



Article

# The Business Model of Digital Platforms for the Sharing Economy: Intensive Case Study Methodology for Rover.com Pet Boarding Platform

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**Abstract:** The sharing economy has allowed idle resources to be used again and is known as a model for the new economy. Advances in network technology have allowed the scale of the sharing economy to be expanded through digital platforms. To our best knowledge, no studies in the literature have explored a pet boarding platform for the sharing economy. This research selected the emerging pet care industry as its scope and took the Rover.com pet boarding digital platform, with the highest market share in the world, as the research object for an intensive case study. Three types of secondary data analysis were used: industry profile analysis, case information, and papers and journals. The business model and value proposition of the platform summarizes the key to the success of digital platforms, which is expected to be helpful to entrepreneurs who want to create a sharing economy marketplace. The research results showed that the sharing economy needs to use digital platforms as a matching intermediary between supply and demand to establish a personal-to-personal transaction pattern and it also needs digital platforms to establish a sense of trust and a guarantee mechanism for participants in the sharing economy. For the digital platform to be profitable, it must identify the platform's unique value proposition and business model, and set up monitoring of transaction parties and evaluation functions, as well as insurance systems and digital platform IT support.

Keywords: sharing economy; digital platform; business model; value proposition



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### 1. Introduction and Research Objectives

The sharing economy is a new type of economy that was selected as one of the ten concepts that changed the world by Time magazine in 2011. Emphasizing the sharing economy is the current trend in the world. American market research firm Juniper Research has shown that the market size of the global sharing economy in 2021 was 186 billion dollars, and by 2022 should reach 402 billion U.S. dollars. The sharing economy has several characteristics, namely network collaboration, social commerce, the concept of network sharing, and consumer ideology [1,2]. Thorne and Quinn [3] proposed that sharing involves a wide range of activities, so that sharing activities encompass the groupings of gratuitous versus non-gratuitous, formal versus informal, monetary versus non-monetary, and commercial versus non-commercial. These characteristics all require user penetration, communication, and coordination through a digital platform on the internet, so that the supply and demand of users and the mutual transaction between buyers and sellers can be obtained from each other. This is an alternative network innovation model that benefits both parties. The reason that it may gradually become popular in today's society is that it is expected to become the current model of the new economy [4,5]. Matchmaking deals on digital platforms have thus expanded rapidly.

The sharing economy has been widely reported by The Economist, in an article titled "The Rising Sharing Economy" that emphasized the way that this economic model communicates and coordinates through the internet, so that users can obtain what they need from

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each other, and in so doing create a form of economic model. Innovative sharing service models and business models rely on the bilateral targeting of customers, using digital platforms to engage in bilateral matchmaking transactions. Internet users can exchange idle resources, such as labor or goods, and can even share knowledge and experience. Providers and consumers who are willing to provide goods and services can conduct transactions through online platforms, so that idle resources and physical objects can be transferred, so as to achieve mutual cooperation and mutual benefit. In today's internet age, where the internet has become the center of life, the scale of the sharing economy model will surely expand. Moreover, in the current economic downturn, most people hope to reduce excess expenses, consumers expect to obtain what they need at a lower price than the market price, and suppliers want to sell excess household or idle items as well as their time to provide labor. If it is possible to use IT technology to develop a digital platform at an appropriate time, the goods and services provided by the supplier can be placed on the platform, while the digital platform provider is able to provide an online platform to match the transactions between the two parties. The significance of the sharing economy is its benefit to providers, consumers, and digital platform operators.

The sharing economy can operate in almost any aspect. Whether it be food, clothing, housing, transportation, or living needs, all can be provided through companies in the sharing economy model, such as Airbnb, Uber, and so on. Airbnb is able to provide users with a variety of unique and ideal places to stay, in addition to hotels. Uber is able to provide passenger acceptance services, so that service providers can make profits and service users can save ride costs and both parties can benefit. However, few people have discussed business opportunities in the pet market, a market for which services can also be carried out within a sharing economy model. The pet service market in the United States has a scale of more than 10 billion US dollars. The sharing economy is an innovative service model that can be applied to pet business opportunities. It helps owners to reduce the burden of caring for pets at home and directly improves the lives of pets. Rover.com is ranked as the top pet boarding platform, far surpassing other pet boarding platforms in reaching 40% of the pet boarding market in the United States.

However, to our best knowledge, no studies in the literature have explored pet boarding platforms within the sharing economy. This study attempted to intensively explore Rover.com through its business model to understand the sharing economy, as it expands from food, clothing, housing, and transportation to pet services. This study examined these new economies through an examination of the value propositions presented by digital platforms in order to summarize and explore the key factors behind the success of the pet boarding digital platform within the sharing economy.

The pet market will grow rapidly in the future because of the aging population, the increasing number of single people, and the changing demographic structure of society. As more people treat their pets as children and place their emotions on them, the demand for pet-related products grows. There has an increase of about 40% in pet-related consumption every year, but e-commerce related to pet services has been relatively less studied and discussed. This study used the Rover.com pet boarding platform to understand how the sharing economy is integrated with digital platforms, and how platform users, namely service providers and demanders, can conduct matching transactions through this platform. We examined the operating model of consumers, providers, and third-party digital platforms, and determined the business model and value proposition maps. Through this study, the business model and operation mode of a pet boarding platform and the multiple value adjustment of a digital platform were discussed in order to provide a reference for digital platform operators in the sharing economy. The research objectives of this study were as follows:

- 1. Examines the value proposition and business model characteristics of pet boarding digital platforms under the sharing economy.
- 2. Analyze and summarize the key to the success of pet boarding digital platforms under the sharing economy.

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3. Since this study employed the case study method and theories of business model and value proposition map, the whole process of events and situations and their related factors of case study and all business model and value map components must be detailed, resulting in the increasing number of pages and intensive case study methodology for the Rover.com pet boarding platform.

#### 2. Literature Review

#### 2.1. Sharing Economy

The concept of the sharing economy was first introduced by American scholars Felson and Spaeth [6] in the American Behavioral Scientist journal, publishing a research report on Community Architecture and Collaborative Consumption, which was then called collaborative consumption, originally referring to the sharing of the right to use items through groups and integrating common resources. It is a concept of renting instead of buying and using instead of owning [7–11]. At present, the term sharing economy can also be interpreted as a peer economy, cooperative economy, and on-demand economy, etc. The focus is on mutual cooperation between supply and demand [9,11]. Hamari et al. [3] explained that this economic model is obtained through the activities of matching services through online communities, providing or sharing the rights to obtain goods and labor services to the demanders, and avoiding the exploitation of middlemen, and the sharing economy can alleviate social problems, such as the phenomenon of excessive consumption. Since it is a matchmaking transaction on the Internet, it is also regarded as a part of e-commerce [10–13].

Matofsk [14] put forward a very broad definition of the sharing economy: the sharing economy is a socio-economic ecosystem built on the sharing of human and material resources. It involves the shared creation, production, distribution, trade, and consumption of goods, and can serve different people and organizations. Goudin [15] argued that the sharing economy includes the following aspects: exchange, collective procurement, cooperative consumption, shared ownership, common value, cooperatives, co-creation, recycling, redistribution, trading of used goods, leasing, borrowing, cooperative economy, recycling economy, peer-to-peer lending, social media, social enterprise, crowdfunding, open source, open data, and user-generated content. This definition has two important characteristics. First, the sharing economy is considered to reduce the waste of underutilized assets, so that assets can be used again through the leasing model. Secondly, through technological breakthroughs, the transaction costs between suppliers and demanders can be reduced.

Botsman and Rogers [16] stated that the sharing economy is divided into three types as follows: (1) product service system: users do not need to buy goods or own goods, but they can use goods; (2) redistribution market: second-hand items are resold and reused; (3) collaborative lifestyle: people with common living habits and interests gather to share idle resources. The sharing economy makes social resources no longer wasted due to repeated use, because users can use items by leasing. The sharing economy approach allows those who have assets or the ability to provide services to generate a second income, and even allow people who have no income temporarily or a fixed occupation to obtain income through this method.

Hamari et al. [3] stated that the sharing economy creates benefits for consumers, providers, and intermediaries. The sharing economy must be created by specific demanders and specific providers. It is an economic system in which players and intermediaries who carry out matching services work together to cooperate. It can be inferred that the sharing economy can benefit all three parties, namely demanders, suppliers, and matchmakers.

According to the estimates of PWC (PricewaterhouseCoopers), the sharing economy services represented by Uber and Airbnb are showing increasing interest, and the report clearly points out that trust, convenience, and community awareness are the factors driving the sharing economy forward (Finance New Paper, 2015). Convenience, engagement, and trust are the main drivers behind the growth of the sharing economy, which currently

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have a combined revenue of around USD 15 billion for companies in the sharing economy services business, which will grow to USD 335 billion in the next decade. This new economic model is indeed as predicted by PricewaterhouseCoopers (PWC), with a huge growth rate and benefits. As long as factors conducive to the sharing economy appear, the development of this economic model will be promoted. The reason for the rapid growth of the sharing economy is that information technology is the key driving force of the sharing economy and the development of the Internet, mobile devices, and digital platforms have helped these self-employed individuals to obtain many services, and technological progress has enabled ordinary individual users to achieve peer-to-peer economic transactions. These transactions were previously impossible without the support of technology. Therefore, the advancement of information technology and the rise of the Internet and digital platforms will also be related to the development of the sharing economy. In addition, evolving economic behavior is also favoring the sharing economy, with the financial and economic crisis since 2008 having a significant impact on the purchasing power of the average household. More and more people are looking to save money and generate additional income. Today, there are many studies pointing out that many consumer products only take a fraction of time. There is also the rise of environmental awareness with the intention to reduce wasteful behavior in society, and to use any asset effectively through more and better methods to make the best use of them [9].

The European Parliamentary Research Service estimated that the global revenue generated by the sharing economy will reach 20 billion Euros in 2023 and is expected to exceed \$110 billion in the next few years. It is undeniable that this economy is experiencing almost unprecedented growth and is growing at an incredible rate. The growing phenomenon of the sharing economy is not only in small innovative startups; large companies have also realized that this new economic model affects many industries, and this new consumption model challenges the entire trade chain. Large traditional groups are now investing in the sharing economy and buying and investing in sharing economy startups.

