Design of Hajj Maslahah Prototype for BBJB Sharia Partners Fintech Customers Using Design Thinking Method

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Abstract. This study aims to find out how banks innovate to design a prototype of the Hajj maslahah application for fintech customers as key banking partners. This innovation is the bank's response to the new competition in the banking world. The innovation approach is carried out using the Design thinking method. In descriptive qualitative research, researchers take part in the implementation of innovation. The research object was 6 members of the Bank Jabar Syariah Bandung team, accompanied by a facilitator and 1 resource person in making innovations. The results of this study provide a complete picture of how the innovation process begins to empathize with 2 Fintech institutions, find problems, namely how to simplify the banking process, carry out the stages of collecting solution ideas, design prototypes in the form of application simulators and conduct prototype testing to customers, namely fintech.

Keywords: Design Thinking, Empathy Process, Define, Ideation, Prototypes

1   Introduction

Banks today face rapid and irreversible changes across technology, customer behavior, and regulation. The net effect is that current forms and models of industrial operations are no longer sustainable in the future (Pwc, 2014). 3

Important prediction, first Future in which core banking services are provided outside the regulated banking industry is feasible. Second, Banks still have the advantage but – to be part of the future they need to invest heavily, rediscover and reaffirm their core role in society, and gain ongoing support from policymakers. Third, Regulators and regulations require a radical re-orientation, realignment from policy to protect, and public policy shifting its focus – to some extent from institutions to markets and services.

The banking industry is bound to change: The breadth and speed of evolution in regulation, customer behavior, and technology – coupled with changing market dynamics and aggressive non-bank competitors – means that the banking industry of the future cannot simply be a continuation of the banking industry it used to be. However, banks face the need for a clear change in strategy and business model to carry out the level of transformation required if they are to maintain their central role in the delivery of banking services. Corporate history is full of stories that remind us of how many companies lost their profits at the turn of the technology cycle.

Between 2025 and 2030, market economies could soon exist without banks, but Banks still have some useful weapons: their brands and reputations remain potentially strong, and alternative banking providers still lack trust. However, many tech players have brands that can translate into the kind of trust needed to challenge banks in banking services. Then there is fintech or financial technology that increases the risk of banks slipping and becoming irrelevant today.

Furthermore, banks need to innovate and manage transformation programs to continue to gain public trust. Innovation and technology are developing rapidly. Experts call this technological development and innovation the communication revolution. Innovation is needed to create good opportunities and also design a service product that suits human needs [10].

A design thinking approach is an approach used to create innovation by focusing on "Human Centered Design" or it can also be called "User-Centered Design" [2]. In addition, Design thinking refers to three success factors of innovation, namely desirability, feasibility, and viability [7]. Design thinking also collaborates on scientific theory and the human condition as a center for innovation. It can be said, the design thinking approach focuses on humans as the center of innovation [3].

Companies, MSMEs, and various types

Of course, businesses will not be able to survive on their own in this global crisis which is so complex because of the very high uncertainty. So we need the support of all business stakeholders, namely business actors, investors, creditors, the community, and the government to come together and unite against the Covid-19 pandemic and the effects of the global crisis it brings [5]. The implementation of learning & innovation can be effective in the form of online workshops to avoid the risk of transmission during the pandemic Covid-19 [6].

This study aims to find out how banks innovate to design a prototype of the Hajj maslahah application for fintech customers as key banking partners. This innovation is the bank's response to the new competition in the

banking world. This research focuses on the design thinking approach as a method for producing information technology innovations that focus on "Human Centered Design". Implementation of online-based innovation to avoid the risk of transmission during the Covid-19 pandemic.

Based on the background and limitations of the problem above, the formulation of the problem in this study is:

1) How is the design method innovation process thinking to design a prototype of the Hajj maslahah application for fintech customers as a key banking partner?
2) How to measure success using Usability Testing, Heuristic Testing, and Impact Testing which is carried out on prototype solutions?

2   Methodology

The approach in this study uses a qualitative approach, taking into account:

1) This research was conducted based on the facts that occurred
2) This study does not aim to test the hypothesis.

