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**DIGITAL PLATFORMS IN THE SHARING ECONOMY: MEDIATING AND  
FLATTENING CONSUMPTION AND SERVICE RELATIONSHIPS**

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Tese apresentada como requisito parcial para  
obtenção de título de Doutor pelo Programa de  
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Universidade do Vale do Rio dos Sinos –  
UNISINOS.

Orientador: Prof. Dr. Norberto Hoppen  
Co-Orientadora: Prof. Dra. Patrícia Kinast De Camillis

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**“Life itself is the most amazing fairy tale”!**

“Nunca deixe que lhe digam que não vale a pena acreditar no sonho que se tem ou que os seus planos nunca vão dar certo ou que você nunca vai ser alguém”.

“Never let someone tell you that it is not worth believing in the dream you have or that your plans will never work out or that you will never be someone.”

Renato Russo

## RESUMO

O objetivo desta pesquisa foi analisar como as plataformas digitais mediam e achatam as relações entre consumidores e provedores de serviços na economia compartilhada (EC) à luz da Teoria Ator-rede (TAR). A partir desta perspectiva, uma pesquisa qualitativa longitudinal foi realizada seguindo as premissas teórico-metodológicas da TAR. A análise dos dados foi realizada à luz do procedimento metodológico da tradução, através do qual os atores foram mapeados, observados e as informações coletadas, descritas e traduzidas. Os atores em rede foram representados empiricamente por dois casos de estudo. Os resultados da pesquisa evidenciam uma relação sociotécnica na tríade consumidor – plataforma digital – provedor de serviço nas relações de consumo e serviço. O estudo dessa relação aponta para um processo de mediação proporcionado pela agência das plataformas digitais, que transportam influências e transferem significados e sentidos para consumidores e prestadores de serviços. Por outro lado, o achatamento das relações resulta da ação das plataformas digitais associado às motivações dos consumidores e prestadores. Especificamente, o argumento central da tese revela relações achatadas de consumo e serviço devido a um processo coletivo de engajamento entre as motivações humanas e ações não humanas. Assim, esta tese propõe o conceito *Protechsumer* abrindo uma agenda de estudos futuros que problematizem a literatura acerca desta agência coletiva, que motiva, induz, conecta, medeia e nivela as relações de consumo e serviço na EC. O estudo também contribui para o avanço da literatura da economia compartilhada, plataformas digitais e de comportamento de consumo, ampliando uma agenda futura de como analisar estas relações segundo a TAR. Além dos debates acadêmicos, o estudo fornece implicações práticas para o desenvolvimento e operação de negócios na economia compartilhada.

**Palavras-chave:** Plataformas Digitais; Economia Compartilhada; Mediação; Achatamento; Relações de Consumo e Serviço; Consumidores; Prestadores de Serviço; Teoria Ator-Rede.

## ABSTRACT

The aim of this research was to analyze how digital platforms mediate and flatten the relationships between consumers and service providers in the sharing economy (SE) in the light of the Actor-network Theory (ANT). From this perspective, a qualitative longitudinal research was carried out following the theoretical and methodological premises of ANT. Data analysis was carried out in the light of the methodological translation procedure, through which the actors were mapped, observed, and their information was collected, described and translated. Network actors were empirically represented by two case studies. The research results show a socio-technical relationship in the consumer triad - digital platform - service provider in consumer and service relationships. The study of this relationship points to a mediation process, provided by the agency of digital platforms that transport influences and transfer meanings and senses to consumers and service providers. On the other hand, the flattening of relationships results from the action of digital platforms associated with the motivations of consumers and providers. Specifically, the central argument of the thesis reveals flat relationships of consumption and service due to a collective process of engagement between human motivations and non-human actions. Thus, this thesis proposes the Protechsumer concept, opening an agenda for future studies that problematize the literature about this collective agency that motivates, induces, connects, mediates and levels the consumption and service relationships in SE. The study also contributes to the advancement of the literature on sharing economy, digital platforms and consumer behavior, expanding a future agenda on how to analyze these relationships in the light of ANT. In addition to academic debates, the study provides practical implications for the development and operation of business in the sharing economy.

**Keywords:** Digital Platforms; Sharing Economy; Mediation; Flattening; Consumption and Service Relationships; Consumers; Service Providers; Actor-Network Theory.

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## LIST OF ACRONYMS AND ABBREVIATIONS

ANT	Actor-Network Theory
BIKEPOA	Porto Alegre sharing bikes
B2C	Business to Consumer
B2B	Business to Business
BR	Brazil
CA	Canadá
CLAV	Congresso Latino Americano de Varejo
COVID19	Corona Vírus Disease 2019
DP	Digital Platform
ESPM	Escola Superior de Propaganda e Marketing
FGV EASP	Fundação Getúlio Vargas Escola de Administração de São Paulo
FB	Facebook
ICT	Information and Communication Technologies
ILAB	Incubadora e Laboratório de Negócios
OPP	Obligatory passage point
P2P	Peer-to-peer
PE	Pernambuco
PR	Paraná
PROSUMER	Provider + Consumer
PROSUMPTION	Production + Consumption
PROTECHSUMER	Provider + Technology + Consumer
PROTECHSUMPTION	Production + Technology + Consumption
RG	Rental Goalkeeper
RJ	Rio de Janeiro
RK	Rental Kennel
RS	Rio Grande do Sul
SC	Santa Catarina
SDU	Southern Denmark University
SE	Sharing economy

SP	São Paulo
TAR	Teoria Ator-Rede
TECH	Technology
TICs	Tecnologias da Informação e Comunicação
UFRGS	Universidade Federal do Rio Grande do Sul
UNISINOS	Universidade do Vale do Rio dos Sinos
WSGN	World's Global Style Network Institut

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## 1 INTRODUCTION

The sharing economy (SE) context continues to disrupt markets, societies, and traditional services (LAURELL; SANDSTROM, 2017; GEISSINGER; LAURELL; SANDSTRÖM, 2018). These disturbances are caused by information and communication technologies (ICT) added to the network society that alters the means of production and access to services (CASTELLS, 2005; SUNDARARAJAN, 2016). Thus, this turbulent situation is developing through new services offered by digital platforms that will represent a growth to \$335bn worldwide by 2025 (WGSN, 2019). In addition, this economic and technological movement promotes alternative business models that transcend traditional capitalism into a digital movement disseminated by individuals, communities, and platforms (MURILLO; BUCKLAND; VAL, 2017; DE VAUJANY; LECLERCQ-VANDELANNOITTE; HOLT, 2019).

Although this movement has become popular around the world with different service demands through various rental service companies such as Airbnb, Uber, and WeWork (SUNDARARAJAN, 2016), there are still gaps to be answered about how this consumer and service relationships occur after the explosion and the power of Web 2.0 with the spread of new technologies such as smart devices and digital platforms (HARVEY; SMITH; GOLIGHTLY, 2017; SIGALA, 2019). This combination and diffusion of informational systems, devices, and digital platforms (DP) integrate a new context of customs and consumption habits, involving new values, practices, and relationships promoted by a socio-technological process (HAMARI; SJÖKLINT; UKKONEN, 2016).

Powered by peer-to-peer digital transactions, SE presents new management challenges that expand the discussion beyond the rationalization of the market or the asymmetric dependence of the action of consumers and service providers (RAZEGHIAN; WEBER, 2019) — for example, understanding the role of the digital platform for a reputation system mediated through tools, resources, and algorithms (BASILI; ROSSI, 2020). Alternatively, to verify how platforms establish data-driven strategies to manage service quality (ZUO et al., 2019). Thus, the increase in studies and discussions reveals digital platforms as intermediaries of consumption and service relationships (LAURELL; SANDSTROM, 2017; MURILLO; BUCKLAND; VAL, 2017). Digital platforms use their digital resources, mechanisms, and tools to induce, connect,

engage, mediate and reshape consumption and service relationships in the sharing economy (BREIDBACH; BRODIE, 2017; DE RIVERA et al., 2017; BASILI; ROSSI, 2020). In addition, the emergence of technology-based platforms has changed the offerings and consumption of products and services in SE.

In this sense, digital platforms were researched in different ways, which refer to offering different things in marketing (product lines), software engineering (software families), economics (products and services that bring together groups of users in two-sided networks) (TIWANA; KONSZYNSKI; BUSH, 2010). Likewise, De Reuver, Sørensen, and Basole (2018, p.127) are based on Tiwana et al. (2010), defining digital platforms as: "external systems based on technology, executable by software on several sides, offered as applications, solutions or systems for end users". In SE, digital platforms are defined as visible and invisible solutions that include websites, blogs, virtual messaging networks, mobile applications, and social networks of texts, content, images, and videos that allow the quick sharing of information, content, products, and services (ECKHARDT et al., 2019). In this context, a broad definition of the digital platform is adopted and includes economy and multisided platforms that offer users temporary access to tangible and intangible resources that can give access and use in services.

Likewise, digital platforms, through their resources, tools, mechanisms, and algorithms, play roles and mediation strategies in the actions of engagement, relationships, and in reducing the uncertainty of transaction costs between consumers and service providers in SE (ABRAMOVA et al., 2015; BREIDBACH; BRODIE, 2017; BARBE; HUSSLER, 2019). In this perspective, digital platforms can provide a continuous process that integrates inductions, connections, and mediations, resulting in new interactions, relationships, and stimuli with the social or behavioral structures between consumers and suppliers (CHEKWA; DANIEL, 2014; ECKHARDT et al., 2019). Therefore, the mediation of digital platforms in SE stands out assuming an integrating influence and position between human agents to transform, transport, and adjust lifestyles, businesses, markets, and consumer relationships (RAVENELLE, 2017; APTE; DAVIS, 2019; ECKHARDT et al., 2019).

In this relationshipal process, which involves consumers and providers in SE Martin; Upham, and Klapper (2017) verified the existence of a strong influence of digital artifacts based on their characteristics, specifications, functions, functionalities, and



data. De Rivera et al. (2017) complements the question and recognizes that the platforms and technological structure (architecture, design, functionalities, and interfaces with users) can provide dynamic production and inductive relationships of consumption in creating a connective sense for a company. Likewise, Eckhardt and Bardhi (2016) reinforce the action of digital materiality on digital platforms in the development of relationships and consumption practices. Thus, digital platforms can develop meanings, mediation, and relationship with customers and service providers through visible and invisible data intelligence that provides services, content, and goods (SUTHERLAND; JARRAHI, 2018). In addition, the digital platform agency can promote mediation action on reputation, trust, engagement, communications, relationship, and quality of service (BREIDBACH; BRODIE, 2017; DE RIVERA et al., 2017; APTE; DAVIS, 2019; BASILI; ROSSI, 2020).