Laudon and Traver [17] considered that e-commerce is the activity of conducting business transactions between organizations and individuals through the Internet. Rayport and Jaworski [18] stated that if the transaction objects are used to distinguish, the e-commerce can be roughly divided into four types: business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer (C2C), and consumer-to-business (C2B). The narrow definition of the sharing economy in academia is such that sharing economy should only include consumer-to-consumer transactions, not business-to-consumer transactions [7]. It refers to that the transactions between consumers and the digital platform are responsible for managing and compiling information. C2C e-commerce emphasizes that consumers use digital platforms to find suitable goods and services, while the other party provides goods and services.

The Internet era has enabled people to connect with each other online through digital platforms and to conduct transactions involving goods and services, and the transactions are more secure and transparent. Suppliers and intermediaries use the sharing economy to transform into new business models and provide innovative services. The sharing economy requires digital platforms to act as intermediary institutions. According to Giaglis et al. [19], as an intermediary institution, it is necessary to achieve market transparency, pricing, and implementation of transactions and supervision mechanisms. The consumers of the platform can understand the services they need, and can use the price and content on the platform to compare and obtain services or products through the digital platform. Further, consumers are willing to pay digital platform operators to use the platform's services, because digital platforms provide additional services to support consumers in sharing resources [20]. The digital platform thus reduces the risk of the provider and increases the mutual trust between the transaction parties. Finally, the quality of consumers' evaluation of the overall service can be based on the standards set by the digital platform, which also establishes a trust mechanism.

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The Sharing Economy TrustSeal system established by Sharing Economy UK in cooperation with the SAIS Business School of Oxford University aims to develop a global standard Kite Indicator of TrustSeal for sharing economy companies, and enable sharing economy participants to increase trust in reputable sharing economy businesses [21]. This system is the first indicator of sharing economy companies, sets global standards for sharing economy businesses, and ensures that sharing economy companies are honest, trustworthy, professional, reviewed, and shared. Through this system, the certification of the trust seal allows service providers and consumers to be consistent and formulate performance standards, as shown in Table 1.

	Performance Standards	Audit Implementation Object
1	Identity Verification	All users who trade on the digital platform
2	Criminal and Background Checks	All users who trade on the digital platform
3	Education and Employment History Checks	All users who trade on the digital platform
4	Clear and Transparent Communication Channels	Digital platforms should provide good and transparent communication channels for both parties (suppliers and demanders).
5	Customer Help and Support	Digital platforms should provide customer support and services for both parties transacting on the platform.
6	Secure Payments, Clear Pricing and Refunds	The digital platform needs to provide a secure payment mechanism and accurate price information and a refund mechanism.
7	Insurance and Guarantees	The digital platform should provide providers and demanders with transaction insurance and assume responsibility for guarantees.
8	Data Protection	Digital platforms should protect the personal information of users of all platforms.

### 2.2. Business Model

Morris et al. [22] et al. considered that at the most basic level, a business model is only defined in terms of a company's economic model and a business model focuses on how to create value and generate profits. The business model proposed by Osterwalder and Pigneur [23,24] defined it as the means and methods that describe how an organization creates, transmits, and acquires value. Zott et al. [25] discussed the recent development of business models, defining that a business model has become a new unit of analysis, using a systematic approach to explain how an enterprise creates value, and a business model has become an indispensable and important role for an enterprise. The reason why the business model is important is that a successful business model can connect the technological capabilities and the realization of economic value of the enterprise with each other, and the enterprise can lead the profitability of other companies through an effective business model [26].

Morris et al. [22] thought that thought business models are highly emphasized in entrepreneurial practice, researchers have not given them much attention, and there is no consensus on the definition, nature, structure, and evolution of business models. There is still hope that the model will become a unifying unit of analysis that can contribute to the development of entrepreneurial theory. However, scholars still have different opinions on the definition and types of business models. Some of the proposed business model structures are too complicated and not easy for everyone to understand. Besides, more precise planning of a company's profitability requires an understandable business model.

Osterwalder and Pigneur [23,24] explored innovative business models and proposed a broader concept of the business model, showing how a company makes money through nine components. These nine components cover the business model through five key areas

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of operation: customers, value propositions, goods or services, infrastructure, and financial status. Through the presentation of visual charts, it is easier to help companies adjust and understand their profitability through their nine-component business model canvas.

The business model canvas consists of nine components, which are customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure [25–28]. It shows how a company makes a profit through nine key factors, including the company's customers, goods sold, infrastructure, and financial systems, as shown in Table 2.

Table 2.	The nine	components o	f a	business	model.
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Constituent Elements	Definition Elaboration	
Target Audience	There may be one or several hierarchical categories and several	
rarget Addience	customer groups.	
Value Proposition	Identify market differentiation, solve customer problems, and	
Value Proposition	meet customer needs.	
Path	Communication, distribution and sales channels with customers.	
Customer Relationship	Build and maintain relationships with each target audience.	
Revenue Stream	The revenue the company receives from its target audience.	
Voy Posourges	The most important asset to make a business model work.	
Key Resources	Provide and deliver the assets required for the above elements.	
	The most important thing a business must do to make its	
Key Activities	business model work. Key activities are required to create and	
Rey Activities	deliver value propositions, go to market, maintain customer	
	relationships, and generate revenue.	
	In order for the business model to operate, an enterprise needs a	
Key Partnerships	network of suppliers and partners that can reduce risks, or the	
Rey l'artiferships	enterprise lacks resources and needs to rely on external partners	
	to obtain resources.	
Cost Structure	Each business model component will have costs and expenses,	
Cost Structure	thereby forming a cost structure.	

The business model canvas was designed and implemented in the context of a specific enterprise, which helps entrepreneurs have a more adequate and in-depth understanding of the external industrial environment of the enterprise. It can also assist enterprise managers to come up with stronger and more competitive business models, evaluate the impact of external forces, and analyze external forces from the inside—out. In addition, the pros and cons analysis method SWOT (Strengths, Weaknesses, Opportunities, and Threats) can be used in combination with the business model. Using the four perspectives of SWOT to evaluate the nine components of the business model canvas, the results of the evaluation and analysis of the components can be used to design new business model options for the future direction of the company's operations. Scholars also suggest that the original business model diagram can be used as an extension of the blue ocean strategy to explore the existing business model and create a more competitive new model.

#### 2.3. Value Proposition Map

Osterwalder et al. [23,24] put forward a value proposition, emphasizing that companies need to think and design the indispensable needs of customers in order to truly determine the profitability of business models. It also emphasizes that business models and value propositions must complement and validate each other. It is believed that organizations use business model diagrams to find customer value propositions, and there are often inconsistencies or gaps, and then develop the thinking framework of value proposition diagrams [29]. For simplicity, identifying the key issue in every successful business model diagram aims to create value for the customer, which means that a value proposition is a promise worth delivering to customers and the main reason for attracting potential customers to buy business goods or services. The value proposition needs to explain to the customer how a product or service can solve their problem or improve the their situation,

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and the most important thing is to create a unique differentiation, i.e., informing the customer why they should choose your company's products or services rather than choosing competitors' products and services.

The first step in customer sketching is to select the target audience, followed by defining customer tasks, customer pain points, and customer benefits [30]. Tasks refer to the ones that customers are expected to accomplish in their daily life. Tasks need to be prioritized according to the customer's mind. The pain point description aims to outline the difficulties, risks, and negative consequences that customers experience before completing a task. Benefit is the ability to describe the outcome the customer wants or the benefit sought. The three elements in the customer sketch are arranged in Table 3.

**Table 3.** Elements of the customer sketch.

Constituent Elements	Definition	Illustration
Customer Job	<ol> <li>An important problem that a customer is trying to solve at work or in life or a need they want to meet.</li> <li>Tasks a customer wants to perform and accomplish. Work to be completed.</li> </ol>	<ol> <li>Functional tasks: accomplish a specific task or solve a problem.</li> <li>Social tasks: the personal image customers want maintain in the outside world.</li> <li>Personal/emotional tasks: the specific feelings, e.g., feeling safe and secure, that customers seek.</li> <li>Auxiliary tasks: auxiliary tasks that customers need to complete in the process of consumption.</li> </ol>
Pain Points	Negative emotions, difficulties, risks, costs experienced by customers before, during, and after task completion	Customer pain points can be divided into three categories:  1. Unwanted results, problems, and characteristics: functional pain points, social pain points, emotional pain points, and any characteristics that customers do not like.  2. Obstacles: things that make it impossible for the customer to start a task or slow down their progress.  3. Risks or Unwanted Outcome: the possibility that something could go wrong, or have serious consequences.
Gains	The interests and wishes of the customer, which may be personal, functional, or economic, including positive emotions, functional requirements, or specific cost savings.	<ol> <li>Necessary Benefits: Features that the solution can never have.</li> <li>Expected Benefit: The customer expects the benefit that the solution will provide along the way.</li> <li>Benefit-Craving: A feature or benefit that customers will fall in love with beyond basic expectations.</li> <li>Unexpected Benefits: Benefits beyond the expectations and desires of customers.</li> </ol>

The customer sketch describes the characteristics of the target audience through three elements, and the company can thus observe and deduce the customer characteristics according to the customer tasks, pain points, and benefits in the customer sketch. When

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the customer sketch is completed, the enterprise needs to think about what products or services to propose to solve the problems of the target customer and create benefits. The elements of the value map are shown in Table 4.

Table 4. Value map components.

<b>Constituent Elements</b>	Definition	Illustration
Product and Service	List all products and services available to customers	<ol> <li>Products and services allow customers to fulfill their needs. The necessary procedures need to be ranked according to their importance to the value proposition.</li> <li>May consist of different types of products and services.</li> </ol>
Pain Relievers	Describe how products and services solve customer pain, and clearly explain how customer pain is eliminated or reduced while the job is being done.	Focusing on particularly serious pain points, the solution does not provide solutions for every pain point, but only for the most serious pain points in the minds of customers. The importance of the solution to the customer needs to be ranked.
Gain Creators	Describe how the products and services provided create customer benefits. How companies create customer expectations, or unexpected benefits, including functional utility, social benefit, positive sentiment, cost savings, and more.	Create benefits for customers and sort them according to their importance to customers.

#### 3. Research Methods

### 3.1. Case Study Method

Yin [29], Douce [31], and Olsson et al. [32] and Garcia Portilla [33] proposed that the case study method is a kind of empirical research. Among the five qualitative research methods such as experiments, investigations, document analysis, history, and case strategies, three research strategies can be based on forms of research questions: whether it needs to be manipulated in behavior and events, and whether the research focus is on the current problem to measure.