The method used in the qualitative approach is a case study method that is more suitable to be used in answering research questions "How" and "what", and if the researcher has little opportunity to control the events to be studied and focus research on current phenomena in real life. The qualitative approach uses a design thinking method approach. The discussion on analysis and design of solutions based on a design thinking approach starts with empathy for users, continues with understanding user goals and needs (define), and then continues with the stage of finding ideas and solutions to the problems obtained (ideate).
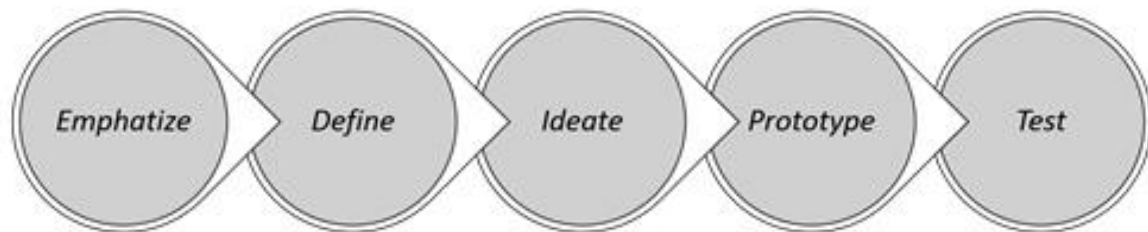

Fig. 1. Design Thinking Stage according to Stanford

The type of data used in this research is qualitative data. Qualitative data is data in the form of explanations and information from interviews with resource persons regarding the problems faced in running a business, ways or strategies to overcome obstacles and the causes of these obstacles. In this study, the research subjects were 7 team members from BJB Syariah accompanied by 1 facilitator and 1 design thinking innovation expert. Customers who are assisted are Fintech or Financial Technology Companies as one of the stakeholders of Bank Jabar Syariah (BJBS)

Data were collected through direct observation and interviews with the research object. In addition, a document study to strengthen references was also carried out by researchers. The steps taken in collecting data are taking all the data during the 5 stages of design thinking, with the following explanation:

In the early stages of research, researchers conducted research in which researchers carried out a process of empathy. The empathy process is carried out to find out what people think, say, feel and do user. the empathy process consists of observation, user interviews, and an empathy map. Customers who are assisted are Fintech or Financial Technology Companies as one of the stakeholders of Bank Jabar Syariah (BJBS), in terms of expanding services to fintech customers. The reason for choosing this context is to increase customer trust in Fintech

In the second stage, after conducting research, the researcher carried out the analysis stage where at the analysis stage the researcher carried out the defined process. The defined process is carried out to understand the needs and problems that users get after carrying out the empathy process.

The third stage is the ideate process carried out to find solution ideas for existing problems. At this stage, after conducting the analysis, the researcher carried out the design stage where at the design stage the researcher carried out the Story Board process to describe the steps taken by the user. The 4 steps taken are looking for info on solutions that have been done by other people, Crazy 8, the best ideas for each member and choosing the 1 best solution for the team, and describing the customer journey or Story Board.

The fourth stage is making prototypes. The function of prototypes or prototypes helps us think better. When we create it will appear more applicable ideas that can make our solution even better. The prototype transforms an abstract solution into something that the customer can sense and respond to. The fifth stage is testing which aims to investigate to obtain information about the quality of the prototype being tested. Testing provides an objective and independent view of the prototype.

3 Result and Discussion

In the analysis and changes in this research, the design of the Hajj Maslahah application prototype for fintech key partner BJB Syariah Bandung customers will be explained using a design thinking approach, during the COVID-19 pandemic.

3.1 BJB Syariah Bank Profile

Establishment of the BJB sharia bank The establishment of the BJB sharia bank begins with the establishment of a Sharia Business Division/Unit by PT Bank Pembangunan Daerah Jawa Barat and Banten Tbk. on May 20, 2000, to meet the needs of the people of West Java who began to grow their desire to use Islamic banking services at that time.

Until now, BJB Syariah bank is domiciled and headquartered in Bandung City, Jalan Braga No. 135, and has 8 (eight) branch offices, 44 (forty-four) sub-branches, 54 (forty-six) Automated Teller Machines (ATMs) spread across the Provinces of West Java, Banten, and DKI Jakarta and 49,630 ATM Bersama network. In 2013 it is hoped that bank bjb will further expand its service coverage which is spread across the provinces of West Java, Banten, and DKI Jakarta.

Vision: To become the 5 largest, healthy, and most well-performing Islamic Commercial Banks in Indonesia. Mission: 1. To provide sharia banking services in a trustworthy and professional manner, 2. To encourage regional economic growth through the improvement of Micro, Small, and Medium Enterprises (MSMEs), 3. To provide additional value to stakeholders. Along with the increasing number of banking businesses that have begun to be disrupted by non-bank financial services, Bank BJB Syariah is determined to continue to make exploitative innovations to existing markets as well as exploratory innovations by opening new markets.

