

DESIGN THINKING APPROACH IN DESIGNING “CARE-PET” CROWDFUNDING PLATFORM FOR ABANDONED CATS AND DOGS IN INDONESIA

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Abstract: Abandoned cats and dogs have the right to a decent life. In Indonesia, there are still many abandoned cats and dogs with various conditions that are not good. This research aims to design the right crowdfunding platform that can answer community problems in improving animal welfare. Respondents in this study were pet lovers (cat/dog lovers). Data is obtained by filling out questionnaires in in-depth interviews. The method used in this study is design thinking. This method can solve user-centered problems. The design thinking stages include empathize, define, ideate, prototype, and test. The results showed that crowdfunding is one solution to solve the problems and challenges faced by the community in caring for abandoned cats/dogs. The design of a verified business model in the form of a crowdfunding platform for abandoned cats and dogs named Care-pet is a solution that can improve animal welfare.

Keywords: business model, crowdfunding, design thinking, pet lovers, prototype

Abstrak: Kucing dan anjing terlantar memiliki hak atas kehidupan yang layak. Di Indonesia, masih banyak kucing dan anjing terlantar dengan berbagai kondisi yang kurang baik. Penelitian ini bertujuan untuk merancang platform crowdfunding yang tepat yang dapat menjawab permasalahan masyarakat dalam meningkatkan kesejahteraan hewan. Responden dalam penelitian ini adalah pecinta hewan peliharaan (pecinta kucing/anjing). Data diperoleh dengan mengisi kuesioner dalam wawancara mendalam. Metode yang digunakan dalam penelitian ini adalah design thinking. Metode ini dapat memecahkan masalah yang berpusat pada pengguna. Tahapan design thinking meliputi empathize, define, ideate, prototype, dan test. Hasil penelitian menunjukkan bahwa crowdfunding merupakan salah satu solusi untuk menyelesaikan permasalahan dan tantangan yang dihadapi masyarakat dalam merawat kucing/anjing terlantar. Desain model bisnis terverifikasi berupa platform crowdfunding untuk kucing dan anjing terlantar bernama Care-pet merupakan solusi yang dapat meningkatkan kesejahteraan hewan.

Kata kunci: model bisnis, crowdfunding, design thinking, pecinta hewan peliharaan, purwarupa

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INTRODUCTION

Animal welfare is a term to describe the quality of life of animals at a certain time (Broom, 2011). According to Law No. 18 of 2009, animal welfare is all matters relating to animals' physical and mental state according to the size of the animal's natural behaviour that needs to be applied and enforced to protect animals from any person's inappropriate treatment of animals that humans use. Animal welfare will be achieved if animal rights can be properly fulfilled. Animal rights include freedom from hunger and thirst, freedom from pain, freedom from discomfort and abuse, freedom from fear and stress, and freedom to express their natural behaviour (OIE, 1992). Animal welfare is one of the issues that the government pays attention. It is evidenced by the existence of several laws that regulate animal welfare. One is Law No. 18 of 2009 concerning Animal Husbandry and Health.

Even though animal welfare is regulated by applicable law, unfortunately, many stray animals are still on the streets, especially cats and dogs. It is due to the unavoidable cat and dog population explosion (Digdo, 2017), especially in Jakarta and its surroundings. According to Digdo (2017), there is an explosion in the cat population in Jakarta as many as 30 thousand heads. This amount is not proportional to the ability of the population to maintain these animals. Cats and dogs have abandoned animals whose animal rights are not always properly fulfilled. Some of the abandoned cats and dogs were fleas and mouldy, smelly and skinny to injuries, which sadly were caused by human intent.

The existence of Law No. 18 of 2009, which regulates animal welfare, is a form of government concern for animal welfare. This concern is not only shown by the government, but the Indonesian people (cat or dog lovers) also care about the welfare of animals, especially abandoned cats and dogs. It can be seen from several actions most people take when they see abandoned cats and dogs, including feeding and drinking, taking them home for treatment, taking them to the animal shelter, and giving them vitamins. In addition to the above actions, several non-profit organizations also have an important role in caring for the welfare of abandoned animals, especially cats and dogs, namely animal shelters. According to HSUS (1999), animal shelters are temporary solutions to complex problems,

including animal abuse, neglect of pets, overpopulation of stray dogs or cats, disease transmission, sick and injured animals, and animal attacks. Animal shelters ensure animal welfare, including rescue, rehabilitation, treatment with the veterinarian, feeding, vaccination, and providing adequate housing for abandoned animals (cats and dogs). This activity requires a very high cost, especially for tens or even hundreds of rescued dogs and cats. As a non-profit organization, all operational activities are financed by the owner's funds and several donors (Somali, 2017). It, of course, can lead to limited funds and infrastructure for rescuing abandoned animals (cats and dogs). This limitation can be overcome in various ways, one of which is crowdfunding.