However, little has been investigated in the literature on information systems, marketing and consumption, how technologies or digital platforms with their solutions, resources, mechanisms, tools and design induce, connect, mediate consumer and service relationships in the sharing economy (PARKER; VAN ALSTYNE; CHOUDARY, 2016; HARVEY; SMITH; GOLIGHTLY, 2017; ECKHARDT et al., 2019). Some studies investigate factors such as access to the sharing economy through technology (BARDHI; ECKHARDT, 2012; BELK, 2014b); how digital platforms carry out and coordinate engagement (BREIDBACH; BRODIE, 2017), how communication relationships occurred through DP mediation (De RIVERA et al., 2017), diffusion and promotion of innovative businesses (WATANABE et al., 2017), platforms' on actions to coordinate the feeling of belonging and trust of consumers (CELATA; HENDRICKSON; SANNA, 2017), the realization, moderation e mediation of consumption sharing by DP (EDBRING; LEHNER; MONT, 2016; APTE; DAVIS, 2019; BASILI; ROSSI, 2020).

However, these studies tend to ignore the socio-technical process in this triad of consumers - digital platform - service providers. In this way, Bajde; Nojgaard; Sommer (2019) supports the existence of mediation based on technological artifacts, which can change behavior, social culture, or consumption. However, few references explain how these consumer relationships through information communication technology (ICT) are establish and happen in the SE (ECKHARDT; BARDHI, 2016; ECKHARDT et al., 2019). For Lamine (2017), technological artifacts in the ICT

environment play a mediating role in dynamic relationships in business and consumptions and become generators of meaning and integration, contemplating an associative debate between those involved in the process. On the other hand, there may be a flattening of relationships between consumers and providers through mediation processes of technological objects or artifacts (BAJDE, 2013; SCHOUTEN, MARTIN, DUFAULT, 2015). Flattening of relationships is a process of assembling consumption between consumers and providers through the mediation of technological objects or artifacts (BAJDE, 2013; BAJDE, 2014).

Likewise, there is symmetry between humans (consumers and service providers) and nonhuman agents (digital platforms) in these associations that receive flattened tensions in these dynamic consumer relationships (BAJDE, 2013). Thus, digital technologies are never inanimate, but they move, act, transport, and inspire meanings and influences in the relationships and dynamics of consumption (BAJDE, 2014; ECKHARDT; BARDHI, 2016). Consequently, there is an opportunity to discuss how an inanimate object (DP) connects intermediary services between consumers and service providers and uses its digital agency to mediate and flatten relationships in the sharing economy (BAJDE, 2014; HARVEY; SMITH; GOLIGHTLY, 2017). For this, Actor-Network Theory (ANT) is chosen because it assumes that humans and nonhumans are symmetrical (LATOUR, 2005). For ANT, the practices at an event are not controlled and built by human consciousness but also by nonhuman agencies in a network (LATOUR, 2005; 2011). Thus, this study intends to advance the knowledge gaps about the mediating and the flattening of the existing relationships between consumers and service providers in the SE.

Therefore, the question of the thesis research is: **How do digital platforms mediate and flatten the relationships between consumers and service providers in the sharing economy?** To answer this main question, this study aims to **analyze how digital platforms (nonhuman agency) mediate and flatten relationships between consumers and service providers (human agencies) in the sharing economy.**

More specifically, this work intends to explore the role, characteristics, and functions of digital platforms in establishing consumption and service relationships in the SE. Therefore, it reveals the following auxiliary question: How are digital platforms

mediating and flattening services and consumer relationships in the sharing economy?  
To answer these questions, this study tries to achieve the following specific objectives:

- Draw how to happen relationships between consumers and providers (humans) when mediated and flattened by digital platforms (non humans) in the sharing economy;
- Describe how the resources, mechanisms, and tools of digital platforms mediate and flatten relationships between consumers and suppliers in the sharing economy;
- Analyze how service providers' service relationships are mediate and leveled by digital platforms in the sharing economy;
- Analyze how consumers consumption relationships are mediate and flattened by digital platforms in the sharing economy.

To answer these questions and attend these goals, this research considers a sociotechnical perspective based on the Actor-Network Theory (ANT) (LAW, 1992; LATOUR, 2000; 2005; 2011). ANT is empirically realistic and enables an interpretative understanding of how an event or phenomenon is developed through the practices and relationships of different actors (CALLON, 1984; LAW, 1992; LATOUR, 2005). Therefore, ANT's theoretical-methodological approach offers insights and paths based on exploratory and analytical procedures. The tools delivered to the researcher can reveal the production of knowledge and interpret phenomena in descriptive, relationshipal, and interactive way (CALLON, 1984; SHIN, 2016). Furthermore, ANT becomes essential for analyzes involving artifacts, things, human beings, practices, and behavioral relationships (BAJDE, 2013).

Therefore, this study proposed to translate and analyze these mediating and flattening relationships in this triad of consumers - digital platforms - service providers through the ANT translation process (CALLON, 1984). This triad and dynamics designate a network, followed and manufactured by facts and routines generated by the matter of the object or platform, or time manufactured by individuals (consumers and service providers) in a unique process (LATOUR, 2005; CZARNIAWSKA, 2006). Moreover, "there is a need to understand the social plot not only as an effect of human actions but also through the intervention of other nonhuman agents" (SELGAS, 2008, p.9). Thus, it is necessary to understand how this relationship is being built and

structured by the parliament of things, a hybrid of humans and nonhumans, who build facts, practices, and processes (LAW, 2004; LATOUR, 2005; 2011). Thus, ANT is adopted in this study, as it contributes to the investigation of complex phenomena such as SE, surrounded by actors, factors, processes, practices, behavior and relationships.

This research deals with a particularly abstract and complex problem, characterized by a sociotechnical approach in an actor-network (LAMINE, 2017). This study reveals how this digital materiality of digital platforms can provide mediation and flattening relationships between individual actors in consumer and service relationships (BAJDE, 2013; ECKHARDT; BARDHI, 2016). In this perspective, digital platforms assume a position of conciliation in this relationship, acting in the same way as human agents to establish sharing practices (BELK, 2017; DE REUVER; SØRENSEN; BASOLE, 2018). Hence, this study considers the sharing economy with a sociotechnical phenomenon provided by the action of technological tools and the motivations of individuals (HAMARI; SJÖKLINT; UKKONEN, 2016; HARVEY; SMITH; GOLIGHTLY, 2017; SUTHERLAND; JARRAHI, 2018). Thus, these socio-technological processes, combined with relationships between individuals and artifacts, need more attention and questions in the studies of ICT and consumption (BAJDE, 2013).

Likewise, these sharing practices are structured, approximated, and carried out by motivations and actions of individual, technical and material forces (BELK, 2017; HARVEY; SMITH; GOLIGHTLY, 2017). Thus, this research analyzes how the relationships between consumers and service providers in the sharing economy are continuously established through digital platforms. Therefore, the relevance of the study is justified, as it tries to explain and translate the symmetry between digital platforms (nonhumans) with consumers and service providers (humans). In other words, this research aims to find a better understanding of how social and technological motivations interact and relate in business with consumers (B2C) who integrate the SE context. Thus, this study proposes assumptions of how digital platforms induce, connect, mediate, and flatten the relationships between consumers and service providers.

In terms of inductions, stimuli and connections are links between consumers and service providers provided by the resources and mechanisms of digital platforms. Likewise, the mediation of digital platforms is the action of technologies to connect,

transform, transport, and influence the sharing relationships between consumers and service providers. Last but not least, the flattening of relationships is a process of mounting consumption between consumers and providers that occurs through the process of mediation of digital platforms. In this way, these definitions reinforce assumptions helping to broaden the discussions about the relationships of actors in the context of the sharing economy, exploring the role of digital platforms in mediating and flattening these practices and consumption and service relationships.

For this, two case studies conduct this research - two digital platforms existing in the Brazilian national market that integrate SE, such as hosting pets and goalkeepers in amateur football matches, between other relationships occasionally revealed in field research. The two platforms studied provide consumption based on access, based on the commercialization of the services offered, such as space, time and talents. Data collection was carried out through observations from participants and non-participants, interviews and monitoring on social networks. ANT's translation phase's support analyzes of these data collections in these two case studies. Therefore, mediation and translation processes (elements originating from ANT – CALLON, 1984) are the main methodological, theoretical support for understanding the phenomenon, suggesting alternative ways of advancing studies on sharing economy, digital platforms, and consumption.

This research contributes to the SE field by analyzing longitudinal events in two empirical studies, offering details, descriptions, and analysis of how the inductions, connections, mediations, and flattening of relationships happen in the consumer triad - digital platform - service provider according to ANT. Also, the study contributed by empirically investigating the flattening of ANT consumption proposed by Bajde (2013). Thus, study findings identify an intense action by the platform agency in mediating the relationships between consumers and service providers in the SE context. Besides that, results show a flattening of consumption and service relationships resulting from socio-technical behavior that brings consumers, platforms, and service providers closer together. In sum, it results in an empirical and theoretical structure that can support the creation of business strategies and relationships with customers and service providers in business and markets in the sharing economy context.

To answer the questions and meet the proposed objectives, clarifying the gap, the structure of the thesis was presented in eight chapters. After this introduction,

chapter 2 presents the theoretical foundations about the context of the sharing economy, consumers and service providers in the SE, digital platforms in SE, consumption, and service relationships in the SE, Actor-network theory. Followed by chapter 3, that discusses and sheds light on a new theoretical framework with propositions on the practices of induction, connection, mediation, and flattening in the relationships between digital platforms, consumers and service providers in the context of the sharing economy.

Chapter 4 describes the methodological procedures of the ANT adopted with activities carried out in the planning, monitoring, screening, writing, description, translation, and analysis phases. Then, chapters 5 and 6 describe and translate the two empirical case studies in the lens of ANT. Chapter 7 presents the results of the discussion. Finally, chapter 8 presents the conclusions, theoretical and managerial implications, limitations, and an agenda for future research in this field.

