

Low Fidelity Prototype Design to Facilitate NDA GCF Website Navigation Process for Submitting Climate Action Project Proposal

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Abstract. The management of funds from the Global Climate Fund for the Indonesian government is managed by the Fiscal Policy Agency as part of the Ministry of Finance of the Republic of Indonesia, which in its communication using the website becomes an important medium so that the message and its objectives can be achieved. National Designated Authority (NDA) serves as the focal point between a country and the Green Climate Fund (GCF). It plays a key role in ensuring country ownership, the core principle of GCF's business model. This study intends to design a low-fidelity prototype on the NDA GCF website so that it is easier for users to navigate and achieve their main goal so that users can upload their ideas for tackling climate change in the form of a proposal. The design direction of the low-fidelity prototype design for this research was obtained from the analysis that had been carried out by the research team in previous studies. The method used is the branching method by John Bower to design prototypes that are easy to understand and understand. To organize the layout and information, the research team uses design principles and elements to show the hierarchy of the website so that users can see the order and priority of the information needed. Design principles and elements are also used to simplify some sections of the NDA GCF website. And the conclusion of this research is that the team believes this prototype will improve the usability of the NDA GCF website so that users can more easily navigate the website and make it easier for them to upload proposals, which is the main purpose of the website.

1. Introduction

The changing climate has become an important topic and a constant search for solutions is always going on at the world level. The global average temperature has risen to 16 degrees Celsius since 1880, with nineteen of Earth's warmest years occurring in the last century since 2000. The amount of ice at the Earth's poles has been reduced by 13.1% every 10 years on average [19] (1). The rates of ice melting at both poles have slowed in the past decades due to various factors. As a result, the sea level has increased- and so has the amount of erosion in bays, storm frequency and intensity. The increase in world sea level continues to increase with an average elevation of 3 millimeters per year.

The Global Climate Fund (GCF) was created because of the ongoing and alarming changes in climate around the world. The GCF provides funding to projects that can improve conditions within the world or prevent climate change. GCF is tied to the UN as a result of its Framework Convention on Climate Change. It's part of the international institution that focuses on responding to and preventing climate change. The GCF is a relatively young

organization and was founded in 2010. With headquarters in Incheon, South Korea, it has funded 159 projects worldwide so far. One of these projects is worth \$4.9 million and contributes to the organization's objective of achieving \$7.3 billion worth of funding.

The management of GCF projects in Indonesia is handled by the Fiscal Policy Agency which is part of the Ministry of Finance of the Republic of Indonesia (BKF Kemenkeu), as the National Designated Authority (NDA) of GCF Indonesia. Research by Indonesia's Ministry of Development Planning (BAPPENAS) in 2019 has shown that they will be able to reduce Greenhouse Gas GHG emissions by 43% by 2030 [29] (2). To help meet the 2030 emission reduction target [27] (3), Indonesia currently requires financing of US\$ 4.4 T. [20] (4). Communication activities will be a key component of Indonesia's GCF NDA. Therefore, it is the target to finally achieve this goal. One idea is making an online platform where anyone can submit ideas for proposals to reduce emissions. This would provide a range of options to help reach targets and give people a chance to be directly involved.

Currently, young people in Indonesia are coming up with creative solutions to combat climate change [17] (5). This proves that the GCF initiative is slowly gaining interest from Indonesians. In March so far, 165 concept notes have been received from various stakeholders and this shows that it will get higher [20] (4).

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The problem now is there are currently a lot of information on the GCF NDA website, so it's quite hard for users to find what they're looking for. It is difficult to know where the buttons to upload their ideas that can be a solution for reducing emissions and increasing ecosystem resilience and then actually submitting their proposal. The design here is a continuation of research done in the past. The recent user-flow study on the NDA GCF website showed where to make improvements and how this website could be more navigable for users.

1.1 Objectives

The purpose of this research is to design a low-fidelity prototype for the GCF NDA website so that users can easily navigate, get the information they need, and can upload their ideas in the form of a proposal that can be a solution to contribute to climate change actions. The prototype design will be within the context of visual design principles and elements to arrange the layout and information that is able to show the visual communication hierarchy of the website so that users can see the order and priority of the information they need.

2. Literature Review

From several articles, it is found that several previous studies have been carried out which can later become the basis for designing a low-fidelity prototype for the GCF NDA website. Viewed from the side of the website navigation performed by the user, it is important to pay attention to the effort made by a user who does not require a long thought in finding the desired information [12] (6). Furthermore, [12] (6) also stated that user behavior in navigating a website is not by "reading" but by "scanning". This is of course important because the motivation & breadth of absorbing information is very different, the scanning behavior of a user makes them look at the whole page quickly and then focus their attention on things that only attract attention, then from the group of things that are interesting. Furthermore, the user will scan to retrieve only the information that is felt useful or the button that needs to be clicked to get the desired information.