According to Wheat et al. (2013), crowdfunding is a technology-based fundraising method where individuals request assistance for their projects through a unique crowdfunding website. Funding comes from many people, even including the global community. Crowdfunding is a new and novel way to gather fund through the internet for small and medium-size business from many investors. It is different from the conventional method which capital is gained from the loans from some of the conventional financial institutions like banks, angel investors, venture capitalists (Debby et al. 2019). The trend of crowdfunding in Indonesian society is increasing. It is reinforced by the increasing number of donations collected in some crowdfunding, one of which is Kitabisa.com. According to the annual report published by Kitabisa.com, the total donation receipts at Kitabisa.com in 2020 reached IDR 835 billion. This number has increased from the previous year, IDR 480 billion.

According to the World Giving Index in 2021, Indonesia ranks first as the country with the most generous population globally (Table 1). The behaviour of Indonesian people always wants to help and share, both with others and with animals. However, not everyone can go directly to help rescue abandoned animals (cats and dogs). It is because they have limitations in rescuing abandoned animals. These limitations range from limited funds, place, and time. In addition, information about abandoned cats and dogs is also limited (Nurfitriyani et al. 2019). It is because usually, the available crowdfunding only provides donations for humans, while special donations for abandoned animals (cats and dogs) are not yet available.

Table 1. The ten most generous countries in the world in 2021

Countries	CAF Ranking	CAF Score Index (%)	Score Helping Strangers (%)	Money Donation Score (%)	Volunteer Time Score (%)
Indonesia	1	69	65	83	60
Kenya	2	58	76	49	49
Nigeria	3	52	82	33	42
Myanmar	4	51	51	71	31
Australia	5	49	57	61	30
Ghana	6	47	65	44	32
New Zealand	7	47	56	51	34
Uganda	8	46	75	32	31
Kosovo	9	46	68	59	10
Thailand	10	46	60	60	17

Source: Charities Aid Foundation (CAF) World Giving Index 2021

Based on the explanation, Care-pet presents as a mobile-based crowdfunding platform specifically for abandoned animals (cats and dogs) that allows users to raise donations and make donations in money and goods to animal shelters. So, this platform is expected to overcome the increased welfare of abandoned animals.

Research conducted by Christine et al. (2016) created the INGON application, a social enterprise application that provides 20% of the profits of buying and selling transactions to be donated to shelters caring for abandoned animals. The design of the INGON system uses use case diagrams, activity diagrams, and e-r-crows foot diagrams, along with the data dictionary and data flow diagram.

In contrast to INGON, the process of developing Carepet uses a design-thinking framework. Design thinking is a multifaceted, human-centred approach to innovation inspired by how designers think and work (Brown, 2008; Kelly and Kelly, 2013, Liedtka and Jeanne, 2011). Design thinking refers to logic, imagination, intuition, and systemic reasoning to explore the possibilities of what could happen and to create desired outcomes that benefit the end-user (customer). The design mindset is not problem-focused but is solution-focused and action-oriented. This process involves analysis and imagination (Brown, 2009). Razzouk and Shute (2012) mention that designers build experience in a particular domain, allowing designers to quickly identify problems, propose solutions, and generate, synthesize, and evaluate solutions often identified as key features of design expertise.

Brown (2009) confirms that design thinking has developed into one of the most powerful creativity and innovation methods throughout the world. The appearance becomes a mode of thought and actions to explain and manage organizational changes and reshape the way people work together in business. The Thinking Framework Design used in this research refers to Stanford University consisting of five stages: empathize, define, ideate, prototype, and test (Ingle, 2013; Natural, 2019; Lewrick et al. 2020). Empathize aims to understand the problems that users are experiencing. Define aims to define a problem statement as a point of view on research. Ideate aims to produce ideas as a foundation for making prototypes. Prototypes are known as initial designs that will be made to detect errors early and obtain new possibilities. Test aims to gather a variety of user feedback (Stanford d.school). The research objectives can be achieved through these five stages by considering users' needs.

The stages of Empathize are the most crucial. Neubauer et al. (2017) stated that empathy is the core of human design and thoughtful design. Putting yourselves in the position of others, immersing yourselves in the subject matter, and finding the actual problem that must be solved is very important for successfully identifying and problem-solving. The opinion of Naiman (2019) confirms that the design of thinking is innovation-centred and begins by developing an understanding of customer needs or users who are not fulfilled or not articulated. Jeane Liedtka said that customer needs that were not articulated were the safest source of new ideas with a true competitive advantage and higher margins. Customer intimacy - in-depth knowledge of customers and their problems - help reveal these needs (Glinska, 2015).