## **2 THEORETICAL FOUNDATIONS**

This chapter presents the literature review with the main concepts researched in this thesis. Following the theoretical foundations, the sharing economy is explained as a sociotechnical approach. After that, an overview of the triad of consumers, service providers, and digital platforms in the sharing economy; In addition, a summary of the main concepts on consumers and service relationships, and ANT in the sharing economy is presented.

### **2.1 Sharing Economy**

There are many concepts and ways to outline the movement and the concept of the sharing economy (SE), both in the area of management, business and in the studies of technology and consumption (BELK, 2014b; HAMARI; SJÖKLINT; UKKONEN, 2016; BREIDBACH; BRODIE, 2017; ECKHARDT et al., 2019). Sharing is an alternative way of distributing goods and services and, in comparison, or parallel with other more traditional forms of distribution and sale (BELK, 2014a). SE promotes and develops alternative and innovative businesses and solutions for the community to help the environment socially and economically (HAMARI; SJÖKLINT; UKKONEN, 2016; ECKHARDT et al., 2019). Sharing also includes loans, sharing and allocation of resources and services for public or private goods, but not leasing with contracts or leases, which are characterized as other businesses or transaction formats (BELK, 2007; 2014a).

Therefore, the sharing economy can be an alternative to the excess stock of private properties, distribution of public and private goods, rent and provision of services with the purpose supported by the actions of exchange, division and sharing, where one or more people can enjoy benefits and/or costs of owning something tangible or intangible (BELK, 2010; 2014a; ECKHARDT et al., 2019). However, the sharing economy can also be considered and represented as a form of connected and collective consumption, which aims to link products and services to a dynamic in which individuals, through digital platforms, practice actions to accommodate needs and desires in a more sustainable way, valuing reuse and sharing (HAMARI; SJÖKLINT; UKKONEN, 2016; BREIDBACH; BRODIE, 2017; ECKHARDT et al., 2019). SE

movement is happening through more accessible technological factors in the market, that provide more conscious, collective, and sustainable consumption behaviors to the social environment (SCARABOTO, 2015; PERA; VIGLIA; FURLAN, 2016; GREENWOOD; WATTAL, 2017).

Consequently, there are some characteristics in this movement or context of the sharing economy, which are related: a) to the diffusion and dissemination of virtual, mobile and Internet technologies; b) a connection between people in a network or networks with distributed assets; c) to idle capacity of assets and intangibles existing in the market; d) encourage significant interactions and trust between individuals; e) involve greater openness, inclusion and popularity of digital technology platforms in our daily lives (STOKES et al., 2014, SUTHERLAND; JARRAHI, 2018). Thus, through their informational, systemic, interactive, and image resources and resources, digital platforms can offer tangible and intangible values to consumers and service providers within the context of SE (ZHU; SO; HUDSON, 2017; DE REUVER; SØRENSEN; BASOLE, 2018). Therefore, the concept and practice of sharing economy lead to reflection on the way and actions that individuals communicate, share and transact their relationships, associated with the insertion of digital platforms in their daily lives and consumption.

In this context, these individuals become consumers and service providers within a universe more focused on the virtual exchanges, where they may be exposed to identities, attitudes, lifestyles and more utilitarian, altruistic and collective reasons economically and socially (PERA; VIGLIA; FURLAN, 2016; HAMARI; SJÖKLINT; UKKONEN, 2016; ECKHARDT et al., 2019). In this direction, digital platforms provide an ongoing process that integrates connections, inductions, relationships, and mediations integrating interactions, engaging, and stimuli with the social or behavioral structures of individuals (consumers and providers), which are part of this economic and commercial structure (SCARABOTO, 2015; HAMARI; SJÖKLINT; UKKONEN, 2016; BREIDBACH; BRODIE, 2017). These sharing practices through digital platforms are associated with the motivations and assemblies of consumer relationships in the distribution of goods or services (ECKHARDT et al., 2019). These motivations and collective assembly of consumption and sharing practices through DP occur in a responsive and utilitarian way towards consumers and providers (ECKHARDT; BARDHI, 2016). Thus, digital solutions seek to transmit sensations, meanings,



engagements, and experiences, making something perceived as intangible, relationships of sharing, into something tangible for consumers and providers (BREIDBACH; BRODIE, 2017; SUTHERLAND; JARRAHI, 2018).

In this perspective, sharing economy transactions are also typically mediated and moderated by digital technology platforms that allow sharing activity and relationships to be scaled and induced by efficiently matching (or connecting) providers and consumers (e.g., PERREN; KOZINETS, 2018; ECKHARDT et al., 2019). Besides, existing definitions often conceptualize the sharing economy as a "system" or "socio-system" (e.g., HEINRICHS, 2013; SUTHERLAND; JARRAHI, 2018) in which customers or users take on enhanced roles as suppliers and customers of resources, goods or services (e.g., HAMARI; SJÖKLINT; UKKONEN, 2016; Eckhardt et al., 2019). To Perren and Kozinets (2018, p. 21), "SE is a market that is formed by an intermediate technology platform that facilitates and mediates exchange activities and experiences between a network of economic actors positioned equivalently."

However, these socio-technological experiences are not receiving attention from the academy when related to the understanding of nonhuman factors (digital platforms), which can promote, shape and mediate these current daily practices of consumption and production, for the distribution of products and services in the markets today (DE RIVERA et al., 2017; DE REUVER; SØRENSEN; BASOLE, 2018; ECKHARDT et al., 2019). Thus, these digital platforms develop different forms of interactions, practices, and relationships between consumers and providers reformulating consumption and service (RAVENELLE, 2017; SIGALA, 2019). These consumption and service relationships also allow knowledge, skills, time, spaces and intangible content to be shared by individuals, communities, and providers through facilities, solutions, applications and or digital platforms that moderate, shape and mediate the connection, interaction, delivery, relationships, and experience in this "sociotechnical" context (DE REUVER; SØRENSEN; BASOLE, 2018; SUTHERLAND; JARRAHI, 2018).

Therefore, the next section introduces studies related to the sharing economy field. Afterward, this study maps the sharing economy as a sociotechnical phenomenon in this triad consumer - digital platform – provider.

### 2.1.1 Mapping the sharing economy as a sociotechnical phenomenon

SE is considered a socioeconomic system because it was developed and supported through new business models, virtual communities, consumers, providers, and digital platforms (DE VAUJANY; LECLERCQ-VANDELANNOITTE; HOLT, 2019; ECKHARDT et al., 2019). In the sharing economy ecosystem, there is an infinity of tools and mechanisms that manage and control the sharing practices and relationships between consumer and service providers to develop rates, rankings, reputation scores, digital profiles, and segmentations (DE RIVERA et al., 2017; BASILI; ROSSI, 2020). In this way, there is the digitization of business in transportation services, accommodation, domestic services, animal care, performed through digital platforms accessed by mobile applications through smartphones and computers (SUNDARARAJAN, 2016; LAURELL; SANDSTROM, 2017). At the same time, there is a balance between the access market, platforms, and communities through peer-to-peer connections and interactions, eliminating intermediaries in these sharing practices (BARDHI; ECKHARDT; ARNOULD, 2012; ACQUIER; DAUDIGEOS; PINKSE, 2017). Although there are many ways to conceptualize SE in the field of management, some definitions associated with digital platforms, consumption, and sharing practices have been chosen and analyzed in this study. Table 1 presents these definitions in SE.

**Table 1: Definitions in the sharing economy**

Author(s)	Definition	Research Directions
BOTSMAN; ROGERS (2011, p. 21 – 65).	SE is an economic model based on sharing underutilized assets, from spaces to skills, to obtain defined monetary or non-monetary benefits, such as sharing and consumption practices. These practices have gained momentum and were disseminated with wide access to the Internet, devices, systems, applications, and social networks that allow us to redistribute, access, rent, or donate used goods to other owners.	How can new technologies and mobile applications help new practices in the sharing economy? How do digital platforms impact users' motivations to expand the sharing economy and collaborative consumption?
BARDHI; ECKHARDT (2012 p. 883 - 896)	The access economy, [...] also known as sharing or peer-to-peer economy, [...] provides temporary access to consumption resources, for a fee or for free, without a transfer of ownership.	It suggests that future research analyze digital materiality, further exploring the impact and nature of consumer-object-services relationships.
BELK (2014, p. 6 – 11)	Distinguishes 'true sharing' from 'pseudo-sharing'. Pseudo-sharing is a 'phenomenon by which the exchange of goods and the potential exploitation of consumer co-creators present themselves as a sharing disguise', or 'commercial relationship disguised as community sharing'.	It suggests further research to analyze the behavior of sharing versus pseudo-sharing after the spread of web 2.0 and digital technologies to understand these differences.
SCHOR (2016, p. 3-12)	Sharing economy activities fall into four broad categories: recirculation of goods, increased utilization of durable goods, exchange of services, and sharing of productive assets. This movement was driven by new technologies such as digital platforms that effectively create "sharing markets", facilitating exchanges and generating influences on how sharing occurs and how much revenue is allocated to management and owners.	It opens the discussion of how these new technologies organize and incorporate sharing practices and cooperative economic activities thought their tools and software. How these powerful resources and tools can create social solidarity, democracy, and sustainability.
HAMARI; SJÖKLINT; UKKONEN (2016, p. 2048 - 2057)	Sharing economy as a technological phenomenon. The development of information technologies along with the growth of web 2.0 has enabled the development of online platforms that promote user-generated content, sharing, and collaboration.	Furthermore, future studies should consider measuring actual usage patterns to investigate more accurately. Another important question has to do with practical questions in the design of SE systems to evaluate the technological behavior of consumers and service providers.
COCKAYNE (2016, p. 73-82)	Sharing or on-demand economy is a term that describes digital platforms that connect consumers to a service or merchandise through the use of mobile application, website, mobile site, blog, or social media page.	How can the neoliberal capitalism of sharing economy, far from being associated with the production and perpetuation of flat effects, be more accurately thought of as directly constituting the production of new sets of social meanings and collective structures?
MURILLO; BUCKLAND; VAL (2017, p. 66-76)	SE, as a particular form of platform capitalism. As a secondary definition, we use the term platform as a set of online digital arrangements whose algorithms serve to organize and structure economic and social activities that share goods and services with consumers, providers, markets, communities and countries.	We understand that in order to assess the general value or merit of the SE, we need to recognize the existence of a technosolutionary component, in large part of the SE that hides interests and ideologies. How do digital systems that intend to produce new social, community, market, political inclusion also constitute economic performances?
ACQUIER; DAUDIGEOS; PINKSE (2017, p. 7-10).	The sharing economy is conceptualized as an act of dynamic balance between the three different core principles - access, platform, and community-based economy.	To address this question, further research need to analyze the impact that the sharing economy has on the wide range of stakeholders and actors involved and to find out how this process happens.
FRENKEN; SCHOR (2019, p. 5-9).	Defined SE as consumers grants each other temporary access to under-utilized physical assets ('idle capacities'), possibly for money, time or resources.	How can we conceptually and empirically assess the various impacts of today's sharing economy platforms in terms of people, planet and prosperity?
PARENTE; GELEILAT; RONG (2018, p. 54 - 59).	SE assets traded between users/suppliers are for temporary use. In sum, we set the boundaries of SE's business model around the following three pillars: (1) the business focuses on the value of unused or underutilized assets; (2) consumers pay for temporary access instead of ownership, using an internet-based platform; and (3) it relies on the effects of the network and the social interactions between users/suppliers for growth.	How do the effects of the network of customers' and suppliers' contribute to SE? How do SE platforms interact with the local ecosystem to gain competitive advantages? What are the advantages of the SE ecosystem and its technology-related advantages that can be implemented anywhere?
SUTHERLAND; JARRAHI (2018, p. 328 – 339)	SE as a sociotechnical phenomenon, in which the possibilities are not economic behaviors or market strategies, but rather productive relationships between people or groups and technologies and digital platforms.	We know that currently there are no perspectives on technology and, more importantly, the sociotechnical perspective in SE research. The future of research in this field must bring together social, economic, and technological research to provide a more collective understanding of centralized and decentralized digital processes in the sharing economy.