3.2 Empathy Process

In the early stages of research, researchers conducted research in which researchers carried out a process of empathy. The empathy process is carried out to find out what users think, say, feel and do. the empathy process consists of observation, user interviews, and an empathy map. Research subjects are subjects that are intended to be studied by researchers. The object of research is the object that is used as research or which is the point of attention of a study. In this study, the research subjects were 7 team members from BJB Syariah accompanied by 1 facilitator and 1 design thinking innovation expert. Customers who are assisted are Fintech or Financial Technology Companies as one of the stakeholders of Bank Jabar Syariah (BJBS), in terms of expanding services to fintech customers. The reason for choosing this context is to increase customer trust in Fintech

Researchers observed the problem first to find out what problems were experienced by Fintech or Financial Technology Companies as one of the stakeholders of Bank Jabar Syariah (BJBS) in terms of expanding services to fintech customers. . The following is the observation process that the researchers carried out:

a. Activities, what activities do they do (according to the context)? Why is activity important?
 • Promotion on social media
 • Door-to-door offers
 • Collaboration with other business providers.
b. Interactions, Who do they interact with within this context? What is the purpose of the interaction and what is the interaction like?
 • Other business providers, MSME
 • YouTubers/ Influencers
 • Telecommunication Providers
 • Customer checking for customers involves Dukcapil, the Ministry of Finance, and OJK.
c. Environment, What is unique about the environment? How much support or not support the environment?
 • Internet network connectivity already supports Fintech.
 • A Digital mindset has started to form.
d. Object, Is there any infrastructure used?
 • In smartphones, customers need to install the fintech application.
 • Open API is needed so that fintech can connect with BJBS's system. The next process in conducting observations is to find anyone who often experiences the problems found. From this, further research will be carried out.

In the user interview process, the researcher designed a research project plan aimed at making the interview objectives definite and the interview results more useful in the process of designing solutions to existing problems. The following is a research project plan design that researchers use during user interviews.

a) Objective: The purpose of this research is to find out how Financial technology / Fintech companies as one of the stakeholders of Bank Jabar Syariah (BJBS), in terms of expanding services to fintech customers. The reason for choosing this context is to increase customer confidence in Fintech. Researchers need to

understand these things so that researchers can find out what features will be very relevant and helpful for users.

b) Method: Conducting undirected interviews with users, namely Fintech companies within the BJBS environment, and asking them to tell about what they have been doing so far in terms of expanding services to fintech customers.

c) Participants: Participants are those Fintech companies within the BJBS environment that have been collaborating so far. The leader of the Fintech company who participated in the interview was participant 1 as the owner of Fintech A, then participant 2 as the leader of Fintech B. From the two participants, several data were found that were used as references to define problems that deserved to be resolved.

d) Location: Due to the COVID-19 pandemic situation, interviews were conducted face-to-face using Zoom media. At 10.00 Western Indonesia Time.

In the analysis and changes in this research, the design of the Hajj Maslahah application prototype for fintech key partner bjb Syariah Bandung customers will be explained using a design thinking approach, during the COVID-19 pandemic.

3.3 Needs Analysis (Define)

In the next stage after doing research, the researcher conducts the analysis phase where in the analysis phase the researcher performs the defined process. The defined process is carried out to understand the needs and problems that users get after carrying out the empathy process.

The data that has been collected from interviews and processed into an Empathy map is then processed to find out what problems are faced by fintech companies in terms of expanding services to fintech customers. The step that must be taken is to accumulate the same complaint/gain data and expectation/gain data on the same NTD. In this case, participant 1 and participant 1's Empathy Map data have the same NTD only in "Cooperation with Funding". After stacking the same data, the problem description is obtained as follows:

• Simplification of processes with technology
• Market share is increasing due to great potential
• Product regulations do not support
• Limited public digital literacy

After getting the 4 problems above, the next step is for the researcher to choose one problem that deserves to be solved. That is a high-value problem, a slice of the problem that is most painful to users and the problem can be solved. The selected high-value problem is to simplify the process with technology. Researchers and the team think that simplifying the process by utilizing information technology will greatly help Fintech to expand its services to customers. And more importantly, Fintech and BJBS can do it. Meanwhile, the other 3 problems require the role of the government as a regulator and other parties that are beyond the reach of the Fintech and BJBS team. Next, an Opportunity statement is obtained, namely what opportunities arise from these problems. The Opportunity Statement provides an overview of the opportunities that arise, namely, "How Can We Simplify the banking transaction process."