It can be seen from the above that case studies particularly focus on the whole process of events and situations and their related factors. Case studies focus on the how and why research forms. Case studies also do not need to manipulate variables in behavior and events, and focus on the events at the time, which is more flexible. According to Yin [34], Douce [31], and Olsson et al. [32] and Garcia Portilla [33]'s suitability of case study strategy, the case study method does not need to control variables in behavioral events, and the research focus is on the current problem, only exploring how and why the event happened, so it is more flexible. The sharing economy is currently regarded as a new type of economy, and the economic model needs to be expanded through digital platforms. Because of the size of the pet market, business opportunities continue to grow every year. In terms of the changing demographic structure of global society, it is already facing the trend of aging and low birthrate. In the future, more families and single people will choose to keep pets to accompany them. This study thus focused on whether the digital platform under the sharing economy has the key factors to be successful, and the case study was used as the research method of the pet care market under the sharing economy.

Yin [21], Douce [31], and Olsson et al. [32] and Garcia Portilla [33] also proposed three methods of case selection. A critical case challenges a hypothesis or theory; people usually

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choose a critical case after deep thought and confirm it based on the evidence that is likely to arise from the hypothesis or theory of case. A unique case is selected based on the researcher's own preferences. The case presents some unique characteristics that allow the researcher to understand the nature of the case in detail. A revelatory case provides novel ideas and generates emerging ideas. This case can reveal a lot of information and provide researchers with in-depth observation and analysis.

At present, the leader with the highest global market share of pet boarding platforms is Rover.com in Figure 1. Consumers Advocate [35] listed the best pet boarding platforms based on five items: platform scale, business type, insurance, reputation, and business policies. Rover.com is a key case that belongs to the case study method, and it is also the leading platform in pet boarding services in pet care. Rover.com used a sharing economy model to enter the pet market. Because Rover.com has the characteristics of a sharing economy market, this pet boarding platform was used as a case study.



Figure 1. Ranking of pet boarding digital platforms. (Access date: 25 October 2022).

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Through the literature, information collection, and arrangement of this case, this study should help us understand the development of digital platforms in the sharing economy and analyze the key factors for the success of the digital platforms in the sharing economy. Rover.com's pet boarding platform uses the concept of a sharing economy, mainly providing matching functions to match transactions between service providers and service demanders, i.e., matching dog owners and pet sitters. The services of Rover.com's pet boarding platform include Dog Boarding, Drop-In Visits, House Sitting, Doggy Day Care, Dog Walking, and other services.

### 3.2. Data Collection

Payne and Payne [36] explained that secondary data analysis is the reanalysis of previously collected qualitative or quantitative data by different researchers or experts. The key to using secondary data analysis is whether the data can be obtained; that is, the availability of data is an important key. In addition, it is necessary to consider the presentation methods of various data. For example, the types of data can be divided into news reports, financial report information, formal research and evaluation reports of the same case, and online media articles, etc. [37]. In this research process, the following three methods were used to extensively collect relevant data of the research objects and organize, summarize, discuss and analyze them, and formulate conclusions while further putting forward suggestions and future research directions. The three types of secondary data analysis are as follows:

- **1. Industry Profile Analysis**: American Pet Products Association, Sharing Economy UK, PricewaterhouseCoopers, and Euromonitor Information Consulting Ltd.
- 2. Case Information: For case data collection, we mainly used the Rover.com website and fundraising information platforms such as CrunchBase, news media observation reports news media, social networking sites, Google play, App Store, and TRUSTPILOT, etc. The content includes the development stage and current situation of the case, the content of the service provided by the platform, and how to improve the usage of both the supply and demand sides.
- 3. Papers and Journals: Literature collection, including books, journals, studies, and research papers related to investigation reports. The searches were performed through the following systems and platforms: Ph.D. Dissertation, Google Scholar, Proquest, and European Parliamentary Research, hoping to increase the background of the development of the sharing economy model and the type of digital platform, the current situation, and the impact on its operation.

The data of the abovementioned data sources were supplemented by different types of information sources such as the data content of the database, for this case, to form a complete data analysis chain.

#### 3.3. Research Process

Our research structure began with understanding the current development status of the sharing economy and related issues, and then understanding the industrial background and target customer group of the research case, further organizing and explaining the business process. Next, in order to gain a more comprehensive understanding of the value proposition of the case and the situation of digital platforms in the sharing economy, we also compiled the relevant requirements for digital platforms in the sharing economy from relevant literature, and used the value proposition map model to analyze and explore the value of the case. In order to clearly grasp the satisfaction and dissatisfaction of the target customer needs, the situation also needed to be adapted. Finally, this study summarized the key to the success of digital platforms under the sharing economy, and provided reference for other entrepreneurs who want to use the sharing economy model to develop related businesses.

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#### 3.4. Global Pet Market Overview Analysis

The changing demographic structure, aging, and low birthrate have become problems all over the world. The fertility rate is getting lower and lower. More and more families, single people, and top customers are choosing to own pets instead of having children. According to the relevant report of the National Bureau of Statistics of China, there are about 55.3 million pet dogs in the United States, 35.7 million in Brazil, and 27.4 million in China. The IBISWorld study pointed out that the increasing number of pet owners is a key factor in the growth of the pet market and that the household or single population with pets is growing at a rate of 2.2% per year. It is expected that the number of households or singles with pets will continue to increase, and there will be more demand for pets to accompany. According to a study by the American Pet Products Association (APPA), the revenue of the pet industry was estimated at USD 69.3 billion in 2016, an increase of more than 4% compared with the previous year 2015. With an average annual growth rate of 5.4% since 2002, the pet market's revenue has maintained steady growth for more than two decades [38].

According to an APPA (American Pet Products Association) research report, it was estimated that in 2017, pet spending in the United States reached as high as USD 69.36 billion. Obradovic et al. [39] put forward some entrepreneurial ideas for those who want to join the pet market for pet-related occupations:, such as pet sitting, dog training/obedience training, pet boarding, doggie day care, grooming, pet finding business, pet restaurants, pet food, pooch couture, pet taxi, pooper scooper, dog walking, pet bakery, pet boutique, and many other business ideas. Currently the services of the Rover.com.com pet boarding platform include pet placement, dog boarding, puppy day care, and dog walking.

#### 3.5. Case Introduction

Rover.com was established in 2011 with a similar sharing economy market model to that of Airbnb, being known as the pet industry Airbnb. Greg Gottesman, one of the entrepreneurial team, initially wanted to create a pet boarding platform. It was an entrepreneurial plan born out of the Startup Weekend competition, in which it won first place. The business model ensures that pet owners can have another option for pet boarding in dog hotels and kennels, so that boarding pets can also live happily in the dog sitter's house. In 2017, Rover.com.com acquired DogVacay in a stock transaction. The market share of the two companies accounted for 20% of the whole market share in the world. After the merger, they became a huge pet service company.

Rover.com and general e-commerce pet boarding websites do not operate pet-related businesses themselves. They use the economic model of the sharing economy to develop a digital platform so that pet sitters and dog owners can match and transact on the platform. When the dog owner is away from home for many days, they can also choose a short-term trip for the dog at home, choose a house for the dog, and choose a dog sitter for the temporary owner, or even a dog companion, without having to send it to pet hotels, kennels, or dog cages for several days. It is hard to believe that this kind of sharing economy model that does not rely on people's food, clothing, housing, and transportation can work, but Rover.com has quickly become popular in the United States and has become a multinational e-commerce platform around the world.

According to Rover.com's strict review system, the passing rate of pet sitters approved by the company is less than 20%, and the dog owners who accept the matching service are more than 95% satisfied with the dog sitter's reception of their dogs. In addition, Rover.com also provides an insurance system. Any transaction made on this digital platform will be guaranteed by insurance. The digital platform currently provides five kinds of services, including pet boarding, family babysitting, door-to-door care, as well as the owner's family-friendly care and basic dog walking services at work. Basically, pet sitters have no license requirements, but must pass Rover.com's review. Service providers who are willing to provide labor services can use their spare time to be employed by dog owners to share the labor of taking care of pets and earn extra income.

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Rover.com services provided on the platform include two parts, as shown in Figure 2. When the dog owner needs to be away from home for a few days, Rover.com can provide dog boarding, family babysitting (House Sitting), and drop-in visits for dog owners. The other part is that Rover.com.com provides doggy day care and dog walking services when the dog owner goes to work. According to the area or address (zip code or address), customers can choose a nearby dog sitter, determine the required service days, and then, according to the size of the boarding pet weighed in pounds, distinguishing between small, medium, large, and giant body types, and find the best dog sitter to receive the case.

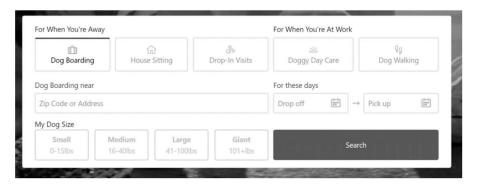


Figure 2. Services provided by Rover.com.

Dog boarding is a service for when the dog owner has travel obligations for a few days; the dog can be boarded at the dog sitter's house, and the dog owner can choose the number of dogs they wants to board, finding a person who is willing to treat the dog as a member of their own family, as shown in Figure 3. If the customer's dog likes to stay at home, they may ask the dog sitter to come to their house to take care of the dog. Door-to-door visiting care means visiting a customer's home to take care of their dog. If the customer's dog suffers from separation anxiety, a dog sitter can also be present during times at which the owner cannot be at home, e.g., during work. Doggy day care means that when the dog owner goes to work, the dog is temporarily deposited with the dog sitter during working hours, which can be fixed for several weeks from Monday to Sunday. Dog walking is to help the customer share their main role and obligations, and lets the customer's dog go out when they are preoccupied.

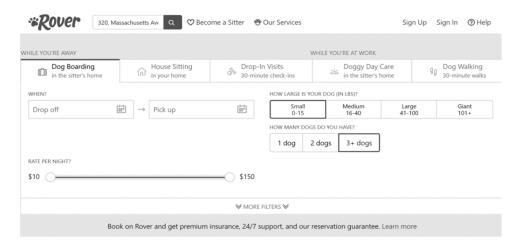


Figure 3. Rover.com search function. (Access date: 25 October 2022).

The personal information of the dog sitter includes the sitter's photo, name, personal profile, rating stars, and customer reviews, while clearly showing the price of the selected service. There is a map showing the location of the first- and second-ranked dog sitter on the right, so that the dog owner can clearly evaluate which distance is more suitable;

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some dog sitter information is shown regarding whether they receive a customer's dog on special occasions such as New Years, as shown in Figure 3.