**Source:** Created by the author

Besides these definitions, other terms such as "gig economy" (PARENTE; GELEILAT; RONG, 2018), "on-demand economy" (RAVENELLE, 2017), "platform capitalism" (MURILLO; BUCKLAND; VAL, 2017), and "sharing platforms" (CONSTANTIOU; MARTON; TUUNAINEN, 2017) have also been used to reveal the sharing economy. As there is no consensus regarding SE terminology and following the research directions presented on table 1, we adopt the definition that SE is a socio-technical movement produced by technological artifacts and social individuals (HAMARI; SJÖKLINT; UKKONEN, 2016; MURILLO; BUCKLAND; VAL, 2017; SUTHERLAND; JARRAHI, 2018). Thus, this movement was developed through the Internet, web 2.0, and digital platforms access by consumers, providers, and business owners (BELK, 2014b; SCHOR, 2016). SE is not only an economic and social behavior, but it is also generated and propagated through consumption relationships between consumers, service providers using technology structures, devices, digital platforms, and systems (BREIDBACH; BRODIE, 2017; DE RIVERA et al., 2017; SUTHERLAND; JARRAHI, 2018; ECKHARDT et al., 2019).

The SE has two components: the human (social) and the nonhuman (technical). For this reason, SE is called socio-technical design (HAMARI; SJÖKLINT; UKKONEN, 2016; GEISSINGER; LAURELL; SANDSTRÖM, 2018). Socio-technical design considers the user and treats technologies as socially incorporated systems, whose role and meaning emerge in use (LAMINE, 2017; SUTHERLAND; JARRAHI, 2018). The practice of SE is reflected in how individuals and communities communicate, relate, and make transactions using digital platforms in their daily lives (SUNDARARAJAN, 2016; DE VAUJANY; LECLERCQ-VANDELANNITTE; HOLT, 2019). The socio-technical design promotes the users and the artifacts to the same level in a heterogeneous relationship (LAMINE, 2017; SUTHERLAND; JARRAHI, 2018). Therefore, SE assumes a practice and relationship through the platform mediation process (BASILI; ROSSI, 2020) that adapts and reshapes markets, consumption, and entrepreneurship (RAVENELLE, 2017; SIGALA, 2019; ECKHARDT et al., 2019).

On the other hand, it is relevant to understand what promotes and mediates these practices of sharing consumption and producing products and services in the market (LAURELL; SANDSTROM, 2017; PARENTE; GELEILAT; RONG, 2018). Thereby, an alternative to explain the advance of the SE can be related to the

understanding of the relationships of human and nonhuman actors in a context of society, services and a decentralized and networked economy (CASTELLS, 2005; BARDHI; ECKHARDT; ARNOULD, 2012). Thus, the sharing economy assumes that engagement is generated and promoted by platforms to individuals (BREIDBACH; BRODIE, 2017). This networked process is in constant motion, providing this materiality through different cultures, perceptions, and relationships between objects and individuals, who can still receive mediations and flattening (LATOUR, 2005; BAJDE, 2013; SCHOUTEN; MARTIN; DUFAULT, 2015). Thus, it is necessary to understand the role of consumers, service providers, and digital platforms in this network of actors, who involve and propagate the sharing economy and accommodate the needs and desires in consumer and services relationships.

## **2.2 Consumers and Service Providers in the Sharing Economy**

Diversity and different types of actors are a reality in the SE context (ACQUIER; DAUDIGEOS; PINKSE, 2017; ECKHARDT et al., 2019). These actors access, rent, and share goods and services through their devices with the help of the Internet and digital platforms (SMITH, 2016). These goods and services are underutilized assets such as cars, bicycles, rooms, time, knowledge, and talents shared and rented between individuals (SUNDARARAJAN, 2016; FRENKEN; SCHOR, 2019; ECKHARDT et al., 2019). These individuals are consumers and service providers that seek access, produce solutions, and share an experience through these underutilized assets (BARDHI; ECKHARDT, 2012; LAURELL; SANDSTROM, 2017). Likewise, these individual actors (consumers and service providers) develop social relationships that tend to produce and create connections and inductions to access, share, and consume goods and services (BARDHI; ECKHARDT, 2012; BELK, 2014a; ECKHARDT et al., 2019). Besides, these sharing practices offer opportunities for individuals, either as consumers (offering cheaper and safe access and new experience) or as service providers (creating microenterprise ventures) (RAVENELLE, 2017; GEISSINGER; LAURELL; SANDSTRÖM, 2018).

In the traditional market context, consumers buy and access products and services out of necessity and desire to enjoy their purpose from possessing anything (BELK, 2014b; FRENKEN; SCHOR, 2019). While in the context of the sharing

economy, the consumer is the one who accesses, uses, and shares products and services that may or may not be an idle property (BOTSMAN; ROGERS, 2011; BARDHI; ECKHARDT, 2012; BRADLEY; PARGMAN, 2017). This behavior started with the sharing of digital products over the Internet, such as photos, music, and films (BELK, 2014a; DE RIVERA et al., 2017). Nevertheless, the practice of sharing is not new to individuals; it was sophisticated and transformed through access to innovative devices and platforms (BELK, 2014b; SCHOR, 2016). In this context, excessive consumption causes people to have unused products (DEL MAR ALONSO-ALMEIDA; PERRAMON; BAGUR-FEMENÍAS, 2020). Therefore, consumers are individuals that access, rent, exchange, use, and experience underutilized assets (goods and services) through web 2.0, devices, and platforms. (BELK, 2007; BELK 2014b; BARDHI; ECKHARDT, 2012; BELK, 2014b; HAMARI; SJÖKLINT; UKKONEN, 2016; PERREN; KOZINETTS, 2018; ECKHARDT et al., 2019).

On the other hand, consumers carry out a set of initiatives to share and access these idle assets, but for this process to happen, a producer or service provider is required (ECKHARDT et al., 2019; BASILI; ROSSI, 2020). In SE, service providers share their skills, activities, and talents to optimize their use through business models such as rental, access, or time leasing (RAVENELLE, 2017). Service providers are individuals who carry out coordinated initiatives through non-contractual, non-hierarchical, and monetized forms of connection and interaction (to perform work, participate in a sharing service, or form time or goods exchange relationship) (SUNDARARAJAN, 2016; COCKAYNE, 2016). For Ravenelle (2017), service providers in SE are independent workers who optimize underused assets to promote access and sharing, instead of ownership. In addition, there are usually independent contractors to deliver, rent, exchange, and share their time, skills, and expertise through digital platforms for consumers (RAVENELLE, 2017; HARVEY; SMITH; GOLIGHTLY, 2017; ECKHARDT et al., 2019).

In the sharing economy, consumers and providers are often categorized as prosumers, because at the first moment are considered the user and the other are providers. For example, In SE users take on expanded roles; sometimes car sharing providers “consume” their car and also “produce” service for those travelling together (ECKHARDT et al., 2019). These prosumers take on and receive a variety of roles and correspondence from digital platforms, such as connection, communication,

promotion, evaluation, and quality control (BREIDBACH; BRODIE, 2017; BASILI; ROSSI, 2020). For example, the Uber user can coordinate with the driver before collection to improve the platform profile, providing a rating and expanding the value of the experience, sharing with others on social media, or in a ranking or evaluation of the app (BREIDBACH; BRODIE, 2017; ECKHARDT et al., 2019; BASILI; ROSSI, 2020).

In this study, consumers and service providers are social actors or human actors who participate in the sharing economy through digital platforms (artifacts or solutions). Digital platforms in this relationship connect, mediate and induce access, interaction and exchange of assets between these consumers and service providers (HARVEY; SMITH; GOLIGHTLY, 2017; DE REUVER; SØRENSEN; BASOLE, 2018). For Latour (2011), an actor is a network player who develops practices and relationships. In SE, these practices and relationships between consumers, digital platforms and service providers are driven by intrinsic motivations (BENKLER, 2017). Likewise, digital peer-to-peer service platforms such as Airbnb, Uber, Spotify, and Youtube allow combining and mediating reputations, evaluations, and ratings between consumers and service providers through their systems, solutions, resources, and mechanisms (ECKHARDT et al., 2019; BASILI; ROSSI, 2020).

However, these actors view themselves as "architects or agents of shareable goods and service" that develop access, experiences, and profits (FITZMAURICE et al., 2020). Thus, the SE offers people new means of exercising control over their talent, work, finances, and creativity (ECKHARDT et al., 2019; FITZMAURICE et al., 2020). Besides, SE provides access, uses, and experiences with innovative and technological goods and services (BARDHI; ECKHARDT, 2012; HAMARI; SJÖKLINT; UKKONEN, 2016). These relationship processes in SE between consumers and service providers can be centralized, decentralized, mediated, and reshaped through resources, tools, mechanisms, functionalities, communication interfaces, design, digital platform algorithms (HARVEY; SMITH; GOLIGHTLY, 2017).