3.4 Solution Analysis (Ideation)

The ideate process is carried out to find solutions to existing problems. At this stage, after conducting the analysis the researcher carried out the design stage where at the design stage the researcher carried out the Story Board process to describe the steps taken by the user, namely the Story Board to register a new account at "Haji Maslahah". The following is the process and results of the ideation stage carried out: The researcher and the team searched whether this problem had a solution at this time. The team is sure that there must be a solution to this problem. The search is done through the help of Google by typing the problem in the google search engine. Then a similar solution was found on the website https://www.bizhare.id/investasi.

The next stage is that each participant is asked to take an HVS paper, then fold it into 8 parts. Each part is asked to draw/sketch the solution that is in the mind of each participant. Do this together and give 1 minute for each solution drawing. Forbid participants to add or subtract the picture when the time is over 1 minute. Then after 8 minutes, we will get 8 crazy ideas multiplied by the number of existing team participants. If you have a team of 4 people, 40 crazy ideas will appear. After finishing the drawing, then ask each participant to explain the 8 ideas he has drawn to all group members. The goal is that each member understands each member's ideas, be they good, unreasonable, strange, enlightening, and so on.

The next stage is ideation after we pour 8 crazy ideas and listen to explanations for each of the 8 crazy ideas. Each member is invited to sketch the best solution which is poured into 1-3 sheets of HVS paper. This solution can be a combination of 8 ideas of his own, maybe a combination of the ideas of other participants, or a combination of his ideas with the ideas of others. In the solution sketch stage, we managed to narrow down at least 4 of the best ideas.

After listening to the presentation of the best solutions from all members, now is the time for the team to discuss to choose the best solution that will be used as the team solution. This solution can be a choice of one of the solutions submitted by one team member or 3 may be a combined solution of several of the best parts submitted by each member. Make sure the solution chosen can answer PWS / Problem Worth Solving or problems that are worth solving. The idea of a Team Solution, showing the best solution that has been agreed upon by the team is "Haji Maslahah". Where there will be an additional application that is in the application owned by Fintech at this time. That is a facility for Hajj registration targeting Fintech customers.

Before making a prototype, first, make Storyboarding. Describe the "Customer Journey" of the customer journey when using the solutions the team created. The trick is to make the six boxes above. Sketch the journey in each box. Make sure all the key processes you have entered into the storyboard.
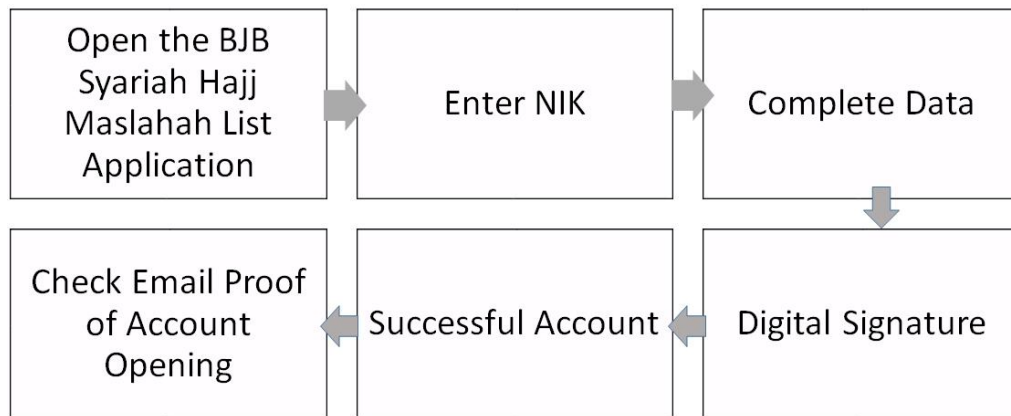

Fig. 2. The Customer Journey

3.5 Designing Prototypes

The function of prototypes or prototypes helps us think better. When we create it will appear more applicable ideas that can make our solution even better. The prototype turns an abstract solution into something that can be sensed so that customers can feel our solution and can respond. Figure 3 Haji Maslahah prototype, shows a prototype that has been made to make it easier for users to experience the solutions offered.

Fig.3. Prototype of Haji Maslahah

3.6 Prototype Testing

Testing aims to investigate to obtain information about the quality of the prototype being tested. Testing provides an objective and independent view of the prototype.