Understanding customers in the development of platforms is essential. According to Muhibuddin et al. (2021), designing platforms must consider the needs and desires of users so that they meet the market and become a competitive advantage. Barnes and Vidgen (2002) stated that the main challenge for e-commerce organizations to develop their web presence and back-office operations was to understand customer needs. Therefore, in developing a Mobile-Based Platform, consumer perceptions of the problems will be studied and the solution will be developed. Based on the explanation above, this research aims to design the right crowdfunding platform that can answer community problems in improving animal welfare.

METHODS

The research location was conducted in Jakarta, Bogor, Depok, Tangerang, and Bekasi. This is based on the number of pet lovers in the Jakarta, Bogor, Depok, Tangerang, and Bekasi areas. Data collection was carried out from February to June 2022.

The respondent in this study was pet lovers, which numbered 60 respondents who were domiciled in Jakarta, Bogor, Depok, Tangerang, and Bekasi. The respondents used nonprobability sampling with a purposive sampling approach. This technique was chosen because the researcher needs samples that match predetermined criteria. Determination of the number of respondents is based on theoretical saturation,

where the number of respondents is known when data collection is considered saturated. Theoretical saturation is a concept in qualitative data analysis where the researcher continues to take samples and where Analyze the data until no new data emerge (Morse et al. 2004). This study uses two data, namely primary and secondary. The primary and secondary data collected are summarized in Table 2.

This research uses a design thinking and canvas business model approach. Design thinking is a comprehensive customer-oriented approach that aims to produce and develop creative business ideas or overall business models (Roterberg, 2018) and is used as a framework, while BMC is used to design the right business model. In this study, the data analyzed were qualitative and quantitative data.

The data analysis techniques used are categorization and reduction techniques for qualitative data analysis. According to Kountur (2009), the categorization technique is rearranging notes from observations or interviews into a more systematic form. In contrast, the reduction technique summarises, chooses the main things, focuses on the important things, and looks for themes and patterns (Sugiyono, 2009). As for quantitative data, the data was analysed by calculating the average value of each statement on the questionnaire submitted. The data analysis technique used in this study can be seen in Table 3. This research uses the design thinking method. The following is an explanation of the stages of the research which is illustrated in Figure 1.

Tabel 2. Data types and sources

Data Type	Method of Collecting Data	Data Source
Primary Data		
Characteristics of respondents	Questionnaire online	Respondents
Problems experienced by the Care-pet's customer segment	In-depth interview	Respondents
Prototype repair	Questionnaire online	Respondents
Secondary Data		
Business model Canvas Care-pet 1	Study of literature	Journal and thesis

RESULTS

Empathize

This empathize stage is done to understand what consumers see, feel, and experience when they see cats or neglected dogs. The initial stage begins with filling out questionnaire by respondents. The profile of the respondents taken at this stage can be seen in Table 4. Later the results of this stage will be processed to be a reference for the next stage. The results will be mapped into the form of a map of empathy. In this study eighth map is used to describe consumers' perspectives,

starting from what they think, feel, see, listen to, do, and feel, to find their problems and expectations when they see a cat or displaced dog.

Empathy map

Think and feel

From the results of questionnaire online that have been carried out at the empathize stage, as many as 60 people like cats or dogs for various reasons. These reasons are illustrated in Figure 2.

Table 3. Data analysis techniques

Stages	Analysis Techniques	Output
Empathize	Categorization Reduction Mapping empathy map	Empathy map
Define	Analyzing empathy map	Several thing that constrains pet lovers in helping abandoned animals
Ideate	Mapping the elements of the business model canvas	Business model canvas 1
Prototype	Business model canvas visualization	Prototype 1
Test	Prototype 1 tested by respondents	Feedback from respondents