According to ISO Ergonomics, the definition of usability [5] (7) is how a website can be navigated by users effectively, efficiently and satisfactorily. And the average person browses a website for about two minutes before deciding to leave or stay [24] (8). The success rate is calculated by how easily and quickly the user can get the information they need on the website. Other research shows that user loyalty to a website will increase if they are able to find what they need on a website [7] (9). Visitors are more likely to be satisfied with a website if they can navigate and find information easily. This will lead to visitors having a good perception of the brand, which is another goal that a brand should strive for. Websites that focus on the needs of their users will prioritize the needs and wants of these users above everything else [1] (10). Users typically have a story-mode mindset when they're trying to learn about a website

[14] (11). Using this pattern, the website will also be more user-friendly and will take less effort for visitors to find their way around. They'll also be able to keep track of what they've seen and liked, which is good for user experience. It's important to plan for the needs of the future user from the beginning by defining design and content through their browsing behavior. One way you can do this is through a Single Exit Point (SEP) which provides an interface that'll be easy for visitors to use.

Design principles need to be applied in order to create an accessible and understandable website [25] (12). Designing a website can seem daunting, but there are some design principles that allow you to build a functional & aesthetically pleasing page. These include balance, hierarchy, contrast, grid and more [16] (13) to create an attractive and easy-to-understand composition. Based on these principles, visitors should be able to easily navigate the website and will be exposed to more important information. Other research has also shown that using design principles in your UI can reduce decision-making time by around 40% [10] (14).

Prototypes allow a design to be better visualized, provide an idea of the visual appearance of, and help show, the flow of the website. A prototype does not have to be realistic but must be sufficiently accurate and legible [10] (14). This needs to be done at an early stage so that designers can test the elements they want to communicate, and the desired information hierarchy on the appearance of the website [9] (15).

3. Methods

The method used to design the low-fidelity prototype of the NDA GCF website adapts the branching approach problem-solving method from John Bower which consists of learning, identifying and generating [3] (16). In the identifying stage, the research team studied and identified all the recommendations obtained from previous research. Then in the generating stage, the research team would start designing a prototype of the NDA GCF website using existing visual directions. The prototype design will use design elements and principles [16] (13) so that this prototype can provide a rough idea of the information on the GCF NDA website. And this prototype will be the basis for entering the next stage, namely the final prototype.

4. Data Collection

The design recommendation of the low fidelity prototype of the NDA GCF website went through several stages and data collection processes. Data collection was carried out by observing the existing designs, followed by an opening interview before the respondent did the user testing. Then the user undergoes a user test with a predetermined scenario to get a hands-on experience of the website design. The data collection ends with an in-depth interview about the experience of using the NDA GCF website to get a view of what the user feels. At the observation stage, the visual elements that are managed in visual principle in the existing designs

become crucial. Each segment is dissected separately and in depth by the research team, through reading the information framework and layout on the NDA GCF website. The interview stage, before and after the user test is an important input because it is the first hand experience and the real point of using the visual appearance of the website. The user test carried out can become a simulation that can be observed by researchers and also becomes a moment of truth experience for users. The scenario used for the user test is that the respondent plays the role of someone who has interests & ideas about climate action projects to be submitted to the GCF NDA. With this motivation, it will be tested when a user test simulation is carried out.

Findings from observations, initial interviews, user tests and interviews were used by the research team to verify the incoming data so that they can be used as the basis for recommendations for the design of the existing GCF NDA website.

5. Results and Discussion

The design of the low fidelity prototype of the GCF NDA website will be presented later in this paper, which involves several visual elements, design principles and which are quite important about processing the information presented. Basically the purpose of this website is to socialize about the existence, function and role of GCF NDAs operating for the benefit of the world in climate change through the contribution of green projects in Indonesia. This design will take important points from previous research to be used as a low-fidelity prototype. In this subsection, the visual processing aspect will be explained which will then be complemented by explanations and comparisons on the previous website and how it relates to increasing interest in submitting proposals for climate action projects (see figure 1). The recommendations presented by the research team in the following section are not final, but are definitely appropriate for users, because they will adapt to the visual design elements. And to get user satisfaction, it is still necessary to go through the user test phase to then get input, this user test can take place in several stages according to the needs and design development time.