3.6.1 Usability Test

Testing using Usability Testing is the last stage in designing this application. Testing is carried out to determine the extent to which users can easily and comfortably complete their tasks. This test is carried out to obtain indicators when usability testing is carried out. Tests are carried out using scenarios of each goal to be achieved by the user.

The results of this test are obtained based on time and user satisfaction, the time is determined based on two key metrics obtained the fastest value on each task and the longest value on each task. This test was carried out by two respondents, namely the owner of a Fintech company who was involved in the empathy process from the start. This test is carried out with the respondent to try the prototype directly and ask if something is not clear.

Furthermore, measurements were carried out using scenarios, where the researcher used two indicators in the usability testing stage, namely the time indicator and the user satisfaction indicator. User satisfaction is obtained from the points given by the user during task testing. Table 1 shows the time indicator while Table 2 shows the user satisfaction indicator.'

Table 1. Time Indicator Table

Time Indicator	Category
1-10 seconds	Easy
>10 seconds	Hard

Table 2. User Satisfaction Indicator

Satisfaction Indicator	Category
1-3 seconds	Dislike
4-6 seconds	Like

From the results of usability testing conducted on two Fintech company owners, the time indicator was obtained with the results of one hundred percent of the participants indicating easy and the overall satisfaction indicator indicating liking.

3.6.2 Heuristic Testing

Heuristic testing is a technique of fintech companies, in terms of the test is based on the 10 principles proposed by Nielsen. At this stage, the researcher tested two experts in the field of User Experience (UX) to find out whether the prototype was made following the heuristic principle. The test is carried out using a Likert scale of 1-5 with the maximum score according to each principle being 10. The results of the Heuristic testing test are conducted on two owners of fintech companies, the scores were 84% (very good) and 85% (very good).

3.6.3 Impact Testing

Impact testing is a test to find out how much impact there is when the Brayut Village application is tested on users. This test is carried out after the user uses the application. At this stage, the researcher tested six people who did not know or had never heard of Fintech. The process of assessing the questionnaire is done by adding the value of Agree and Strongly Agree which is divided by the number of Respondents.

The responses given to the application by the user amounted to seven respondents, each of whom answered the given question, and all of the respondents' answers were combined into a value that resulted in the number of each type.

The results showed that four people Strongly Agree and three people Agree with the solution presented in the prototype. So that the index is obtained 100%.

4 Conclusion and Suggestions

4.1 Conclusion

From the discussion and analysis, it can be concluded in this research is as follows:
1. The Design thinking method which was carried out by a team of seven people turned out to be successful in defining the following
   a) Assisted customers are fintech companies, in terms of expanding services to fintech customers.

b) Empathy through observation and in-depth interviews results in problems that deserve to be resolved, namely "how can we simplify the transaction process" for fintech so that the number of fintech customers increases.

c) Ideas produced a solution which was named "Haji Maslahah". An application that facilitates the process of opening an account for the Hajj list for prospective fintech customers.

d) The prototype of "Haji Maslahah" in the form of an application interface/application interface

2. The prototype of "Haji Maslahah" after the test was carried out on the participants, the results of the Usability Testing were "easy" and the indicator of satisfaction was "like", the score The results of Heuristic Testing are 84.5%, and the Impex Testing index is 100%.

3. The results of this test show that the prototype displayed can provide solutions to the problems of Fintech companies, in terms of expanding services to fintech customers.

4. This shows that innovation in new services in conventional banking can be done using the Design Thinking method, which includes five stages, namely empathy, problem definition, ideation, prototype, and test.

5. The implementation of innovation using an online model due to social restrictions by the government related to the risk of disease transmission during the COVID-19 pandemic and the implementation of these innovations has proven to be more effective, namely being able to produce new service innovations while still being able to avoid the risk of disease transmission during the Covid-19 pandemic.

4.2 Suggestion

By considering the description of the research results and referring to the limitations of the research conducted, it is recommended that through this research the following:

1. Team participants should be from various disciplines and various departments in the workplace.
2. There are still many problems that deserve to be solved, so there is still a lot of room to innovate more new services.
3. Prototype results need to be continued into a new service product to be implemented in real terms and a product launch & evaluation process is carried out using the Agile Execution method.
4. Innovation of new products/services with the design thinking method needs to be done a lot so that conventional banks or companies can continue to follow changes according to customer needs.

4.3 Acknowledgements

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