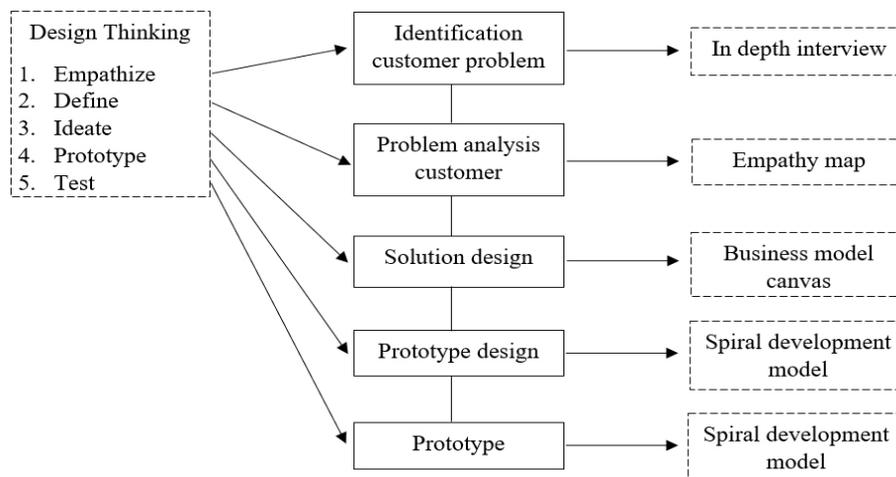


Figure 1. Research design

Table 4. Profile of respondents

Category	Description	Total	Percentage (%)
Gender	Male	19	31.7
	Female	41	68.3
Profession	Student	42	70
	General Employees	6	10
	Businessman	5	8.3
	Civil Servant	4	6.6
	Veterinarian	1	1.7
	Housewife	1	1.7
	Lecturer	1	1.7
	Monthly Income	< IDR 1.000.000	24
	IDR 1.000.000 – 3.000.000	19	31.7
	IDR 3.000.001 – 5.000.000	11	18.3
	>IDR 5.000.001	6	10
Domicile	Jakarta	12	20
	Bogor	20	33.4
	Depok	10	16.6
	Tangerang	9	15
	Bekasi	9	15
Monthly Expenditure Allocation	Food, personal expenses, social expenses	20	33.4
	Food, personal expenses	15	25
	Food, social expenses	5	8.3
	Personal expenses, social expenses	9	15
	Personal expenses	11	18.3

Say and do

Based on the in-depth interviews, it is known that as people who like cats or dogs, respondents stated that the welfare of abandoned cats or dogs is still very concerning. According to the respondents, many people are unaware that animals have the same right to live a prosperous life as humans. According to respondents, people still torture, kick abandoned cats or dogs, discriminate against domestic cats, and intentionally abandon small cats with their mothers instead of giving abandoned cats or dogs to eat and drink. Based on the in-depth interview, the respondent took several actions to the abandoned cat or dog, including leaving it alone, feeding it/drinking it, and bringing it home for treatment. The complete data can be seen in Figure 3.

See

A stray cat or dog is an animal that has no master. They live and live on the streets. As animals that live on the streets, they often do not get good treatment from the community, which causes the physical condition of these animals to be unfavourable. Based on in-depth interviews with 60 people, 100% or all respondents had seen abandoned cats or dogs with various conditions such as smelly and thin, healthy and fat, wounds, lice and mould. The complete data can be seen in Figure 4.

Hear

Cat or dog lovers will hear more information about abandoned cats or dogs through family, friends, communities and social media.

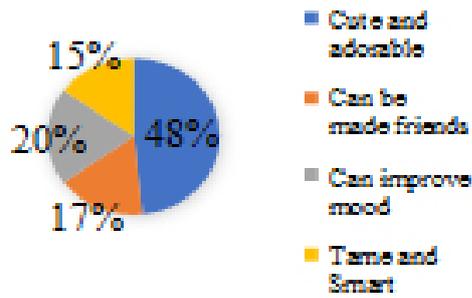


Figure 2. Reasons for liking cats or dogs

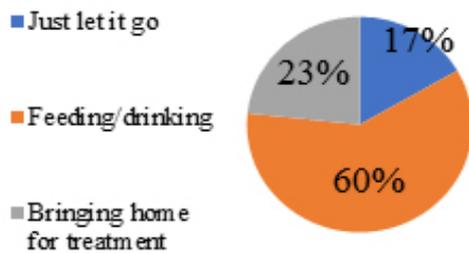


Figure 3. Actions taken against abandoned cats or dogs

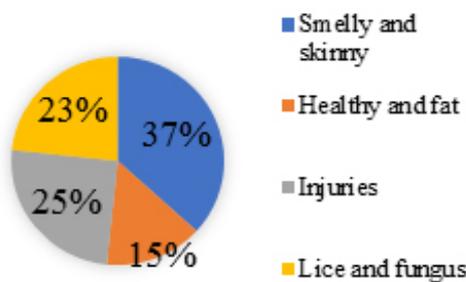


Figure 4. Condition of abandoned Animals

Pain

Animal lovers or pet lovers are people who like pets, such as cats, dogs, rabbits, Etc. In this study, pet lovers are people who like cats/dogs. Based on in-depth interviews, most of the respondents who are pet lovers want to help abandoned animals. However, they are constrained by several things, namely limited resources, parents or family are not allowed to bring and keep cats or dogs home, and if they are brought to animal shelters (animal shelter), information regarding the location of animal shelters is still limited. In addition, respondents also had difficulty finding reliable information regarding special donations for abandoned animals.

Gain

The results of in-depth interviews show that pet lovers really care and want to help abandoned cats or dogs. Pet lovers hope that with their existing limitations, they can still help abandoned cats or dogs so that abandoned cats or dogs get a better life than their welfare increases.