### **2.3 Digital Platforms in the Sharing Economy**

The dissemination and access to ICT technology helps to create a plurality of business models in the context of the sharing economy (GEISSINGER; LAURELL;

SANDSTRÖM, 2018). This SE movement develops business interruption, facilitating exchanges through a platform logic, which, in turn, allows unprecedented scalability (ACQUIER; DAUDIGEOS; PINKSE, 2017). Likewise, there are many types of digital platforms, such as (technical view) an extensible codebase in which complementary third-party modules can be added to offer products and services; Technical elements of the digital platform (sociotechnical view) (software and hardware) with associated organizational processes and standards; Digital platform (view of multilateral markets) that mediates and combines different groups of users, such as buyers and sellers with digital technological solutions through applications, websites and blogs (DE REUVER; SØRENSEN; BASOLE, 2018). Thus, these services enabled through digital platforms change the relationship between consumers and producers or providers changes from "go-to" to "come to" (SMITH, 2016).

In the SE, digital platforms consist of a wide network of service providers and consumers, with strong collaboration on commercial products (MOHLMANN, 2015). This leads digital platforms to mediate a context farther from the traditional view of retail supply chain, where consumers are treated as a mass (HÄNNINEN; SMEDLUND; MITRONEN, 2018). Thus, SE platforms have revealed that activities can be separated into two main categories: access over ownership and transfer of ownership. However, it is possible for a platform to facilitate both exchange modes (HAMARI; SJÖKLINT; UKKONEN, 2016, p.3). Seen in this light, both are platforms for access-based consumption, based on the commercialization of the services offered (BARDHI; ECKHARDT, 2012; PARKER; VAN ALSTYNE; CHOUDARY, 2016). In this case, suppliers and consumers share space, time, skills and talent. Therefore, SE platforms are organizational hybrids that compile access, exchanges and relationships with digital solutions and control and coordination mechanisms (BARDHI; ECKHARDT, 2012; ECKHARDT et al., 2019).

In this way, digital platforms assume a relevant position in SE relationships through visible and invisible resources and tools, structured to provide goods and services in a more direct and transparent way, with a focus on experience, personalization, relevance and added value (DE REUVER; SØRENSEN; BASOLE, 2018). Therefore, digital platforms develop, promote and orchestrate a culture or parallel revolution that, on the one hand, consumes digital and, on the other hand, digitizes the physical (SUNDARARAJAN, 2016). This digitalization of the relations of



consumption, work and service receives a strategic focus for exercising a loose control of governance between these actors, with the objective of legitimizing and creating engagement (CONSTANTIOU; MARTON; TUUNAINEN, 2017). This particular question reveals a management process of how platforms promote, mediate, and establish norms and rules through their systems, resources, mechanisms, and tools (BASILI; ROSSI, 2020).

However, De Vaujany; Leclercq-Vandelannoitte and Holt (2019) argue that there is a paradox in this process and believe there is no governance of digital platforms, but a process of relationship with digital communities. For example, the first of these questions is to establish the scope for understanding the context, process, and practices of these platforms in this movement with different actors in the SE (DE REUVER; SØRENSEN; BASOLE, 2018). Thus, another issue related to the nature of digital platforms in the SE is to understand how their actions, processes, systems, and resources are materialized and developed in consumer and services relationships (BRADLEY; PARGMAN, 2017; BASILI; ROSSI, 2020). Likewise, in the SE context, the platforms are composed of several digital solutions such as websites, mobile applications, communication tools, and profile pages on social networks (SMITH, 2016; SUNDARARAJAN, 2016).

Meanwhile, there are doubts about how platforms with centralized and decentralized digital solutions promote and mediate relationships between consumers and providers (HAMARI; SJÖKLINT; UKKONEN, 2016; SUTHERLAND; JARRAHI, 2018). Similarly, Eckhardt and Bardhi (2016) raise questions about the action of digital materiality on digital platforms in the relationship between consumers and service providers in consumer practices that occur in the SE. On the other hand, sharing practices are built, established, and promoted between norms and rules propagated by consumers and providers that cooperate with these systems and digital platforms (SUNDARARAJAN, 2016; GEISSINGER; LAURELL; SANDSTRÖM, 2018). Therefore, digital technology is closing the gap between decisions, actions, and relationships made by consumers and suppliers in these sharing practices (BARBE; HUSSLER, 2019; DEL MAR ALONSO-ALMEIDA; PERRAMON; BAGUR-FEMENÍAS, 2020).

Consequently, it is necessary to understand the actions, functions, and stimuli provided by these digital platforms to create engagement and reduce the feeling of

uncertainties and risks in the interaction and relationship between consumers and service, talent, and content providers (ABRAMOVA et al., 2015; ECKHARDT et al., 2019). However, it is evident that digital platforms mediate the sharing economy through their functionalities and system design (BASILI; ROSSI, 2020). Table 2 presents these perspectives.

**Table 2: Digital platform definitions in the sharing economy**

Author(s)	Definition	Perspectives and main resources.
BASILI; ROSSI (2020 p.1- 4)	The digital platform uses its reputation system, evaluation mechanism, notification, and communication resources to control and mediate service providers and the quality of service in the SE.	Platforms in the mediation of service providers and service quality through reputation system in the SE.
DEVAUJANY; LECLERCQVA-NDELANNOITTE; HOLT (2019 p. 15 - 17)	The digital platform has as its structural (not managerial) aim a complete mediation of the relationships of social communities through its image, communication, and resources, which some activities can become a product of mediation or manipulation, which can make sense.	Platforms in the mediation of communities and businesses in the SE.
SUTHERLAND JARRAHI (2018, p. 338)	The agency of digital platform resources, functionalities, design, such as algorithms and rating systems, carries out transactions or shares exchanges, versus the amount that is left to the participants (consumers and suppliers).	Platforms concern centralized or decentralized mediation in the SE.
CONSTANTIOU; MARTON; TUUNAINEN (2017, p. 17-22)	Digital platforms with a strategic focus exercise lose control, building trust and establishing norms among users to promote coo petition within the platform through community building.	Platforms combine and move resources, users, and activities.
BREIDBACH; BRODIE (2017, p. 764)	The platform merely represents an intermediary to orchestrate and facilitate the exchange of resources between other actors in the sharing economy, instead of a distinguished service in itself.	Platforms as engagement actors between consumers and service providers.
DE RIVERA et al., (2017, p. 15)	Online and sharing social interactions can be mediated, framed, or entangled in technological contexts. Therefore, the structures and content of the platforms can stimulate the sharing economy.	Platforms as mediators.
JOHNSON; NEUHOFFER (2017, p. 2364)	Platforms and their operational resources provide an activity facilitated through an intangible "value proposition" that acts on the tangible resources of each consumer or service provider.	Platforms as value integrators.
HAMARI; SJÖKLINT; UKKONEN (2016, p. 2047)	Peer-to-peer activity based on sharing access to goods and services, coordinated by individual attitudes and platforms.	Platforms combined with the attitudes of individuals.
PARKER; VAN ALSTYNE; CHOUDARY (2016, p. 8)	Digital platforms are a business based on or that enables the development of value between service providers and consumers. The digital platform provides an open, participatory infrastructure for these interactions and sets the governance conditions for them.	Platforms in business governance.
CUSUMANO (2014, p. 32)	Digital platforms connect individuals who have underutilized assets to people who want these assets in the short term.	Platform's business.
CANNON; SUMMERS (2014, p. 1)	A business model in which peers can offer and buy goods and services with each other through a platform [...] That sharing economy companies are true intermediaries, providing a platform for consumers instead of providing services directly.	Platforms and the SE, from the perspective of an intermediary.

**Source:** Created by the author

The design of these paths provides a theoretical vocabulary developed for debates around SE and technological mediation combined with atomizing relationships between the community-based economy, such as consumers and service providers (ACQUIER; DAUDIGEOS; PINKSE, 2017; BREIDBACH; BRODIE, 2017; LAURELL; SANDSTROM, 2017; GEISSINGER; LAURELL; SANDSTRÖM, 2018; BASILI; ROSSI, 2020). There are different ways of understanding this point. However, few studies explain the real role and functions of platforms in connections, in business generations with the most varied and different services, partners, and customers (MOHLMANN, 2015; ECKHARDT et al., 2019). Thus, in order to understand the assembly, symbiosis, and engagement between social, consumer, and technological components in the sharing economy, it is necessary to better understand the context in this field (SCARABOTO, 2015; ECKHARDT et al., 2019). Therefore, this experience arises from a dynamic hybrid relationship in which these consumers or providers do not feel the actions and mediations developed by the technological base (BREIDBACH; BRODIE, 2017; ECKHARDT et al., 2019; BASILI; ROSSI, 2020).

Likewise, given the integration of actors in the sharing economy, network analysis can be used to assess the roles, relationships and information flows with digital platforms, as well as the degree of influence and strength of connection between these actors on a network. Therefore, a key question to address this gap about mediation of digital platforms for consumers and providers may be in understanding the roles, functions and consequences that are delivered and supported by multi-sided digital platforms combined with human needs and desires. (ECKHARDT; BARDHI, 2016; HAMARI; SJÖKLINT; UKKONEN, 2016; KOZINET; PATTERSON; ASHMAN, 2017). Both human actors (consumers and providers) and nonhuman actors (digital platforms, technological solutions, and organizations) act in these situations that occur in collective and heterogeneous ways (LAW, 2004; LATOUR, 2005; BAJDE, 2014). Therefore, in the conception of the actor-network theory, there is no agent outside the network (LATOUR, 2005). In this way, the nonhuman element connects, interacts, and influences consumption or human beings mediating and generating new consumption behaviors (BAJDE, 2014; CANNIFORD; BAJDE, 2016).

## **2.4 Consumption and Service Relationships in the Sharing Economy**

In SE, consumption and service relationships are developed through individual, technological and organizational processes (HAMARI; SJÖKLINT; UKKONEN, 2016). These processes can be controlled, coordinated, or reformulated through digital solutions, human or organizational action (BELK, 2017). Thus, relationships are established when all participants are directly involved to produce consumption in a shared way (ECKHARDT; BARDHI, 2016). Therefore, consumption and service relationships occur through processes of inductions, connections, intermediations, interactions, and engagements that support an exchange of peer-to-peer services between consumers and service providers in the SE (BREIDBACH; BRODIE, 2017; DE RIVEIRA et al., 2017; ECKHARDT et al., 2019; BASILI; ROSSI, 2020). In addition, digital platforms, through their resources and mechanisms, stimulate actions, enable connections, mediate and flatten the relationships between consumers and service providers (BAJDE, 2014; SCARABOTTO, 2015; PERREN; KOZINETTS, 2018).