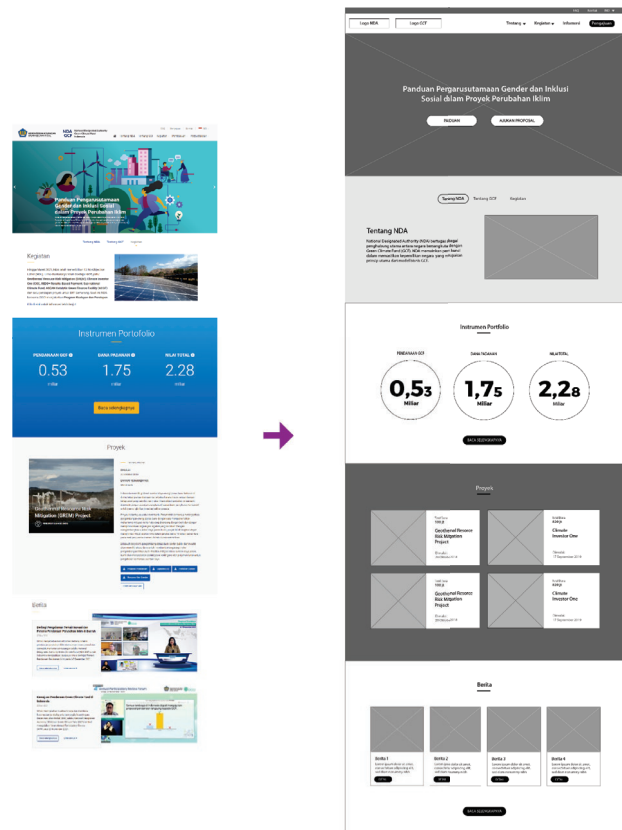


Fig. 1. Comparison between previous web and the low-fidelity Prototype for NDA GCF Website

5.1 Proposed Improvements (11 font)



Fig. 2. Header NDA GCF Prototype

The navigation menu in the header section has been rearranged and shortened using a visual hierarchy [16] (17) with the 'submit' button as the main emphasis to make it easier for environmental activists to upload proposals. This is done by highlighting the submission button in a black box and white text so that it stands out from the rest of the navigation menu. The navigation menu is also shortened to four buttons so that it is easy for users to understand. Then added a small bar with a dark color at the top containing additional menus such as FAQ, Contacts, bilingual, with a smaller typeface size but still visible to the user's eyes for easy navigation (see figure 2).



Fig. 3. Main Banner NDA GCF Prototype

The information on the main banner is divided into three sections: 'Headline', 'Guidelines' button and 'Submit Proposal' button. This will make users more focused on information that is indeed a top priority on the GCF NDA website, namely submitting a proposal and users can also get guidance on how to prepare for submitting a proposal. For the banner background, you can use a representative image with a black overlay to make it look contrast [16] (17) with the information and make it more legible, or you can add additional images or illustrations that are arranged harmoniously so as not to interfere with the readability of the existing information (see figure 3).



Fig. 4. About NDA GCF Prototype

The changes made in this section are by highlighting the 3 buttons placed on top part of the segment so that they can be seen more clearly in the eyes of the user. Buttons in the active state are given a rounded shape visual element and a darker color, while other buttons are given a lower contrast color (see figure 4).



Fig. 5. Portfolio Prototype

The focus in this section emphasizes the funding that has already been released for all the finished & ongoing projects in the GCF NDA. The proportion of the scale [16] (13) between the outgoing funds and other information is made more contrast so that the user's eyes can focus on the number and are interested in taking a longer look at the section. Users can also search for more information by clicking the buttons provided (see figure 5).

5.2. Project Section

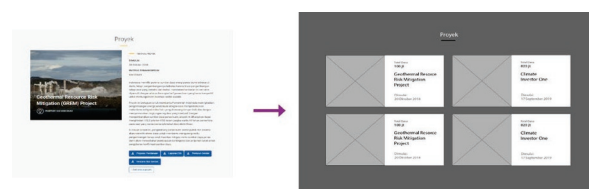


Fig. 6. Project Prototype

In contrast to the previous design which only featured one project, the new design approach, the visual layout displays 4 projects. The goal is that users can see an outline of what projects are currently running. Users can see the title of the proposal, the date the project started, and the amount of funding provided. If you want more details, the user can click one of the information boxes that are already available (see figure 6).

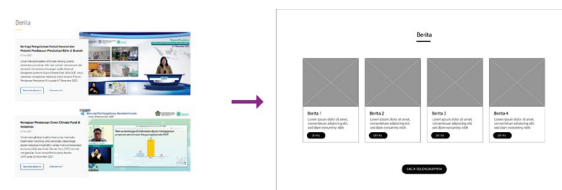


Fig. 7. News Prototype

The approach taken in the news section is to add news information and make it into four information boxes. This makes it easier for users to see the big picture of activities on the GCF NDA website. The information presented is divided into 3 structures: thumbnail images, news titles, and short descriptions that make it easier for users to process information quickly (see figure 7).

6. Conclusion

After designing a low-fidelity prototype based on recommendations from previous research, the research team believes this prototype will improve the usability of the NDA GCF website so that users can more easily navigate the website and make it easier for them to upload proposals which are the main purpose of the website. This prototype can also be continued to the next stage, namely the high-fidelity prototype and become the final product so that when the NDA CGF website is redesigned, there will be many creative solutions to deal with climate change in the world. In this regard, the research team will see further how aesthetic aspects in visual communication design can contribute to how the user experiences a user interface design.

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