Define

The next stage is Define. This stage is to front the findings obtained in the mapped course stage into four maps. Based on the empathy map that has been made, the majority of Pet Lover's respondents desire to help displaced animals but are constrained by several things. i.e. available resources are limited, parents or families are not allowed to supervise and raise cats or dogs, and information about on-site animal shelters is still limited. In addition, respondents also had difficulty finding information about special donations for trusted displaced animals. Respondents also hope with the limitations they have. They can still help cats/dogs neglected.

Ideate

This stage is the stage for creating ideas as solutions to problems that occur in consumers. Based on the problems that have been mapped into the empathy map in the previous stage, the solution offered in this study is amazing crowdfunding for abandoned cats or dogs called Care-pet. The business model of Care-pet is described in the business model canvas.

Customer segment

A customer segment is a group of potential subjects targeted by the company to be achieved or served. The customer segment is selected based on the characteristics of behaviour, problems, and needs mapped in the empathy map in the previous stage. The customer segments that Care-pet targets are pet lovers, pet owners, and donors.

Value Propositions

Value propositions are blocks or elements that describe value, which can be in the form of advantages or uniqueness of the products or services offered. Care-pet's value to its consumers is to help abandoned animals by providing donations through a digital-based

platform (crowdfunding) so that donors can easily reach them and provides a feature of donating goods to reduce the misuse of donations.

Channels

Channels are media used by companies to convey value to consumers. Based on the in-depth interviews, as many as 40 people made donations through an online platform, so Care-pet will be made in the form of a mobile application to make it easier for consumers to help abandoned cats or dogs. Therefore, the channels used by Care-pet to convey value to consumers are mobile applications, stores and social media.

Customer Relationship

This element will explain how the company builds relationships with its customers. Care-pet will display the transparency of the distribution of donations and documentation of the donation's impact, which will be notified through the notification feature of the application. It can build and increase customer trust in Care-pet. In addition, for customer acquisition, Care-pet will also conduct campaigns through social media, such as Instagram and Tik Tok.

Revenue Stream

Revenue streams are cash or income generated by the company from each targeted customer segment. Cash flow or income from Care-pet is obtained from a five percent cash donation commission per donation transaction made by the user, and the second is from the sales margin of the product or item to be donated.

Key Resources

Key resources are the resources needed to make the business model work. To carry out all elements of its business model, Care-pet requires various resources, including the capital, social media, and human resources who are qualified in their fields (technology experts (IT), marketing, finance, and operations).

Key Activities

Key Activities from Care-pet are raising donations for Pet Lovers, Pet Owners and shelters that need assistance in caring for abandoned animals, channelling donations, and creating content that can be in the form of campaigns from Care-pet's social vision so that the customer segment of Care-pet can be moved to make donations. Other activities, namely continuously developing the platform to maintain and improve its performance.

Key partnerships

Key partnerships are the key partners that make the business model work. In its business process, Care-pet needs other parties as partners. These parties are feed and equipment companies for small animals as suppliers of goods to be donated and payment gateways.

Cost Structure

The cost structure is the company's cost structure in conveying value to consumers. The main costs incurred by Care-pet include carrying out key activities and providing resources. These costs are creating content (campaign), marketing, channelling donations, developing the platform, and team member salaries.

Based on the explanation above, Care-pet's business model canvas 1 is summarized in Figure 5.

Prototype

The next stage is the prototype. This stage is the stage to visualize the previously designed business model. The prototype was made using this study's software engineering development model, namely the spiral development model. The spiral model (spiral model) combines the prototyping model and the waterfall model. The prototyping model focuses on presenting or presenting to the user with an input format. Then the software's output will be evaluated, while the waterfall model. It focuses on a systematic or sequential software development process. The prototyping model focuses on presenting or presenting to the user with an input format. Then the software's output will be evaluated, while the waterfall model focuses on a systematic or sequential software development process. The stages are as follows.

Key Partners <ul style="list-style-type: none"> - Cat/dog feed and equipment company 	Key Activities <ul style="list-style-type: none"> - Raising donations - Sending donations - Create content - Develop platform 	Value Proposition <ul style="list-style-type: none"> - Helping abandoned animals - Digitally based so that it is easy for donors to reach - Provide the item donation feature to reduce the misuse of donations 	Customer Relationship <ul style="list-style-type: none"> - Transparency of donation distribution - Documentation of the impact of donations - Promotion on social media 	Customer Segment <ul style="list-style-type: none"> - Pet Lovers - Pet Owner - Donor
	Key Resources <ul style="list-style-type: none"> - IT - Finance - Marketing - Operational 		Channels <ul style="list-style-type: none"> - Apps store - Play store - Media sosial 	
Cost Structure <ul style="list-style-type: none"> - Platform creation and development - Marketing - Employee salary 			Revenue Stream <ul style="list-style-type: none"> - Donation commission - Margin from sales of goods 	

Figure 5. Business Model Canvas 1 Care-pet

Liason

This stage is to collect information regarding the necessary data for the platform to be created. The authors collect information by conducting in-depth interviews with 60 respondents at this stage. The following are the results of the interview regarding what features should be included in a donation application.