To become a dog sitter on the Rover.com platform, applicants must pass a certification exam, the pass rate of which is only 20%. All dog sitter applicants who want to enter Rover.com to engage in pet care services must undergo detailed background checks. Dog sitter applicants approved by Rover.com to provide services on the platform must then submit detailed autobiographical and personal information. Nothing is approved automatically by the system, but only after background review and strict screening by experts hired by Rover.com. In addition, all dog sitters must accept the dog sitter professional course offered by the Rover.com team, and provide 24-h veterinary assistance so that these pet caretakers can consult at any time if they have questions when caring for pets. In addition, Rover.com also put forward a performance commitment in the reservation guarantee, indicating that although the temporary cancelation of the dog sitter's care or dog walking service rarely occurs, the dog owner may use Rover.com's reservation service within 7 days. If the situation occurs, Rover.com will process a full refund first, and will then help find a new pet sitter on the customer's behalf. A 24/7 customer service line is also available for pet owners, and Rover.com provides additional insurance to ensure each customer rights when dog sitters are caring for their pets.

### 4. Business Model Analysis

This study summarized Rover.com's business model from relevant literature and data and then discussed and analyzed them one by one as follows.

### 4.1. Target Customers

Rover.com is a typical pet care platform operated as a sharing economy model, and the target customer group comprises two groups; that is, pet owners and pet sitters. However, the services differentiated according to the Rover.com website are based on two categories of dog owners who need to leave home and cannot accompany their dogs at home and cannot accompany and take care of their dogs at work. The primary customer group comprises dog people who treat their pets as children. Another target customer group is dog sitters, because 20% of Rover.com's revenue comes from the service fees paid by the dog owner to the dog sitter, and each successful transaction can accrue benefits, so it needs a lot of cooperation. The service provider is required by pet owners and the dog sitter provides services so that dog owners can search for suitable dog sitters and carry out the corresponding transactions. Rover.com charges network platform usage fees, which is another of Rover.com's sources of revenue.

### 4.2. Value Proposition

Rover.com's Logo is a dog footprint, and text reads "We're The Dog People", indicating that the company comprises a group of dog lovers, as the world's largest pet care platform and the top five-star rated dog sitter and dog walker website

# 1. Regional Search: Pet Boarding is Convenient to Quickly Find a Pet Sitter Close to Home

Rover.com provides detailed personal information of dog sitters. Regional display can help dog owners to quickly search for find the dog sitter closest to their home, and also to mobile applications. The Rover.com Card and the online booking function save communication time between every house calling and asking for details such as availability, and there are hundreds or thousands of dog sitters who provide a loving and homely environment.

# 2. The Qualifications of Dog Sitters are Strictly Reviewed By Experts, and Can Refer to The Customer's Evaluation of the Dog Sitter Service

Rover.com's dog sitters need to be reviewed and approved by experts, which is one more certification system than the general kennel and pet hotel operators. Customers can

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also learn about the actual situation of using this pet sitter service in the past through customer reviews. These two systems are more credible than temporarily searching for kennels or pet hotels on the Internet.

In addition, Rover.com also first check the environment of the pet sitter's home to confirm whether it is suitable for boarding a dog, so that the pet owner's dog can live comfortably and safely. Rover.com shared the burden of taking care of pets, and first screens and checks the first-level accommodation environment for pet owners. The stricter requirements for dog sitters also allow pet owners to trust the dog sitter on the Rover.com platform. Owners will therefore be much less worried about the problems of dog boarding.

## The Pet Sitter Has Flexible Working Hours, and Engages in Interesting and Meaningful Work

Rover.com hopes to find dog sitters that are dog lovers. They use their spare time to take care of dogs and help the owner's dog to receive proper boarding and care. Dog sitters can use the Rover.com mobile app and Internet function to schedule their time to work, so that the dog owner can send the needs of the service to the dog sitter. Rover.com has a huge customer base on the Internet, eliminating the advertising and marketing expenses of dog sitters who want to start a new business. Rover.com continues to train dog sitters and provide a 24/7 support team. When the dog sitter encounters pet dog boarding problems, customers can call and ask for the veterinary assistance provided by Rover.com.

#### 4. Pet Sitters Only Accept a Small Number of Pets, and Can Take Care of Dogs

When a dog is boarded in an unfamiliar environment, it will be very cared for. Moreover, if the caregivers of pet hotels and general kennels usually need to take care of a large group of pet dogs, it is inevitable that pet sitters can pay more attention and care to the boarding dogs through Rover.com. Pet sitter can accommodate up to one pet owner at the same time in Rover.com (up to three pet dogs). When a pet shop or pet hotel receives a large number of pets, it will cause the dog to move or become uneasy. If some dogs are more aggressive and pet sitters are not careful, the pet may be injured. Some older dogs and pets with limited mobility need more attention and company from caregivers than shy dogs.

# 5. The Boarding Fee is more Reasonable and Cost-Effective Than the General Kennels and Pet Hotels, and the Dog Has a Wider Space for Activities

The cost of using a pet sitter for boarding in Rover.com is 15% less than or even half the price of boarding a pet in a kennel or pet hotel, depending on the service price of the dog sitter. When the dog owner goes out, they can only put the dog in a pet hotel and keep it in a cage, which is expensive and uncomfortable. Rover.com finds the price of short-term accommodation for pets and the dog does not need to be caged, and can freely enter and leave the dog sitter's home and garden. If the dog owner allows it, some dog sitters will even take the dogs to parks, mountains, and the beach to play, and let the dogs have a great time during this short stay.

# 6. Dog Sitters Provide a Variety of Services, and Dog Owners Can Choose Services According to Their Needs

The Rover.com platform provides services such as pet boarding, dog sitting, door-to-door visits, care, and dog walking. If the dog owner just wants to go to work, doesn't want to leave the dog alone at home, and also wants the dog to go to the toilet and run when he has to go out, he can choose the dog care and dog walking service. If the dog owner needs to go out and be not at home, they can choose dog boarding. Or, because the dog is accustomed to staying at home and is too nervous about unfamiliar environments, the dog owner can also choose a home sitter or visit. If the dog is sick and needs to take medicine, the dog owner can also ask a dog sitter to perform the necessary care. In addition, some dog sitters are qualified as veterinarians or veterinary clinic assistants, and they will also explain this in detail in their personal profiles. If the dog in the dog owner's home

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needs special care, Rover.com can also find a dog sitter with a relevant background and qualifications through the platform.

### 4.3. Customer Relationship

Rover.com is similar to Airbnb in the sharing economy. The channels used are the same as the website and have a 24/7 dedicated line service. Through these channels, customers can communicate service concepts and website users' experiences and information, delivering Rover.com's brand image and value proposition to dog sitters and dog owners. Some dog sitters also use YouTube to promote themselves in order to obtain more demand and orders from Rover.com dog owners. The customer relationship analysis of this study is shown in Table 5.

Table 5. List of Rover.com channels and customer relationships. (Access Date: 25 October 2022).

Channel	Customer Relationships and Characteristics
Rover.com.com	<ul> <li>☑ We call everyone Dog people and are willing to serve dogs.</li> <li>☑ The emphasis is on a sense of mission, entering the pet care market and making pets' lives better.</li> <li>☑ Focus on trusted pet sitters and dog walkers.</li> <li>☑ Provide detailed personal information of each pet sitter for the dog owner and the evaluation given by the customer, according to the price of the service function and the time.</li> <li>☑ Easy-to-operate 24 h network service, complete the operation by yourself.</li> </ul>
Mobile App	✓ Self-service mobile network service: complete the booking service by yourself and provide detailed introduction of the dog sitter's personal information and service fees for browsing. ✓ Dog owners can know their dog's boarding or walking status, location, and photos anytime, anywhere. ✓ The dog sitter can report the dog care information at any time ✓ Google Play and Apple IOS are developed.
24/7 Dedicated Line Service—+1 888-453-7889	☑ If the dog owner has any problems or disputes, they can notify Rover.com at any time, and ask the service personnel to provide assistance services. Rover.com also provides a 24 h dedicated line service. ☑ After the dog sitter is entrusted, if there is a pet health problem during the period, they can contact Rover.com through a special line, and they can ask Rover.com's professional veterinarians to provide assistance services at any time.
YouTube- Rover.com.com	<ul> <li>✓ Publicity: Rover.com advertising and value proposition, how to become a Rover.com dog sitter, and how dog owners use it, as well as how Rover.com finds dog sitters.</li> <li>✓ Introduce information about dogs. For example, how to train a dog, how to say hello to a dog you meet for the first time, and more.</li> <li>✓ Dog sitters use YouTube for filming promotional services.</li> <li>✓ Channel name: Rover.com</li> </ul>
Facebook and Other Online Communities	<ul> <li>✓ Promote Rover.com advertising and concept.</li> <li>✓ A variety of related dog videos and information sharing.</li> <li>✓ Uses the scalability and cohesion of online community software to attract more fans and become an online community.</li> </ul>

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Rover.com attaches great importance to the concept of the brand, whether on their website or Facebook, YouTube, Pinterest, Twitter, Instagram, and so on, continuing to promote the core concept. Rover.com uses various media such as video files, pictures, and online articles, etc. to present topics of interest to dog lovers in these channels, and then encourages these online communities to attract these dog lovers to join Rover.com's dog sitters or let the dog owners use Rover.com to book dog sitting services. From the very beginning of the business, Rover.com wanted to take good care of dogs, and let these dogs be regarded as friends and family members. Rover.com has also developed multi-level customer relationships on both sides, including interacting with fans through online communities, continuously providing fresh information about dogs, and sharing common interests with community fans, such as sharing the personalities and preferences of various types of dogs. For example, Chihuahuas are smart, loyal, and fierce, and flower names may be used to name pets at home. "What is the best style of harness for a dog" and "what kinds of toys should I buy for my dog" are also questions that may be answered on these platforms. Moreover, it was revealed on Facebook by the way that if the fans happen to have a puppy or want to celebrate the birthday of a friend's dog, etc., they can consider Rover.com's gift cards. Or, when a dog owner asks an expert to introduce the most suitable toys for their dog (such as the functions of training intelligence, grinding teeth, etc.), they will help readers attach the links to these toys at the end of the article.

The Mobile App Self-service also allows dog sitters and dog owners to communicate and interact with each other using mobile devices. Dog owners inevitably feel a little uneasy about unfamiliar dog sitters about fostering and caring for dogs. Through the mobile app, the dog sitter can update the boarding or care situation to the owner at any time, and quickly respond to direct contact with the dog owner. In addition, GPS tracking will also be attached, allowing dog owners to find out where their dog is anytime and anywhere.