Similarly, Bardhi and Eckhardt (2012) reinforce the existence of the consumption landscapes in the sharing economy or access depends on the consumer-object-provider interaction. For Bajde (2014) technologies are never simply standing there without action, but rather transport, transfer, approximate and inspire meanings and influences in consumer relationships with products or service. Thus, digital platforms have a particular role in the context of the sharing economy to adjust, mold, mediate, and approximate bring together the relationship of consumers and providers (HARVEY; SMITH; GOLIGHTLY, 2017; ECKHARDT et al., 2019). Therefore, digital platforms and solutions involve consumers and providers developing new forms of relationships through the digitalization of services (ECKHARDT; BARDHI, 2016). In this way, new forms of relationships in the SE develop an assumption that consumption happens through the experience between consumers and service providers mediated by digital platforms (PERREN; KOZINETTS, 2018; ECKHARDT et al., 2019).

Likewise, consumers and service providers receive connections and inductions to exchange goods and services to request and offer services through dynamic relational processes (ECKHARDT; BARDHI, 2016; HARVEY; SMITH; GOLIGHTLY, 2017). Thus, consumer and service relationships in the sharing economy receive an extensive meaning that is transformed and supported by digital resources, solutions

and mechanisms (HARVEY; SMITH; GOLIGHTLY, 2017; BASILI; ROSSI, 2020). These digital resources of the platforms develop inductions and connections for consumers and service providers in the sharing economy (BREIDBACH; BRODIE, 2017; HARVEY; SMITH; GOLIGHTLY, 2017). Thus, inductions are sometimes direct and indirect stimuli provided by digital platforms to consumers and service providers through communication and reputation systems (BASILI; ROSSI, 2020). Thus, the main characteristic of platform inductions is to adapt consumers' needs to market demand through digital communication actions (CONSTANTIOU; MARTON; TUUNAINEN, 2017).

On the other hand, connections occur through peer-to-peer links, eliminating intermediaries (BENKLER, 2017; BASILI; ROSSI, 2020). These links are possible through the dynamic processes provided by the interfaces, functionalities and mechanisms of the digital platform (BREIDBACH; BRODIE, 2017). In this way, consumers and service providers, even if they are unknown, connect, exchange, share information and cooperate, boosting consumption and service relationships (SCHOR, 2016; PERREN; KOZINETS, 2018). Therefore, connections are made due to the communication and interaction resources of digital platforms in SE (SUNDARARAJAN, 2016). In addition, digital platforms use several different technologies, such as big data, algorithms, artificial intelligence and gamification to connect and induce consumers and suppliers in SE (HARVEY; SMITH; GOLIGHTLY, 2017; APTE; DAVIS, 2019; BASILI; ROSSI, 2020).

In this way, consumption and service relations in SE are mediated by platforms, reputation systems, marketplaces, or computer systems (ECKHARDT; BARDHI, 2016; HARVEY; SMITH; GOLIGHTLY, 2017; BASILI; ROSSI, 2020). Digital platforms mediate the relationship between consumers and service providers through their resources, interfaces, functionalities, mechanisms, and design (DE RIVEIRA et al., 2017; BREIDBACH; BRODIE, 2017). For example, the foldable shape of notebook transforms our behavior to type, read or navigate on the Internet (digital devices adjust our vision to develop or consume content), and figuratively (Prosumers become “written” and “read” in a world of foldable screens) (BAJDE, 2013; 2014). Therefore, digital platforms exert an influencing action by transporting meanings and senses for establishing relationships between consumers and service providers. For example, re-signify social interactions through voice applications, or establish meaning for a dog

caregiver activity (BARDHI; ECKHARDT; ARNOULD, 2016; LAURELL; SANDSTRÖM, 2017).

These heterogeneous dynamics between consumers, providers, platforms happen in an integrated way, being flattened by the resources and systems of digital technologies. For example, live tools used to connect and bring people together through video streaming applications to provide communication, interaction, or content sharing in pandemic moments (SWEZEY, 2020). In this situation, these digital solutions bring people together, providing exchanges and relationships (ECKHARDT et al., 2019). This consumption process carries pressure and tensions, developing the flattening relationships through communication and interaction promoted by reputation systems, notification systems, connections systems, and design resources by digital platforms (BAJDE, 2013; 2014; SCHOUTEN, MARTIN, DUFAULT, 2015).

Therefore, flattening behavior is created and receives pressure through representation, cooperation, intermediation, and intervention exists in these sociotechnical relationships between individuals, services, and digital objects in consumption (BAJDE, 2013; 2014; SCHOUTEN, MARTIN, DUFAULT, 2015). For Latour (2005), one of the foundations of actor-network theory is to explain the practice of actors or actors in a web that receives and produces effects that can generate mediations and flattenings. Here, in this study, flattening is the process that helps to associate, assemble, and legitimize the sharing of relationships between consumers and service providers in the SE (e.g., BAJDE, 2013). Therefore, to a deeper understanding of the existing relationships between these actors (human – consumers and service providers, and nonhuman – digital platforms), it is necessary to describe this combination of elements of agency, mediation and flattening relationships between the proposed actors by ANT (CALLON, 1984; LAW, 2004; LATOUR, 2005; BAJDE, 2013; 2014).

## **2.5 Actor-Network Theory within the Sharing Economy**

ANT, combined with research on information and communication technologies (ICT's), such as digital platforms, is a reality (SHIM; SHIN, 2016). ANT is designed to understand and analyze technological relationships integrated with social (LATOUR, 2005). The core aim of ANT is to follow the network association between artifacts and

individuals (LAW, 1992; LATOUR, 2005). This theory focuses on this heterogeneous network of interests, processes, and relationships, including people, objects, technologies, policies and organizations (LAW, 1992; LATOUR, 2005). Even though it is designed to interpret the heterogeneous relationships in a network, this theory seeks to describe how networks form, hold together, develop movements and fall apart (LATOUR, 2011; BAJDE, 2013). Therefore, the human and nonhuman actors are a collective group that acts and interact as a coordinated network in motion (LATOUR, 2005; BAJDE, 2014). Thus, ANT seeks to translate these complex relationships between individuals (human) and artifacts (nonhuman) actors, trying to "open this black box" (CALLON, 1984).

On the other hand, other theories seek to interpret these relationships between social and technologies, for example, theories such as Sociomaterial Practices (ORLIKOWSKI, 2007), Mangle of Practice (PICKERING, 1995), and Relational Materiality (LAW, 2004). However, ANT incorporates human and nonhuman elements in collective, ongoing actions, processes, and relationships (SHIM; SHIN, 2016). The theory of sociomaterial practices considers human and nonhuman actors interconnected, but this theory is limited in analyzing this perspective separately between actors (ORLIKOWSKI, 2007). Unlike the Mangle of Practice, which sees the network as "double dance of the agency", ANT considers the agency in a network in a "dynamic collective process" (MARTINI; MASSA; TESTA, 2013). ANT has the power to translate and describe the complex relationships between heterogeneous elements that are entangled and assembled into a network (SHIN, 2016). Although ANT translates and describes the dynamic relationships between actors in-network, it does not consider the materiality of the relationship like Law (2004). Instead, ANT aims to explain how the relationships between the actors come together to form networks.

Likewise, ANT considers artifacts and technologies in the same plane as individuals and social groups (BAJDE, 2013). Thus, ANT assumes that humans and nonhumans are symmetrical (LAW, 1992; LATOUR, 2005). For ANT, the evolutions, actions and transformations of an event or practice are not entirely controlled or built by human consciousness, but also by a nonhuman agency in a network (LATOUR, 2005). The ANT network is a heterogeneous association between artifacts and individuals in a collective of assemblies that helps redistribute and reallocate action in an event or practice (LAW; MOLL, 1995; LATOUR, 2011). ANT scholars argue this, a



set of heterogeneous elements as a dynamic collective process in motion and incorporated into reality (SHIM; SHIN, 2016; SHIN, 2016). For ANT, any element has the potential to act, and the action is the result of a continuous two-dimensional process in the network. Therefore, the agency is defined as a property of network associated entities, considering the role played by human and nonhuman actors (LATOUR, 2005; SHIM; SHIN, 2016). ANT agencies are composed of people, things, facts, texts, artifacts and associations being built collectively, but they can receive joint, interactive or intermediary action from one or more actors (LAW, 2004; LATOUR, 2005; BAJDE, 2013).

Another important aspect is to define mediation in this actors-network perspective (LAMINE, 2017). ANT mediation is an event that is defined neither by the inputs, nor by the outputs, nor by causes or consequences (SHIN, 2016; LAMINE, 2017). Therefore, Mediate is to interfere, is to make a difference in the production of an event or practice, not being an exclusive action of humans (LATOUR, 2005; SHIM; SHIN, 2016). ANT Mediation refers to the idea of the environment, as it is a mid-point in which the action of locating and globalizing concentrates and disperses interactions, giving symmetry to human and nonhuman beings (LATOUR, 2000; 2005; BAJDE, 2013). Thus, mediation can act, interfere, distort and transport the general course of events that are in a heterogeneous two-dimensional network (LAMINE, 2017). ANT attempts to comprehend and describe these social and material elements, which need to be translated individually and collectively (LATOUR, 2005; 2011). In other words, all mediation directly involves an actor in a network that transforms and redistributes meanings in an event or practice (CALLON, 1984; LAW, 1992; LATOUR, 2011).

Thus, ANT suggests an arrangement or combination in which the actors act as mediators in this assembly (BAJDE, 2013). Mediators are entities that transform, translate, distort and modify the meaning or elements that are supposed to carry a fact, process or relationship (LAMINE, 2017). Mediators, even in silence, are considered and recognized in many of the analyses as intermediaries in action, "What goes into them never defines exactly what comes out" (LATOUR, 2005, p. 65). Meanwhile, intermediates are representatives (human or nonhuman) who "speak on behalf" of other actors, reproducing points of view that were inscribed in them without transforming them (LATOUR, 2005; LAMINE, 2017). Therefore, the inscription process is defined as a set of agreements, alliances or interests between the actors and their

roles in an event or practice (CALLON, 1984; LAW, 1992). ANT mediators offer interpretations and descriptions of these different results, translating the actors' assembly in a network (LATOUR, 2005; BAJDE, 2013).