- User Profile

This feature displays user information, such as username and date of birth. The user can only see information on this feature. Based on the in-depth interviews with respondents, as many as 20 respondents answered the need for a user profile feature in a donation application.

- The Institution or Profile of The Beneficiary

Based on the interviews with respondents from 60 respondents who were interviewed, 35 respondents answered that there was a need for features that explained the institution or profile that would receive donations. According to respondents, this feature can consider respondents in making donations.

- Money Donation Feature

This feature is a feature that users can use to make donations using money. In this feature, respondents want many alternatives in making payments, such as using electronic money such as OVO and Gopay. From the interviews, as many as 24 respondents answered the need for a money donation feature in a donation application.

- Item Donation Feature

This feature is almost similar to the money donation feature, which is both used to make donations; the difference is that in the item donation feature, the user does not directly donate a nominal amount of money, but the user will first make a purchase of any items to be donated. These items have been adjusted to the needs required by the recipient institution. This feature exists to increase user confidence in the donation application. Based on the interviews, as many as 37 respondents answered the need for a donation of goods featured in a donation application.

- The Number of Donations Collected

This feature displays the number of donations collected and the remaining time of a fundraiser. Based on interviews with respondents, as many as 30 respondents answered the need for this feature in a donation application.

- Notification of Transparency of Donation Distribution

This feature contains documentation of the distribution of donations as evidence that the donations have been channelled to institutions in need. In addition, this feature also displays other important notifications, namely that the donation payment has been successful. This feature is also a distinct value of a donation application because it can increase user confidence in a donation application. Based on interviews with respondents, 38 respondents answered that this feature must exist in a donation application.

Planning

At this stage, the activities are planning and estimating resources, processing time, and other supporting information based on the data obtained in the previous stage. In working on the prototype, the resources needed are tools to make the appearance of the prototype and human resources, which will make the prototype, and the estimated time for working on the prototype is approximately ten days.

Risk analysis

Based on the risk analysis done in making this prototype, no significant risks must be anticipated. It means it can proceed to the next stage.

Engineering

It is at this stage that the prototype is made. It was making a prototype based on the information obtained at the Liason stage. In this study, the prototype was made using the Marvel app application to allow respondents to explore the prototype like an application ready to be launched. From the system design that has been built, Care-pet offers several main features (Figure 6), including registration or registering features, homepage or home, payment options, information related to

institutions or profiles that are doing fundraising, and payment options features. The following explains the main features offered by Care-pet:

- Feature Registration or Register

Users who have never registered before can register or create an account first on this page. Users can sign up via Facebook or Google accounts, and this option is given to make it easier for users to register.

- Home Page

The start page displays the features found in the Care-pet application. These features include the donation feature, the shelters feature, which contains information about the location of the shelters, and the fundraising feature. In addition, there is also a Care-pet news feature. This feature contains articles containing information on how-to and tips and tricks in caring for pets (cats/dogs) and other information that supports the existence of Care-pet. Next is the notification feature for the transparency of the distribution of donations. This feature contains documentation of the distribution of donations as evidence that the donations have been channelled to institutions in need. In addition, this feature also displays other important notifications, namely that the donation payment has been successful.

- Information about Fundraising Institutions

Information about institutions or fundraising profiles can be found on the donation page, monetary and goods donations.

- Payment

The payment methods offered by Care-pet vary. It is done to make it easier for users to make transactions. Care-pet will cooperate with payment gateway mid trans, which offers 20 payment methods. The payment method that Care-pet will use is card payment, which is payment using a credit or debit card from all banks bearing the VISA/Mastercard/JCB/Amex logo, bank transfer, namely transfer payments via ATM, mobile, or internet banking, and e-wallet such as Gopay, and OVO. It is in line with Christine et al. (2016) that manual payments are very inefficient. The system must be able to make payments using credit cards, e-banking, Etc.