Dog owners can also contact the customer service staff through the 24-h dedicated service line. If the dog sitter has been entrusted, but temporarily refuses to take care of dogs, Rover.com will take responsibility and find the next qualified dog sitter. The price is higher than the original price, and Rover.com will also deal with the middle price difference, so that dog owners can trust Rover.com's matching system. In addition, for dog sitters, Rover. com also provide 24 h veterinary consultation services throughout the year, so that if the dog sitter encounters some care difficulties or the dog's health is temporarily out of order, emergency notification and handling can be arranged. Unlike general kennels or pet hotels, they are only open during business hours, and by the end of hours, the caregivers of the kennels or pet hotels have all left the workplace. Even the veterinary hospital is unable to find a line of contact for inquiries or emergencies during off-hours. Rover.com's 24 h service is truly reassuring, allowing customers to know the pet boarding situation through the telephone line or mobile app, and conveniently obtain the latest dog information from familiar dog sitters. On the other hand, dog sitters and Rover.com's assistance respond quickly to meet the customer's service needs, and also care about the follow-up situation of the dog sitter and the dog, so that bilateral customers feel more cordial and valued.

### 4.4. Key Resources

#### 1. Digital Platform Supporting the Sharing Economy Concept

The original idea of Rover.com was to let dog owners have an alternative to dog farms and pet hotels, and to allow more reliable dog caregivers to join in, so as to reduce the psychological anxiety of dog owners when they travel. Rover.com adopts a group self-service approach for dog lovers. Dog lovers provide labor in their spare time, rent labor services, and earn income by taking care of other people's dogs. Dog owners can pay less than boarding at pet hotels and dog farms and ensure their dogs are properly cared for. Rover.com also provides a communication channel for the dog owner and the dog sitter to communicate with each other, and the fee is set by the dog sitter, which is similar to the Airbnb type of digital platform. On the Rover.com platform, customers can choose to book the service time of the dog sitter. After placing the order, the customer can make a secure

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transaction payment on the platform. After the whole service is completed, the dog owner can go to the platform to evaluate the dog sitter service on a rating scale ranging between one and five stars.

Rover.com developed the Rover.com Card app in August 2016, which allows dog sitters to use this app to communicate with dog owners more easily anytime and anywhere. The Rover.com Card records the dog's walking time, size, and time of eating and drinking in detail. After each visit and care such as housekeeping, dog walking, etc. is completed, the Rover.com Card is sent out from the Rover.com mobile device app. In fact, every Rover.com Card sent by a dog sitter helps build trust and shows dog owners that a dog sitter will treat their dog like family. Sending a Rover.com Card with customer details is another way to manage the customer relationship between dog owners and dog sitters. On the one hand, it can let the dog owner know whether the dog sitter is working seriously, and it saves a lot of effort in communication, and the active notification has also won the dog owner's trust and goodwill.

#### 2. Brand

Rover.com is already the largest company in the pet care market around the world. Whether it is on social networks, platform websites, or media reports, Rover.com continues to promote its brand as a connection between dog owners and dog sitters who love their dogs. The operating market has been transnational from the United States to Canada, etc., becoming an international enterprise. More than once, Rover.com has emphasized that it is a group of dog lovers and makes good use of five-star reviews from customers who have used it. Dog owners gave it a perfect five-star rating after more than 95% of the reviews on the platform were for services booked through Rover.com. The key to brand expansion is to use the evaluations given by customers after using the service to potential customers as a reference. Perfect customer reviews prove that Rover.com Pet Boarding is trustworthy. Use community groups and media reports to form the power of active communication and quickly open up brand awareness.

The first condition for establishing this brand for Rover.com is the general background check of dog sitter, which needs to be reviewed by experts, and the pass rate is only 20%. They will also go to the dog sitter's house to confirm whether the environment is suitable for dog boarding. These certification conditions are all to ensure that the dog sitter who can provide services on the platform is trustworthy and confirms that the dog in the care is well cared for. All pet sitting services booked are also available 24 h a day, and provide secure online payment. If the service is temporarily canceled by the dog sitter, Rover.com will take over the responsibility for compensation and find the next dog sitter. Rover.com also provides veterinary consultation, a 24/7 team of trust and safety experts, a 24/7 mobile app, photo and video sharing, and extra insurance systems. They all greatly exceed the services that ordinary pet boarding platforms can provide, which is also the key to Rover.com's brand far exceeding other pet boarding platforms.

### 3. Third-Party Payment

Rover.com cooperates with PayPal and credit card companies, and payment needs to be completed by online payment, providing a convenient and secure payment channel. When the dog owner books a Rover.com dog sitter, after the reply has been booked, Rover.com will send the dog owner a bill, and the dog owner can pay online. All payments are made to Rover.com in advance; Rover.com will deduct 20% of the dog owner's payment to the dog sitter, and the dog sitter can request the rest to be transferred to their PayPal account or request a check.

When the dog owner is charged at the time of booking, Rover.com holds the funds until the service is complete. Within two days of completing the service, the dog owner will see their payment ready as processed in their Rover.com account. Rover.com uses PayPal to allow dog owners to pay directly for consumption, and to better manage accounting controls. The service fee charged will be debited directly, and there will be no subsequent failure to receive payment.

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### 4. Dog Sitter

The dog sitter can use idle time to provide services for the dog owner's dogs. When the dog owner goes to work, the dog sitter can help walk the dog and take care of the relatives. Dog sitters also must have a house suitable for dog boarding space and Rover. com will assess the environment according to this service. After the dog sitter is reviewed and certified, according to the five service options defined by Rover.com, they can set their charging services and set the service fee.

### 5. Dog's Owner

Dog owners are people who book services provided by dog sitters on the Rover.com platform. The dog owner can search for a suitable dog sitter according to the area where the dog sitter is located and the services provided, the price charged, the service time, and the size and number of dogs that can be received. Before booking the service, the dog owner can browse the customer reviews and ratings of the previous transactions with the dog sitter, and carefully read the dog sitter's personal information, and then choose to subscribe to accept the service or search for the next suitable dog sitter.

### 4.5. Profit Model

Rover.com provides a digital platform for dog sitters, allowing dog owners to browse the sitter's profile, providing services about dog care, and selecting the dog sitter that best suits the dog owner's search on the platform, regardless of region, fees, care methods, etc. and this dog sitter has been reviewed and certified by Rover.com. Rover.com's business model is to complete dog owners' booking services and money transactions from dog sitters on the Rover.com platform, which is the source of Rover.com's revenue from different customer segments.

### 1. Dog Sitter

Rover.com charges a service fee to dog sitters and charges a 20% service fee for each booking. The service charges the dog owner is an average of USD 30 per day. New dog sitters and dog walkers will be charged 20% of each booking. The newly launched Rover. com Go charges 25% of the service from each booking, because Rover.com Go provides assistance to the dog sitter to create a better personal information service, and arrange a meeting with a professional photographer to assist the dog sitter how to take good photos, increasing the search rate of dog sitters found by dog owners on the dog owner search page. Since Rover.com has a large customer base on the platform, the customer base is stable. Rover.com also provides various services for dog sitters, such as consultation on pet raising issues, 24 h consultation services throughout the year, dog sitter education courses, and veterinary consultation services. There are also guarantee clauses to enhance mutual trust. Continuously improve and innovate the functions of the platform website and enhance the user experience of the mobile app.

#### Dog's Owner

A standard service fee will be charged, but the total charge will not exceed USD 25. Rover.com will issue a full refund to the dog owner if the dog sitter cancels the appointment temporarily or if the dog owner cancels the booking before the first day of service. Rover. com has always emphasized that dogs are family members, and the safety of dogs is the top priority of this platform. On this pet boarding platform, there are comments and stars given by dog owners after being served by dog sitters. In addition, dog sitters also need to be reviewed and visited by Rover.com's special personnel. Rover.com provides dog owners with 24/7 dedicated line service, reservation guarantees, and pet insurance for dogs that are injured under the care of sitters or dog walkers.

#### 3. Advertisement

Rover.com introduces dog-related information, including shopping, on various social media. It specially introduces dog-specific toys, such as Barkbox, which gives a customer's

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dog a gift every month, emphasizing the joy that is passed on to the dog every month, and pampering the dog. In addition, there are pet sleeping boxes, clothes, and toys, etc., which can be directly linked to purchase websites, such as Amazon. For example, introducing toys with different functions suitable for dogs to relieve loneliness, train their intelligence, grind their teeth, and so on. If one have dogs of different breeds, such as French bulldogs, one will also be introduced related products with French bulldog patterns, for example, cosmetic bags, T-shirts, and baseball caps with French bulldogs printed on them; clicking on the link of each product image will also link to a different website, resulting in alternative revenue streams for pet boarding platforms.

#### 4.6. Cost Structure

Rover.com is very proud to be different from the average pet boarding company in providing insurance benefits, offering reservation fulfillment guarantees for dog owners, special insurance for dog sitters and dog walkers when pet boarding. Pet insurance for dog owners applies if the pet is in the care of a dog sitter or dog walker and an injury occurs. On the other hand, if the dog sitter or dog walker's existing pet comes into contact with the dog owner's boarding dog, it will also be covered if the caregiver is injured directly or the dog sitter and dog walker's pet is injured. For the Rover.com technical team, the current research and development mainly focuses on data analysis, continue to establish a relational data database service in the Amazon Web Services cloud, and employ market analysts and data analysts within the team, in order to provide Rover.com more useful information for users. Additionally, in Amazon S3 for AWS ECS and Lambda do a good job in the safe configuration of storage devices, and do a good job backing up data off-site. In addition, the improvement of mobile devices on Android and Apple IOS, the application of GPS tracking walking, and the combination of mobile devices and IoT technology allow users to use it more conveniently and instantly. The above is expected to provide customers more information and stabilize Rover.com's growth during the transformation process as Rover.com changes with the industry and the market.

Among year-round dedicated line service support and consultation from the veterinary team, dog sitter education and training courses, dog sitter special review and certification, and allowing users to use PayPal online payment, Rover.com's projects also cost them a lot of money. However, for Rover.com, it can make the best efforts for dog lovers and dogs improve and enhance the life of dog owners' dogs so that dog owners can rest assured that their dogs will be taken care of by dog sitters. Putting the safety of one's dog first, and ensuring that the dogs in the Rover.com service area are happy and well cared for even when the dog owner is not around, can also make dog owners live happier and more fulfilling lives. Rover.com follows the model of a sharing economy, completes the concept of dog lovers, takes dogs as the primary key, and more closely integrates the connection between users and their digital platform to meet the needs of users.