Consequently, there is symmetry between human and nonhuman agents in these network associations that receive flattened tensions in these hybrid and dynamic relationships in consumption (BAJDE, 2013). Thus, ANT becomes essential to observe how flattening relationships between individuals and artifacts occur in consumption relationships (BAJDE, 2013; SCARABOTO; FISCHER, 2016), because these flattening relationships are created by heterogeneous visible and invisible associations between human and nonhuman actors, in a hybrid movement (LATOUR, 2005; BAJDE, 2013). ANT's flattening relationships can be described mainly by the existence of a power mechanics, between actors and intermediaries, who can coordinate and control the meaning, interactivity, experience and the relationship existing within a culture or collectivity consumption (LAW, 1992; LATOUR, 2005; BAJDE, 2013; 2014; SCHOUTEN, MARTIN, DUFAULT, 2015).

In this perspective, flattening relationships are visible and invisible actions developed by the artifact agency that play a mediating role in the implementation, assembly and stabilization of consumer practices promoted by consumers and service providers (BAJDE, 2013; SCHOUTEN, MARTIN, DUFAULT, 2015). Moreover, there are networked human and nonhuman elements that are seen and perceived not separately and dichotomized, but through their approach and relationship. Thus, the flattening relationships of ANT receive pressure through the representation, cooperation, intermediation and intervention existing in these sociotechnical relationships between individuals, and artifacts (BAJDE, 2013; SCHOUTEN, MARTIN, DUFAULT, 2015). Likewise, the flattening relations, between consumers and service providers in the sharing economy, are a reality, since digital technologies develop digital consumption with digital relations in the Internet and application support markets (BAJDE, 2014). Thus, Table 3 presents the concepts of ANT used in this study.

**Table 3: Key elements of Actor-Network Theory**

Concept	Definition	References
Agency	Heterogeneous entities, considering the role played by human and nonhuman actors. This agency is the result of a continuous two-dimensional process of translation and enactment, generating hybrid mediation actions between artifacts and people in a context or phenomenon. This study considers platforms, solutions, mechanisms and resources associated with the actions and habits of consumers and service providers in the sharing economy, which can build a stable relationship.	BAJDE (2013; 2014); CANNIFORD; SHANKAR (2013; 2016); LAMINE (2017); LATOURE (2005; 2011); LAW (1992; 2004); SCHOUTEN; MARTIN; DFAULT (2015);
Actor (or <i>actant</i> )	Human and nonhuman entities that perform or mediate some form of action or make a difference in the heterogeneous network in motion or phenomenon. The human actors in this study are consumers, service providers; digital platforms of nonhuman actors with solutions, tools and resources.	BAJDE (2013; 2014); CANNIFORD; BAJDE (2016); CALLON (1984); LATOURE (2005; 2011) LAW (1992; 2004);
Actor-network	Heterogeneous networks of interests and aligned actions that include people, artifacts, organizations, patterns, paths, subjects, and facts. Consumers and service providers with their behaviors and actions during engagement and relationship with digital platforms inside and outside organizations in the SE.	BAJDE (2013; 2014); CZARNIAWSKA (2006); CALLON (1984; 2008); LAMINE (2017); LATOURE (2005; 2011); WALSHAM (1997).
Intermediates	Intermediates are representatives (human or nonhuman) who "speak or act on behalf" of other actors, facts, and processes, reproducing points of view that have been inscribed in them without transforming them, but which can mediate. In SE intermediates can be invisible and visible resources of digital platforms, behaviors and actions of consumers and service providers that flatten and mediate these relationships through practices and processes in a digital services business.	BAJDE (2013; 2014); BREIDBACH; BRODIE, (2017); CZARNIAWSKA (2006); LAMINE (2017); LATOURE (2005, 2011); LATOURE; WOGLAR (1997); SHIM; SHIN (2016); SUTHERLAND; JARRAHI (2018).
Inscription	The procedures that have the responsibility to materialize something that is being researched, that is, to give meaning and or to formalize the visible and invisible phenomena that will serve as raw material for the elaboration of statements or outputs from the scientific field. Results extracted from the procedures for monitoring the actors (consumers, digital platforms and service providers) that can explain the relationship of mediating and flattening.	CALLON (1984) LATOURE (2005; 2011); LATOURE; WOGLAR (1997); LAW (2004); MELLO (2016); SHIN (2016);
Inscribers	All materials constructed or materialized in the registration process or action. These representations can be conversations, maps, texts, graphs, diagrams, images, videos, etc., that allowed their manipulation, comparison and analysis. Data, contents, and images of the actors (consumers, digital platforms and service providers) gathered through observation procedures, conversations, direct and indirect interviews that can explain the mediation and flattening relationship in the SE.	FARAJ; KWON; WATTS (2004); LATOURE (2005; 2011); LATOURE; WOGLAR (1997); LAW (2004); MELLO (2016).

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ANT's theoretical conceptual elements invite us to reflect on the existing and proposal definitions in this study about the phenomenon of the sharing economy through the imperatives of human agency, represented by consumers and providers,

and the nonhuman agency of technological artifacts. Thus, ANT adds and collaborates in order to assist in a broader understanding of the collective action of the actors involved in mediation and flattening, which occurs in this relationship between consumers, digital platforms, and service providers. The actor-network theory can go beyond providing elements of analysis for understanding organizational phenomena, because it provides methodological reflections for researchers in the area (CALLON, 1984; LATOUR, 2005; BAJDE, 2013). For Latour (2005, p.12) "the social scientist needs to closely monitor all the actions and practices of the actors involved and which associations are established". This procedure is a matter of following the artifacts or things through the networks in which they are transposed and propose to describe them in their tangles and symmetry (CALLON, 1984; LATOUR, 2005; BAJDE, 2013).

Consequently, the exercises carried out in this research sought to observe and question the relationships developed between humans (consumers and providers) and nonhumans (digital platform), following the actors and preserving, symmetrically, the actions carried out by the social, natural and material world in the descriptions. For Callon (1984), there is an overlap of how facts, process and practices happen when associating human and nonhuman actors in a situation, context, or phenomenon. In this way, it is important to observe this overlap between social agency and objects in consumer and service relationships (BAJDE, 2014; SCARABOTO, 2015; CANNIFORD; BAJDE, 2016). Thus, these particularities can be described mainly by the existence of a power mechanics, between actors and intermediaries, which can coordinate and control the experience, the sense, the usability, the engagement and the relationship existing in a collectivity between consumers, digital platforms and services providers (BARDHI; ECKHARDT, 2016).

In this way, these relationships can be assembled, modified and mediated from a flattened configuration in the dynamics of the sharing economy, through inscriptions and inscribers that mobilize this practice in a "single format" (BAJDE, 2013; ECKHARDT; BARDHI, 2016). Thus, ANT is consolidated when, through associations and inscriptions, helping in the translation and understanding of how certain technical artifacts or technical partners, visible or invisible, can guarantee or support the interest of a human actor (CALLON, 1984, 2008; LATOUR, 2005). Thus, the theoretical and methodological basis proposed by ANT is centered on understanding of how the everyday practices of individuals and objects that coexist in networks and unique

interactions emerge (LAW, 1992; 2004). In addition, Latour (2000; 2012) recognizes ANT as a method by which actors are able to execute, transform, mediate, flatten or stabilize this social at any time.

In this perspective, ANT proves to be a theory that sees the social as a trainer and needs to be stabilized as things happen (CALLON, 1984; LATOUR, 2005; 2011). Thus, the translation perspective of ANT must take into account the focus of the circulation in which artifacts or objects circulate or move in a network together with the human actors to the point where one point connects to another in a natural and imbricated way and in the network (CALLON, 1984; 2008). Moreover, the main foundation of ANT is the perception of how human and nonhuman beings are configured as actors in stable heterogeneous networks, with aligned interests and collective mobilizations (LAW, 1992). Therefore, the ANT translation process explores how heterogeneous networks emerge, how they remain over time, and how they compete with other networks with different interests also aligned (CALLON, 1984; 2008; LATOUR, 2005).

Consequently, the challenge of combining the concepts of the sharing economy, consumers and service providers, and digital platforms with ANT allows new discussions and reflections on how to make connections, inductions, mediations, and flattening out of these heterogeneous relationships of network actors. For example, unlike the uniform nature of rooms at a Sheraton hotel, Airbnb rentals display a considerable degree of variance, forms, and combinations for the consumer by service providers (e.g. ECKHARDT; BARDHI, 2016; ECKHARDT et al., 2019). Therefore, ANT is considered most suitable for describing, translating, and analyzing complex elements and roles of agencies in a network (CALLON, 1984; BAJDE, 2013). Also, ANT is not suitable for analyzing differences in the relationship of the performance of objects, or artifacts, but it describes how it acts and interferes in relationship with individuals in practices, processes or relationships such as consumption (BAJDE, 2013; SCHOUTEN, MARTIN, DUFAULT, 2015).

Following this theoretical discussion, the next chapter presents a reflection with premises added to a generic framework to address the gap in the triad relations between consumer - digital platforms - service providers in the SE in light of ANT.

### **3 DIGITAL PLATFORMS AS PROTAGONISTS IN MEDIATING AND FLATTENING RELATIONSHIPS BETWEEN CONSUMER AND SERVICES PROVIDERS**

The theoretical discussion leads to a reflection on how digital platforms mediate and flatten consumer and service relationships in the SE. Thus, this chapter presents a structure with three previous premises to reveal this gap. ANT adds to this proposal some reflections through the imperatives of the human agency, represented by consumers and providers, and the non-human agency of digital technological artifacts (LATOUR, 2005; BAJDE, 2014; ECKHARDT; BARDHI, 2016). With this in mind, this structure aims to assist in a broader understanding of the action of the heterogeneous actors (consumer; digital platforms; service providers) to understand how these consumer and service relationships are structured and happen in the sharing economy. Thus, this research seeks to reveal an association between human and nonhuman agencies (LATOUR, 2005; BAJDE, 2013).