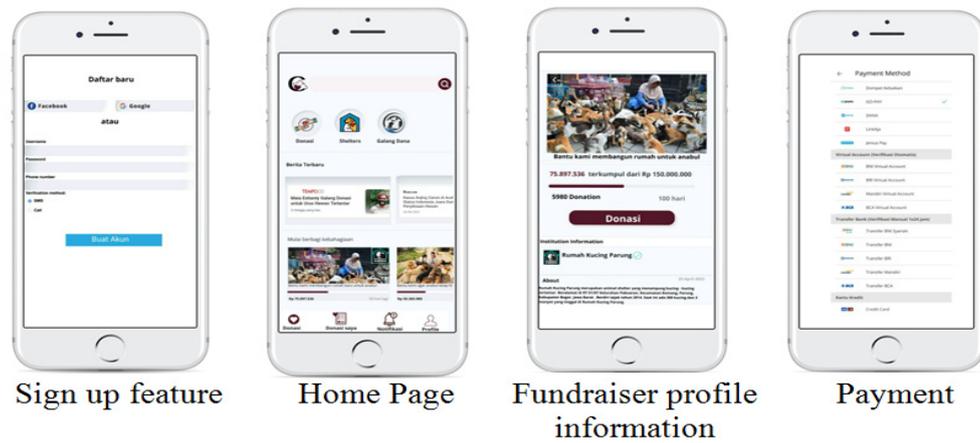


Figure 6. Main features of Care-pet

Construction and release

At this stage, the thing to do is to test the initial appearance of the prototype. Prototype 1 Care-pet can also be run by accessing the link bit.ly/prototypeCare-pet or through a device scanner by scanning the QR code in Figure 7.

This stage is a process of testing the solution offered in the form of a prototype. This is done to get feedback from consumers. The feedback obtained is used as a reference to produce solutions that can overcome consumer problems and meet their needs. At this stage, respondents were asked to try using the prototype 1 Care-pet made and provide an assessment and response to the prototype. These assessments and responses are used as a reference for making improvements.

Testing is carried out using a user experience questionnaire (UEQ) at this stage. The questionnaire proposed in the UEQ is in the form of a statement regarding the four user experience variables according to Guo (2012), namely value, usability, desirability, and adaptability. These four variables cover all aspects of Care-pet that must be assessed, starting from the suitability of the solutions offered, ease of use, convenience of visual appearance, and ease of access. In each statement submitted, respondents were asked to provide an assessment in the form of agreement on each statement submitted based on a Likert scale. The Likert scale used in this study is a modified Likert scale of four scales, namely strongly disagree, disagree, agree, and strongly agree. This Likert scale was chosen to anticipate undecided answers. According to Hadi (1999), the category of undecided answers has a double meaning, and it can be interpreted as not being able to decide or give an answer.

The following are the results of testing the prototype 1 Care-pet:

Variable Value

The value variable is a user experience variable that shows the alignment between the Care-pet features and user needs. In testing prototype 1, the value variable is divided into three statements, namely (V1) the Care-pet application makes it easy for me to help abandoned cats/dogs, (V2) the features in the Care-pet application make it easier for me to donate to abandoned cats/dogs, and (V3) various functions in the Care-pet application are well integrated (integrated). Respondents' assessments for each statement submitted in the value variable are summarized in the spider web diagram in Figure 8.

Figure 8 Diagram of variable value spider

Based on the results of the respondents' assessment of the value variable (Figure 8), it can be seen that the statements helping (V1), facilitating (V2), and integrated (V3) have fairly high average values, namely 3.4, 3.1, and 3.2. This shows that respondents agree that Care-pet can help and make it easier for them to help abandoned cats/dogs.

Variable Usability

In this study, the usability variable is used to measure how easy it is for the user to complete the desired task using the Care-pet application. This variable is divided into seven statements, namely (U1) I learn to use the Care-pet application, (U2) I can easily remember how to use the Care-pet application, (U3) Care-pet is very useful, (U4) the information contained in the application is easy to understand, (U5) the structure on the menu

and the Care-pet page can be found easily, (U6) the information found in the application is easy to find, and (U7) the color of the application is of interest to me. The average value of each statement is summarized in the spider web diagram in Figure 9.

Based on the results of the respondents' assessment of the Usability variable (Figure 9), it can be seen that the statements U1 to U7 have an average value of 3.3, 3.6, 3.3, 3.1, 3.2, 2.8, and 3.2. This shows that the respondents agree that Care-pet is easy to learn, understand, useful, the structure is easy to use, and has quite attractive colors. This result is different from the U7 variable, according to the respondent's assessment, Care-pet information is still not easy to understand, so there needs to be improvements so that the Care-pet application structure can be more easily understood.