#### 4.7. Value Fit Analysis

This section uses interviews, questionnaires, and group focus methods in relevant papers and journals in recent years to measure dog owners' affection for their dogs. Attachment affects consumer demand and summarizes the dog owners' decision to influence consumption because they regard dogs as family members and emotional sustenance, as a reference for the analysis of the needs of the target customers in this study.

In recent years, studies have been performed on the impact of pet emotions on consumer demand. It is found that consumers who regard their pets as family members will define the pet's identity as a member of the family. For such consumers, the proportion of emotional factors will be higher than cognitive factors in pet health-related choices. Because pets do not have the same insurance coverage as people to pay for medical care, veterinarians are often paid more for medical care than doctors are paid for human medical care. However, such consumers are more likely to trust expensive pet medical expenses and feel a responsibility to provide the best medical care for their pets [40].

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Regarding the impact of pet identities on dog owners' related consumption decisions, Jyrinki [41] put forward a research report on consumer decision factors in pet-related consumption. The focus group method was used. With five to seven participants, the group consists of dog owners and close friends or relatives of dog owners. From the research, it is pointed out that there are six patterns related to pet-related consumption in the construction of the pet's identity, and the pet's identity is regarded as a source of happiness by the dog owner. Pet-related consumption behaviors provide dog owners with peace and relaxation. From this, it can be seen that if dog owners consume with the psychology needed to buy pets, they will feel warm. In this sense, having this kind of happiness seems to establish dog owner identity in a rather personal way. Dog owners care about how they derive satisfaction and happiness from purchasing the supplies their pets need. Additionally, by purchasing supplies for pets, dog owners can derive a good mood from this consumption behavior, and pet-related consumption creates a sense of happiness in the identity of dog owners.

In order to discuss customer sketches, it is necessary to conduct customer demand analysis. The dog owners' emotional attachment needs to pets described in the research are collected, and the content of the needs that pet boarding is concerned about is unified into specific needs descriptions, and then classified into customer sketches according to their nature. The three categories of customer tasks, customer pain points, and customer benefits help this study grasp the key points of dog lovers' needs for pet boarding and care services. First of all, we analyzed the user reviews that have used Rover.com in TRUST-PILOT. TRUSTPILOT is an online review business website and the world's largest online review community, as shown in Figure 4.

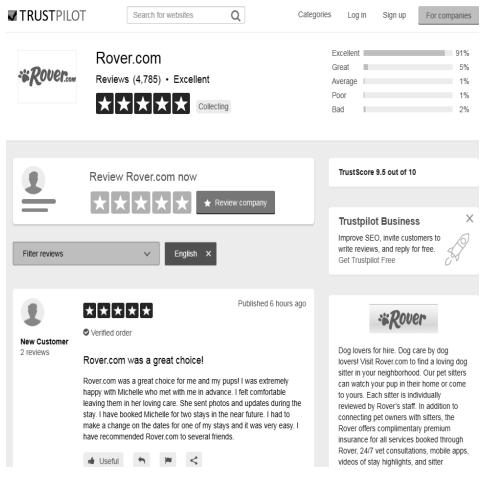


Figure 4. Rover.com customer evaluation service. (Access date: 25 October 2022).

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Customer tasks refer to the things they want to accomplish in work or life, including the work they wants to accomplish, the problems they are trying to solve, and the needs they wants to be satisfied. The types of tasks that customers want to complete are divided into functional tasks, personal/emotional tasks, and auxiliary tasks, as shown in Table 6.

**Table 6.** Dog owner customer needs—customer tasks.

Customer Tasks for Compilation of Related Research	Task Description	The Type of Task to Which It Belongs
A dog sitter who cooperates with the dog owner to walk the dog, take care of the dog during the day, and take care of it at home	Pet boarding operators can take care of pets requiring	-
Can accommodate elderly, sick or disabled dogs requiring nursing care.	special care.	functional tasks
Find pet boarding places and caregivers at all times.	24 h booking service	
Reasonable and affordable fees for boarding or services.	The cost is affordable.	-
Trusted Pet Caregiver		
Pet caregivers with vetted backgrounds	•	
Relevant pet care experience, e.g., veterinary assistant	If dog owners find information that is certified or	marsanal/amatianal
You can refer to the reviews and ratings of pet boarding operators.	rated for pet boarding operators, they can make more choices and feel more at	personal/emotional tasks
Find a suitable pet boarding environment and hope that the dog can be healthy and happy when the owner is away.	ease.	
The location of pet boarding operators, service items, and prices can be clearly listed on the website, making it easy to compare and make decisions.	Summarize pet boarding business information to help you decide.	
Pet caregivers who keep in touch and report the status of pets from time to time.	Always keep in touch and send back pet information, you can also check the pet status immediately.	auxiliary tasks
Easy to use website to book pet boarding and pay online.	Easy to use booking service and payment	
Provide 24 h a day, year-long, round-the-clock dedicated service.	If you have any questions, you can always get in touch and get assistance.	

Benefit refers to achieving the results and benefits that customers want, and some benefits are expected and persistent by customers, and some are beyond expectations. Benefits include functional benefits, social benefits, positive emotions, and cost savings. There are four types of customer benefits: necessary benefits, expected benefits, eager benefit, and unexpected benefits. The customer benefits of dog owner customer needs are organized as shown in Table 7.

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**Table 7.** Dog owner customer needs—customer benefits.

Customer Benefits Compiled from Relevant Research	Types of Customer Benefits	Degree of Benefit	
The boarding fee is lower than other pet boarding places, such as dog farms and pet hotels.			
Pets can live in the house, there is a large space for movement, and they do not need to be locked in small spaces, such as dog cages, etc.	expected benefit	medium height	
The dog has separation anxiety and needs more attention and love from a special person.			
Find a qualified and certified pet sitter, preferably a pet care license for professional care.	oly		
Dogs can do outdoor activities with the dog sitter during the boarding time, such as beach running, swimming, hiking and hiking.	craving for profit	moderate	
Additional insurance system and 24-h dedicated line service.			
Dog sitter always reports the latest photos and conditions of pets.			
You can learn about the dog sitter's background, house and yard photos for pets before boarding.			
Simplify the process of booking dog sitter services and use this system 24 h a day to make reservations.	necessary benefit indispensab		
Help dog owners find a dog sitter in the nearest location nearby, and a dog sitter who can cooperate with time.			

After sorting and summarizing the tasks, pain points, and benefits in the dog owner's customer sketch above, the demographic of dog owners, the task description of the customer tasks they value, the specific description of the pain points, and the types of needs and properties can be concluded, and are organized in Table 8.

**Table 8.** The needs of pet parent groups—a summary.

Task Description of Customer Tasks		
Can take care of pets requiring special care in the affordable range.	24 h booking service and the dog sitter is certified or reviewed and rated well for peace of mind.	
Aggregate information to help users make decisions	Always keep in touch and send back pet information; you can also check the pet status immediately.	
Easy to use booking service and payment	Always be in touch and get assistance when you have questions.	

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 Table 8. Cont.

Detailed Description of Customer Pain Points			
Death or injury, illness, or the loss of pets are all unbearable worst outcomes.	Failing to take care of pets according to the owner's agreement or failing to provide meals or go out regularly.		
The dog sitter fails to take care of the pet responsibly, allowing the pet to attack or bite other dogs.	Dog owners are worried if they do not report the status of their pets.		
The dog sitter has been booked, but it was temporarily canceled, causing the task to be delayed.	Pet boarding company's evaluation of fraud is inconsistent with the current situation.		
The service fee is temporarily increased, and it may be forced to accept or reluctantly terminate the contract to find the next nanny.	Door-to-door for pet care, but bring in exotic pets		
Specific Needs for	Customer Benefits		
Lower boarding fees than other pet boarding places	Home care to reduce the dog's insecurity		
Pets can live in the house; there is a large space for movement.	Bonus points for frequent booking customers		
Need more attention and love from special people.	Dog sitter reports latest photos and condition of pets		
Can do outdoor activities with dog sitter, such as beach running, swimming, hiking and hiking.	Know the dog sitter's background, house, and yard photos for pets before boarding.		
Homemade special dog food for boarding pets	Simplify the process of booking dog sitter services and use this system 24 h a day to make reservations.		
Find a dog sitter who can cooperate with you recently and on time.	Certified dog sitter and insurance system for boarding pets		

# 4.8. Value Map

The value proposition proposed for the case is summarized and sorted from the service content provided by the case to the target customer, the problems it tries to solve, and the benefits it hopes to bring, as shown in Table 9.

Table 9. Rover.com value map.

Service Content			
Certified Dog Sitter	Huge group of dog owners	24 h online booking service	
Dog sitter location and personal information	Clear service charges	Provide a mobile app to monitor the dog and contact the dog sitter at any time.	
The dog sitter takes the initiative to send back pet photos and conditions.	Paypal online payment that is convenient and safe	Easy to use online booking service	
Year-round dedicated line service	24/7 veterinary hotline support service	A dog sitter who is willing to provide care can be found	

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Table 9. Cont.

Pain Point Solution		
Pet safety is the first consideration, and Rover.com will first review the qualifications of applying for a dog sitter and conduct a personal interview to ensure	Pain Point Solution  If the appointment is rarely canceled by the dog sitter, Rover.com will assist in finding a replacement dog sitter and will be responsible	Mobile App Rover.com Card is convenient for the dog sitter to return pet photos and the current status to the dog owner.
the qualification of a dog sitter.	for the additional cost.	
Create a mobile app, the dog owner can use the mobile app to check the pet's dog walking route, the number of bowel movements, and meals.	If you find that the dog sitter's care and evaluation are different, you can report back to the Rover.com platform at any time and then interrupt the service and find another dog sitter.	If serious problems occur, the insurance will be responsible for claims, and the platform will immediately suspend the qualification of dog sitter.
Create Benefits		
Save money with lower fees	Certified dog sitter for peace of mind	There is a large space for pets and the babysitter is limited to three pets. Dogs receive more care
The website dog sitter's location, charges, personal information, and evaluation are clear and detailed, saving time for searching	The mobile app and website, and PayPal online payment are convenient to use.	Special pet care needs, 24 h customer service, and veterinary support and insurance coverage

Comparing the abovementioned 21 requirements one by one, there are 17 requirements that meet the value adaptation situation, showing that the value map proposed by the case meets most of the needs of the pet parents group, and is in line with the case development of pets in the pet care market.

#### 5. Research Results and Discussions

#### 5.1. Research Results

The key points of the research results are as follows:

#### 1. Value Adaptation of Pet Safety Comes First and the Owner is at Ease

Summarizing several requirements such as dog sitter certification system, the dog sitter's limit to accept pets, the customer's evaluation system for the dog sitter, the dog sitter's care services, the ability of the customer to view their pet's location through the app, and other needs found that the needs mentioned above are all items that can make dog owners feel more at ease. Dog sitters and dog owners are both dog lovers. Dog sitters want to take on interesting and rewarding jobs while working with their favorite animals and ameliorating the caregiving burden of owners.

Dog owners will find a certified dog sitter, and the Rover.com pet boarding platform also provides detailed customer reviews for pet parents to refer to. For some dogs with special care needs, dog owners can use the platform to find or inquire about dog sitters who can provide special services. In addition, the dog sitter's quota system for dogs will also ensure that dogs can receive more specialized care, reducing the risk of negligence caused by one person taking care of multiple pet dogs. The Rover.com Card App also allows dog owners to check their dogs' current location, status, diet, and toilet visits at any time. To sum up, the services and functions provided above make dog owners feel more at ease and reduce anxiety.

# 2. Value Adaptation of the Digital Platform or Mobile App for Reservation Services and Online Payment

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From the demands of the 24 h reservation service, the Rover.com mobile app, and online payment, it can be concluded that dog owners hope to make reservations for dog boarding services anytime, anywhere, and conveniently, because there may be temporary situations which occur, such as the urgent notification of a business trip or a long-distance trip, and general dog boarding operators can only respond to inquiries and accept dog boarding during business hours, and do not offer a 24 h reservation service. In addition, based on emotional and responsibility factors, dog owners usually need to inquire with a few more companies, or obtain relevant detailed information, and will not make hasty decisions. In the traditional search for dog boarding service providers, one has to rely on telephone communication to inquire about the appointment date and service charges; some operators already have online platforms, but they only search for information on a single operator. The Rover.com pet boarding platform is a sharing economy market mode of operation. The market value information is very transparent. There are more than 140,000 pet sitters. The personal information, location, charging method, evaluation, and service of each dog sitter are introduced in detail and provide 24-h operation and dedicated line services.

In the era of mobility, facing the emergence of emerging business service models and lifestyles, dog owners have moved their channels for obtaining pet boarding industry service information and clear communication and responses from traditional physical stores to online platforms. Extending from online platforms to mobile devices, too many people are accustomed to using mobile devices for transactions, so they developed a mobile app to conduct booking services and online digital payments, and also facilitate contact with dog sitters, allowing dog owners to use mobile apps. The use of the Internet and mobile devices has been integrated into daily life. From the information and services of many dog sitters provided by Rover.com, customers can benefit from the immediacy of the booking service and find the location of a dog sitter, of which there are more than 140,000 to choose from. This makes most dog owners prefer to use the pet care services of the Rover.com and even stimulates the occurrence of transactions.

### 3. Dog Sitters Also Love Dogs, and Treat Pets Like Family

Getting along well and allowing dogs to receive the same care and care as their owners is in line with Rover.com's value proposition. Through various social networking sites, news reports, programs, and even dog sitter members on digital platforms, Rover.com uses YouTube videos to promote themselves as dog lovers. Rover.com engages in dog boarding services, interacts with boarding dogs, and takes meticulous care. It has attracted many dog owners to pay attention to this digital platform, and they also want to use this five-star-rated dog boarding platform to choose the best dog caregiver.

Rover.com's value proposition is promoted from the business community to fans of various communities, continues to build up the trust of dog lovers, conveys a warm emotional concept, and maintains the owners who have special feelings for dogs in the community. Interaction is helpful, and at the same time, it also develops and promotes the customer groups served on this digital platform, providing a strong support and basis, which is also an important part of the future development of Rover.com's channel marketing plan.

# 4. Deeply Understand Dog Owners' Emotions Towards Pets and Create Differentiated Value Required by Customers.

Rover.com aspires to be a dog guardian to make the daily life of dog owners easier in caring for their beloved dogs. A powerful website sells the emotions between people and dogs, and has a deep understanding of the needs of dog owners. It is necessary to integrate emotions into services, and transform the duty of care into dog owners' trust in dog sitters and this brand. The slogan on the website and every thoughtful text description show that Rover.com can appreciate the importance of dogs to dog owners and every vivid photo shows the dog companions' love for dogs. There is no special modification and web animation design. There are only photos of each companion and the dog on the website,

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which truly presents a warm and loving message, such as the dog sitter hugging the dog, kissing the dog's forehead, holding the dog, or happily sticking out their tongues together; these real pictures can make people feel the dog sitter's love for the dog.

Rover.com conveys a special emotional value proposition. Whether it is a dog sitter who provides services or a dog owner who needs dog care services, they are all people who truly love dogs, so that dog owners can better understand the representative meaning of the Rover.com brand.

#### 5.2. Discussions

Although the concept of sharing economy has been proposed by scholars since 1978, it did not attract attention at that time due to the immature Internet technology. Now that the Internet has matured and is compatible with mobile devices, more and more people search for more information through the Internet, and more transactions are completed through ecommerce. The sharing economy needs to expand the economic scale through digital platforms and attract more participants in order to exert the benefits of the sharing economy.

To our best knowledge, no studies in the literature have explored the pet boarding platform for sharing economy. This research selected the emerging pet care industry in the growing pet market as the scope, and took the Rover.com pet boarding digital platform with the highest market share in the world as the research object for intensive case studies. For example, the study showed that a sharing economy can achieve economies of scale and reduces transaction costs through market model of pet boarding digital platform, attracting consumers and pet sitters to engage in new types of transactions with temporary use and sharing of resources. By applying the theories of business model and value proposition map, this study empirically investigated how target audience, value proposition, customer relation-ship, key resources, key activities, key partner, cost structure, and pain points affect consumers' and pet sitters' behavior to the pet boarding digital platform.

# 1. The Sharing Economy Achieves Economies of Scale and Reduces Transaction Costs through Digital Platforms

The main reason underlying the success of the sharing economy is the benefits it provides to both service/product providers and consumers. The transaction parties of the sharing economy are the activities of mutual business transactions between individuals [42]. Rover.com can help dog sitters and dog owners understand their respective needs and services provided. Moreover, it can achieve individual market transparency and pricing transparency, greatly reducing transaction costs for both parties. Dog sitters can easily start a business at a relatively low start-up cost and generate income from excess time. Additionally, dog owners can quickly compare the price and service content of all dog sitter services on Rover.com.

Today, the sharing economy can be so prevalent that most of the key to success lies in the fact that the pet boarding digital platform can be more convenient, save transaction costs, and be more efficient, greatly increasing the number of users of the sharing economy, and expanding the market size of the sharing economy and platform participation. The participation of the number of participants makes the sharing economy more effective.

# 2. The Sharing Economy Needs to Build Trust among Participants through A Digital Platform Trust System

The Rover.com digital platform can help dog owners conveniently and quickly match dog sitters with dog owners, and the price of booking boarding services is also cheaper than that of boarding dog hotels and dog farms. However, these are still not enough to attract more dog owners to choose Rover.com, because dog owners are still unfamiliar with the unknown dog sitters on the platform. Therefore, Rover.com must allow dog owners to quickly develop a sense of trust in it.

Trust in the sharing economy has some distinct characteristics [43]. First, trust needs to be established between strangers. Secondly, based on the communal idea of the sharing economy, trust is democratized and facilitated through others' evaluations. Third, based

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on the user provider platform, the platform may function as both the party that needs to be trusted and as the facilitator of trust for the exchange party [44]. One of Rover.com's unique value propositions is to continue to promote the concept of "treat your pets like family". Targeting dog lovers means clearly identifying the target group, and integrating the idea of pampering dogs into the demands of digital platforms. From the design of Rover.com's website, a large number of warm pictures of people and dogs are displayed. Rover.com's goal is to establish that the participants or users on the platform are all dog lovers, and customers can thus be assured to find a suitable dog sitter on Rover.com; not only because of the unique value proposition mentioned above, Rover.com has established participation. The measures of trustworthiness are as follows:

- (1) Qualified dog sitter: By a strict expert review system, dog sitters need to be reviewed and approved by the company on a case-by-case basis, and the pass rate is less than 20%.
- (2) Establish an evaluation system: Dog owners who use the matchmaking service on Rover.com have a five-star satisfaction rate of 95% for the dog sitter's satisfaction.
- (3) Insurance system: For any matching transaction made at Rover.com, an insurance guarantee, 24-h dedicated line, and veterinary consultation services are provided.

The promotion of value propositions and the platform mechanism established by Rover.com in the above three points are all to build the trust of platform participants, so that dog owners can trust Rover.com. In addition, in the sharing economy trust seal system established by the British Sharing Economy Promotion Association, among the eight performance standards of its trust seal, Rover.com has met the identity verification, background check, education and employment history checks, and provide digitally secure third-party payments, insurance, and guarantees, and customer support and services. The reason why Rover.com can succeed in the pet boarding market and become a model of a digital platform for the operation of the sharing economy model is comprised of the key factors mentioned above.

# 3. If the Customer's Pain Point Fails to Achieve the Adaptation Situation, the Experience can be Improved to Reduce the Pain Point

A customer pain point refers to an issue that a customer experiences when interacting with a product or service. These pain points are diverse and can be found at every step of the customer journey. Understanding pain points helps businesses avoid customer dissatisfaction, make product improvements that meet customer needs, and help the business align its marketing strategy better [45].

As far as the pet care market is concerned, Rover.com is an innovative sharing economy digital platform service, focusing on pet boarding services. It does not need to first purchase capital such as dog boarding venues, buildings, etc., nor does it need to pay to hire a dog sitter on the platform. For example, there are four types of common pain points that customers face: financial pain points, process pain points, support pain points, and productivity pain points [46]. Process pain points happen when customers feel like the process of doing things or finding answers is too complicated. In order to allow customers from both sides to use Rover.com for more matchmaking, Rover.com must focus on developing new technologies and launching new functions for digital platforms. Besides, to offer the best customer experience with support, Rover.com implements live chats to help customers in real-time because lack of support or poor quality assistance from Rover.com team can lead to support pain points.