Figure 7. QR code prototype 1 Care-pet

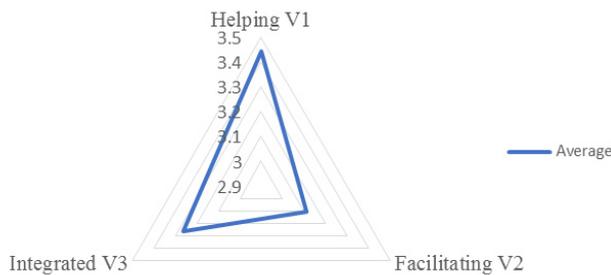


Figure 8. Diagram of variable value spider

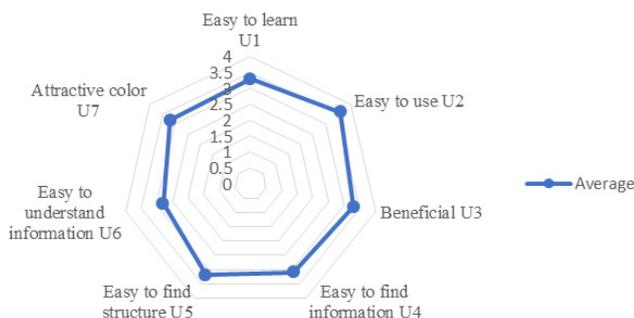


Figure 9. Diagram of usability variable spider

Variable Desirability

Desirability is a variable related to the emotional attractiveness of the user. Most of these variables are driven by the visual design of the product or service offered, starting from the selection of colors, letters, to graphics (Guo 2012). In this study, the statement for the desirability variable is divided into eight, namely (D1) the content in the application is presented clearly, (D2) the content presented is relevant, (D3) the graphics used in the application are appropriate, not excessive, (D4) the use of color in the application Care-pet is not excessive, (D5) the design, symbols, icons and labels on the Care-pet application are relevant, (D6) the use of type, size, font in the Care-pet application is appropriate, not excessive, (D7) the Care-pet application has an attractive appearance, and (D8) I feel comfortable using the Care-pet application. The results of the assessment of the eight desirability statements are summarized in Figure 10.

Based on Figure 10 above, it is known that the user's emotional appeal to the Care-pet application is quite good. This is evidenced from the test results obtained that the average is almost the same except for the D4 statement, namely the use of color in the Care-pet application is not excessive. This statement obtained the lowest score, namely 2.5. This shows that the colors of the Care-pet application are not yet attractive to users, so improvements are needed. Based on suggestions for improvement given by users, namely use bright and contrasting colors. This is intended to make the Care-pet application look more attractive.

Variable Adoptability

Adoptability is a variable related to the ease with which users can access Care-pet. In this study, the adoptability variable is only represented by one statement, namely with the availability of the Care-pet application in the mobile application store, I feel that the Care-pet application is easily accessible (A1). This statement makes the adoptability variable have the highest value compared to other variables, which is 3.7. This shows that the availability of application-based Care-pet in the mobile applications store makes it easier for them to access it and is in accordance with the needs needed by users. The users referred to in this study are pet lovers and pet owners.

Managerial Implications

Based on the research, the managerial implication that can be applied is to develop Care-pet as a crowdfunding platform to answer community problems in improving animal welfare. Care-pet can help and make it easier for users to help abandoned cats/dogs. The availability of application-based Care-pet in the mobile application store will also facilitate user access and suit user needs. However, according to the respondents' assessment, Care-pet's information is still not easy to understand, so there need to be improvements so that the structure of the Care-pet application can be more easily understood. In addition, the colour of the Care-pet application is not yet attractive to users, so improvements are needed. It can use bright and contrasting colours.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Care-pet design, a crowdfunding platform for abandoned cats and dogs, is obtained through a design thinking approach. Based on the empathy map, problems experienced by a cat or dog lovers in helping abandoned cats and dogs are limited resources, parents or family are not allowed to bring and keep cats or dogs home, and they are brought to animal shelters, information about the location of animal shelters is still limited. The Care-pet canvas business model, which consists of nine elements: customer segments, value proposition, channels, customer relationships, key resources, key partners, key structures, and revenue streams, is the stage for creating ideas as solutions to problems occur in consumers. The Care-pet prototype is designed based on a mobile application with an attractive appearance and relevant features to improve the welfare of abandoned cats/dogs. The last stage is testing the solution offered in the form of a prototype. The results showed that crowdfunding is one solution to solve the problems and challenges faced by the community in caring for abandoned cats/dogs. The design of a verified business model in the form of a crowdfunding platform for abandoned cats and dogs named Care-pet is a solution that can improve animal welfare.

Recommendations

Currently abandoned cats and dogs have become an issue that is familiar with human social life. It's time for abandoned cats and dogs to get a decent living, this can happen, of course, cannot be separated from the public's concern for the existence of abandoned cats and dogs. Based on this research, there are two recommendations to improve the welfare of abandoned cats and dogs in Indonesia. The first is campaigning for the #care for abandoned cats and dogs movement. The second is to use technology to collect donations to make it easier for people to donate, which can help improve the welfare of abandoned cats and dogs.

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