According to the customer pain points, there are partial adaptation and inconsistency items, which can be improved in order to alleviate customer pain points [47,48]. For example, the dog sitter fails to report the current situation of the dog, causing the dog owner to worry; Rover.com should set up an active notification mechanism to remind the dog sitter to report the situation every day to reassure the dog owner. It should use the mechanism established on the platform or use the mobile App to take the initiative and remind dog sitters to report back regularly. A qualified team should be established to evaluate the ma-

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licious activity and fraud, and investigate whether any dog sitter's report is true to ensure the authenticity of the dog owner's comments on the dog sitter, ensuring users on the platform can trust dog sitter reviews. Rover.com should use the mobile App mechanism to remind the dog sitter to provide meals within the time agreed with the dog owner, and send photos of the dog's meal to the dog owner. Additionally, a GPS tracker may be set up on the dog collar, and actively send the location to the dog owner to check the dog's location; the dog sitter may be asked to fill in the care log immediately and send it to the dog owner to ensure that the dog sitter takes care of the dog according to the agreed terms.

The most important customer pain points of dog death or injury, illness, loss, and letting the dog hit or bite other dogs constitute real pain for dog owners. The safety of dogs must be Rover.com's priority and the most important criterion. Even when the dog sitter applies for membership, and has undergone strict expert review and environmental review, it is still difficult to guarantee that an accident will not occur. The insurance system can be used as a follow-up compensation mechanism, and the dog sitters who are at fault will be removed from site so that the dog sitters remain vigilant and dog owners can be compensated.

# 4. Rover.com Should Establish Dog Evaluations for its Boarding and Insurance System

Rover.com pays more attention to the dog owners, and the established evaluation system only allows dog owners to give reviews and comments on the service performance of dog sitters. However, it does not give the dog sitter the right to evaluate the boarding dog. According to TRUSTPILOT's evaluation, the dog sitter may receive a dog that attacks and causes another dog to be injured. Some even attack the dog sitter, causing injury to the dog sitter or dog walker. Essentially, Rover.com should establish and administer of digital platform contracts among peers, including the management of payments, the formulation of rules and standards regarding service levels, and legally mandated or voluntary provision of insurance and guarantees to protect assets, resources, and participants [49]. Therefore, Rover.com's insurance system is applicable to the dog sitter or dog walker who is injured due to direct contact with the dog owner's boarding or entrusted dog, but the insurance system can only be used after the event, and cannot prevent accidents in advance.

If Rover.com does not give the dog sitter the right to evaluate these more aggressive dogs, it is possible that the next dog sitter would fail to understand that the dog is aggressive to other dogs, and thus fail to take the necessary precautions. The probability of unexpected situations will increase, and the number of dog injuries will increase. In addition, it is also suggested that the trust mechanism should be based on the evaluation system of mutual trust and equality between the two parties [40,42] so that the dog sitter can evaluate the dogs that have been cared for. If there is a more aggressive dog boarding or caring, the dog sitter can refuse or accept it according to their own ability or considering that there are other dogs to take care of, so that the dog cannot bite another boarding dog. If the risk is reduced, Rover.com should give the dog sitter's evaluation of the dog, and prevent it in advance, in order to reduce the occurrence of such accidents.

#### 5. Standby Boarding Service Points and Help Stray Dogs Boarding.

Rover.com's philosophy is to make life better for dog owners and pets, and Rover.com's website supports many animal rescue organizations. The idea of acquiring goods and services for stray cats and dogs through a collaborative approach is becoming a significant part of the world's overall pet economy [50]. The sharing economy is serving as driving forces of the rapid growth of the stray dogs rescue businesses related to sharing economy [51]. The sharing economy is originally conceived to be used between people and people to match goods and services with each other. The main body is people, but the Rover.com has achieved friendship between pets and people to match and take care of each other. The concept of people waiting to eat allows people who are hungry and need help to receive free meals from food and beverage outlets or restaurants. This idea of dining should be used on stray animals in need. Drawing on the strength and belief of many

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people, and then slowly modifying it according to the actual situation, perhaps in some stray animal homes or dog sitter homes in urgent need, there can also be kind-hearted people to provide meals or treats. Because of the resources individuals provide, dogs can be well cared for. Dog people are full of inspiration.

# 6. Accumulate Points of Service, Give Regular Customers the Most Price Discounts, and Increase Customer Transfer Costs.

Rover.com has targeted dog lovers, successfully created differentiated services, and established a value proposition and brand image. However, the customer relationship management part is missing. Although Rover.com has merged with DogVacay at present, there are few competitors facing it, and it is difficult to guarantee that there will be no new competitors entering the pet care service market in the future. Although companies must strive to acquire new customers, marketing scholars and experts warn that the cost of acquiring new customers is much higher than retaining existing customers. When winning new customers, Rover.com must also take good care of old customers and consolidate customer relationships. Increasing the cost of customer transfer is a good way to prevent the loss of customers [52]. To increase the cost of customer transfer, Rover.com must first strive to improve customer value. Rover.com can allow customers to provide membership points after using the service; afterwards, customers can receive discounts or points, and the continuous accumulation will make the value and retention of customers in Rover.com higher than that of other pet boarding service platform providers, and existing customers will not switch to new platform services.

Previous research has suggested many factors that influence customer retention. One factor is the impact of price discount on retention [53]. Practically, price discounts are the most frequently used marketing tools not only for attracting new customers but also retaining old customers. Price discounts influence customer retention rates, especially in the relatively long-term contexts [54]. Therefore, Rover.com should provide price discounts (e.g., a free joining fee, a monthly fee, etc.) and customers-retention incentives. Previous experiments also show a causal relationship between the type of price discount and customer retention [55].

### 7. Combining Pet Veterinarians and Pet Grooming Services

When a dog is boarded at a sitter's home or home day care, etc., it is possible that in some special cases, the dog will needs medical action from a veterinarian. Certain older pets may require regular health checks or vaccinations. On the Rover.com platform, it is true that some dog sitters will provide current positions or have worked as veterinarians or as veterinary assistants, but most of the dog sitters on the platform do not have pet care qualifications and experience. In addition, pet grooming is an essential health maintenance activity that is fundamental to the welfare of dogs [56]. Pet grooming services and supplies in promoting and maintaining dogs' health and welfare are extremely important. Therefore, Rover.com should combine pet veterinarians and pet grooming services.

For example, the Pampered Doctor App is the first pet medical matching platform in Asia and a digital platform for the traditional market model of the sharing economy. It is known as the Uber of the veterinary industry, and its target customers are enthusiastic veterinarians and dog owners who love pets, founded on the idea of helping dog owners find their ideal animal hospital and veterinarian quickly and easily. What is adopted is the concept of mobile medical cart to provide the most convenient and immediate medical care for dogs at the owner's home [57]. If Rover.com can combine or develop a similar veterinary visit function, it is believed that the life and health of pets can be further improved.

#### 8. In The Internet of Things Era, by Using Sensors, Rover.com Can Do More

The pet care market is also related to the smart technologies such as the Internet of Things (IoT), which can provide convenient services with various aspects for pet owners. In order to provide smart pet care services for pets and pet owners, we need to think about how to check the status of pets and provide the proper services for pets [58]. Rover.com

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currently uses Rover.com Card through the mobile app, and the dog walker or dog sitter records the dog's walking path, eating time, and urination times. Manual records inevitably suffer from mistakes and omissions. With the advent of the Internet of Things era, the Internet of Things (IoT) technology has become very common. A non-invasive sensor is installed on the dog, which can be worn through the dog collar and worn on the neck to monitor and record the activity level of the furry child. Behavior patterns, amount of exercise, and other data no longer need to be manually recorded by dog walkers or dog sitters. The dog activity status is continuously recorded 24-h-a-day and the data will be automatically transmitted to the dog owner's mobile phone or sent to the cloud, and a report can be compiled to let the dog owner know the dogt's activity.

Additionally, missing dogs are often not found by their owners, but many are euthanized at shelters. Many are ultimately euthanized if not reclaimed after a standard holding period that varies among shelters [59]. If the dog is lost accidentally, it can also use the sensor to assist in the search and quickly retrieve the dog, which can help the dog sitter and dog owner to achieve the task of all-weather care, detect the abnormality at the first occurrence, and address the situation immediately. For dog owners, dogs are like family members, and they all hope that they can accompany them healthily for a long time. When entrusting one's beloved dog to a dog sitter, of course, more attention is paid to the safety of the dog. The application of IoT technology can help dog owners know the status of their dogs anytime, anywhere, and make it easier for dog sitters and dogs to contact them. Of course, it can also be used as another safety measure. It is commonly assumed that the presence of animals is beneficial to human wellness and has contributed to the increased interest in pet ownership and demand for adopting a pet cat or dog [60].

#### 6. Research Limitations and Future Research

This study adopted the case study method and secondary data analysis method for pet boarding platforms under the sharing economy. Digital platform companies operating in different fields under the sharing economy model may have different business models and value propositions for individual digital platforms. The research results of this study have not yet covered the scope of all sharing economy operations.

Rover.com was established in Seattle, USA, and protects the confidentiality of customer personal data. Therefore, it neither possible to obtain individual customer information, nor to conduct interviews or questionnaires on Rover.com's bilateral customers, dog owners, and dog sitters. As a result, this case may fail to truly reflect the true intentions of Rover.com users, which may affect the difference in value proposition and business model research.

Rover.com has been regarded as a very successful sharing economy model around the world. After it was established in Seattle, United States, it expanded its pet boarding service to Canada, etc. and became a multinational sharing economy digital platform. For digital platforms under the sharing economy, most of them are allowed to operate by combining with local operators, or setting up operating sites in local countries and striving to comply with local national regulations. Additionally, regarding pet boarding platform operators, there are similar pet boarding platforms. All use a similar digital platform under the sharing economy model. As for pet boarding platforms under the sharing economy, various countries have begun to develop such pet boarding platforms one after another. However, due to limited time and lack of manpower, this study did not carry out a discussion and comparison of pet boarding platforms in various countries. It is possible to conduct in-depth discussions on pet boarding platforms of the same type of sharing economy market in various countries, summarizing the business model diagram and value proposition of pet boarding digital platforms under similar sharing economy models in various countries.

Recently, a dog rental service has been launched to prevent people from buying dogs on impulse, which would lead to a wave of abandonment and an explosion of dog shelters. The dog rental service allows tenants and pets to get along and confirm that they can live

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together and reduce abandonment. Although they are digital platforms under the sharing economy, they are used to engage in dog rental services. There are also some sharing economy concepts [61,62]. It is an industry that rents out pets, and it is engaged in the business of renting out life. Although renting pets is not illegal at present, supervision work should be undertaken and caution exercised.

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