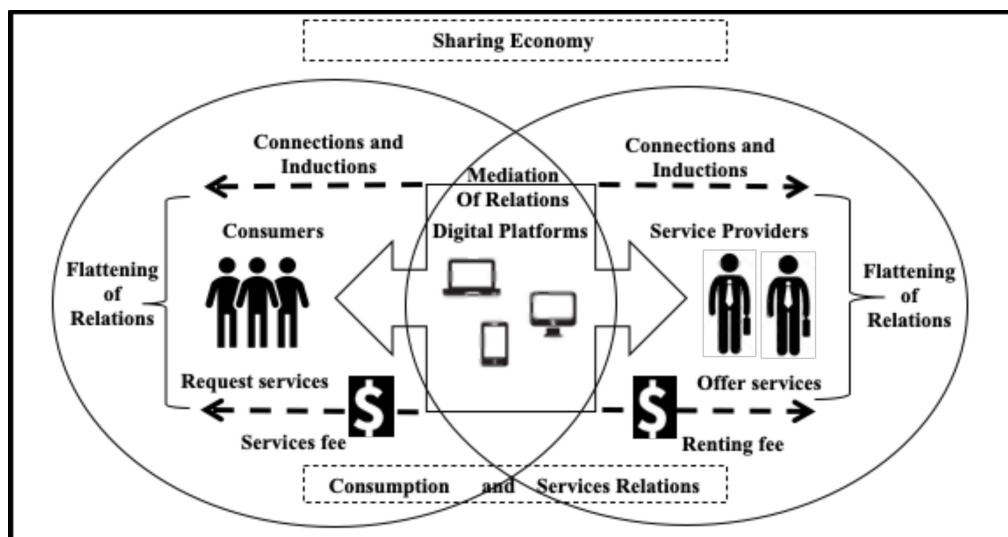
In this perspective, the digital platforms agency can implement different forms of relationship in the consumption and distribution of services in the SE (HARVEY; SMITH; GOLIGHTLY, 2017; ECKHARDT at al., 2019). More recently, Mair and Reischauer (2017, p. 13) reinforced that when say that "these digital platforms mediate transactions, combining the supply side with the demand side". On the other hand, Del Mar Alonso-Almeida, Perramon and Bagur-Femenías (2020) believe that the increase in the number of alternatives to access the consumption of a product / service is allowed due to the various alternatives of accessing information through various digital sources (Internet, social networks, digital platforms and markets). However, for Möhlmann (2015), the sharing relationship is interdependent between the actions of individuals and devices. In this view, relationships are built through reputations that build trust for consumption and sharing. Meanwhile, Hamari, Sjöklint and Ukkonen (2016) and Harvey, Smith and Golightly (2017) recognize that digital platforms play a crucial role in promoting relationships between consumers and service providers in the SE, making them closer and more confident efforts and solutions.

Likewise, this framework proposal goes beyond the institutional change recently argued for some authors (MALHOTRA; VAN ALSTYNE, 2014; MURILLO; BUCKLAND; VAL, 2017); Sharing practices combined with interactions and interdependencies of actors (MÖHLMANN, 2015; LAURELL; SANDSTRÖM, 2017; BARBE; HUSSLER,

2019); Attitude factors of individuals impacted by the technological process (HAMARI; SJÖKLINT; UKKONEN, 2016; HARTL; HOFMANN; KIRCHLER, 2016); A paradoxical balance between social and technological agents (ACQUIER; DAUDIGEOS; PINKSE, 2017; DE VAUJANY; LECLERCQ-VANDELANNOITTE; HOLT, 2019); Governance process managed and established only by digital platforms (BREIDBACH; BRODIE, 2017; CONSTANTIOU; MARTON; TUUNAINEN, 2017; SUTHERLAND; JARRAHI, 2018); Either due to the process of the reputation system argued by Basili and Rossi (2020) or due to the axiom that the sharing economy happens and depends only on the companies and market production without considering the agency of digital platforms (RAZEGHIAN; WEBER, 2019). Thus, this is critical that scholars keep a sharp focus on the technological role and its effect on the sharing economy (ECKHARDT et al., 2019).

Thus, figure 1 presents a generic proposal for a theoretical framework to analyze how mediation and the flattening of relations between consumers, platforms, service providers in the sharing economy take place in the lens of Actor-Network Theory.

**Figure 1: Theoretical framework – Mediating and Flattening of relationships**



Source: Created by the author

In this organizational structure, digital platforms create meaning and exert a strong influence on decisions and relationships of sharing practices between consumers and service providers. This framework is composed of a plural ecosystem of social, economic, market, and technological actors in which they share the usual

institutional, structural and organizational arrangements to facilitate the interaction and exchange of resources, good and services (BELK, 2014a; MAIR; REISCHAUER, 2017; ECKHARDT et al., 2019). Thus, the framework presents different elements, such as consumers that request service and pay to use or access through service fees. Service providers offer service and monetize their labor through renting or access fees. Digital platforms connect, induce, and mediate relationships in this consumption and service offering. These relationships happen between individuals (consumers and service providers) through the digital materiality of platforms that mediate the connections and inductions of sharing practices. This mediation process orchestrated by digital platforms develop a flattening relationship between consumers and services provides which simplifies, facilitates, transforms, and promotes interactions, sharing, access and consumption in the sharing economy context.

Regarding this framework, we have three main ways to explain how these mediations and flattening relationships happen. First, these relationships happen at the same level of interaction and in a network (LATOUR, 2005, 2011). Second, these relationships occur through connections and inductions mediated by resources, tools, algorithms, and digital platforms systems (BREIDBACH; BRODIE; 2017; BASILI; ROSSI, 2020), and, in the last process, the actors communicate, interact, cooperate, and share goods and services in an integrated and networked way that is receiving a flattening pressure in consumption and service relationships (BAJDE, 2013; 2014). This flattening pressure accommodates and orchestrates access and sharing activities through the materiality of the digital platforms agency (BAJDE, 2013; SCHOUTEN; MARTIN, DUFAULT, 2015). This materiality of the digital platforms agency happens through solutions, resources and tools intrinsic to these technologies that carry meaning and legitimize connections, involvement, utility, access, and exchanges (ECKHARDT; BARDHI, 2016; DE REUVER; SØRENSEN; BASOLE, 2018). Therefore, digital platforms mediate consumer and service relationships through resources, tools, functionalities, mechanisms, systems, algorithms and routines (DE RIVEIRA et al., 2017; DE REUVER; SØRENSEN; BASOLE, 2018; BASILI; ROSSI, 2020).

With this in mind, mediation relationships occur in the model from the multiple visible and invisible processes of connections and inductions that alter the way we create meaning in this prosumer sharing experience (SUTHERLAND; JARRAHI, 2018; ECKHARDT et al., 2019). Thus, digital sharing platforms play roles and mediation



strategies to involve and reduce uncertainties in transaction costs and influence other actors to participate in SE practices (DE REUVER; SØRENSEN; BASOLE, 2018; BASILI; ROSSI, 2020). The digital platform can provide a user experience generating and managing meanings and confidence (CAMILLERI; NEUHOFER, 2017; ECKHARDT et al., 2019). In addition, digital platforms promote the intermediation of actions mediating the behavior of consumers and suppliers (CANNON; SUMMERS, 2014). By the way, this social and technological environment is dynamic and responsive, whose platforms can evolve, be adapted and acquire new actions, functions, processes and relationships with the network and build sharing consumption over time (CANNIFORD; SHANKAR, 2016; DE REUVER; SØRENSEN; BASOLE, 2018). For Sigala (2019), this process is not new, but a new way of connecting, controlling, inducing and adapting consumption based on a set of structures and factors that involve social, organizational and technological actions.

For this reason, the interfaces, characteristics and design resources, systems and communication platforms can generate mediation based on a relational dynamic, which communicates, connects and induces the message between individuals and providers in a transparent and private way (HARVEY; SMITH; GOLIGHTLY, 2017). Likewise, Canniford and Bajde (2016) make us think of a scenario in which individuals and technological artifacts participate in a social world structured and interconnected by various forces that can be combined and at the same time in movement, generating connections and inductions by both the parties involved. Therefore, we assume that the mediation process creates a flattening between consumer and service relationships through digital platforms in the sharing economy.

### **3.1 Connections and Inductions between Actors in the Sharing Economy**

This proposal for a theoretical framework presents connections and inductions at the same level and occurs between human and non-human actors in the sharing economy. This process is bidirectional with links and exchange of relationships between consumers and service providers (ECKHARDT; BARDHI, 2016; BREIDBACH; BRODIE, 2017; ECKHARDT et al., 2019). Connections and inductions occur in the dynamic processes provided by the interfaces and functionalities of the systems, as well as in the resources of design, communication and interaction of

solutions, applications and platforms (SUTHERLAND; JARRAHI, 2018; BASILI; ROSSI, 2020). Scaraboto and Fischer (2016) support the existence of a hybrid relationship, in which individuals, providers and technologies can generate connections in the SE. On the other hand, the process of connecting consumers and suppliers sometimes happens because of the control of the platform (DE REUVER; SØRENSEN; BASOLE, 2018). Thus, the platform performs linking actions between consumers and suppliers automatically and in a conducted manner (SUTHERLAND; JARRAHI, 2018).

On the other hand, inductions are sometimes direct and indirect stimuli provided by digital platforms to individuals through notifications, communications, reputation systems and design tools (BASILI; ROSSI, 2020). These inductions promote consumption and service relationships between actors (consumers and service providers) through communication and interaction tools provided by digital platforms (BREIDBACH; BRODIE, 2017). The digital platforms in the SE (for example, Uber, Airbnb, Lyft) act as intermediaries in this direct (digital resources) and indirect (digital media) induction between actors (consumers and service providers) (ECKHARDT; BARDHI, 2016). These connection and induction processes can be visible and invisible, integrating resources and offers with human needs and desires to consumption or work (RAVENELLE, 2017; DE RIVERA, 2017). Thus, this study shows the first proposition developed through a theoretical reference proposal to reveal this process.

**P1: Consumers and service providers participate in the sharing economy through connections and inductions mediated by digital platforms.**

### **3.2 Consumer Mediations and Service Relationships in the Sharing Economy**

Digital platforms manage and develop mediation and coordination at scale, changing the behavior of traditional consumption and service in the SE (GEISSINGER; LAURELL; SANDSTRÖM, 2018; ECKHARDT et al., 2019). This mediation occurs from connections and inductions, providing time, significant or interactive functional and utilitarian situations, creating multiple and associative consequences among all actors (BREIDBACH; BRODIE, 2017; SUTHERLAND; JARRAHI, 2018). This mediation of consumer and service relationships occurs through new business models, structured

by an information system, and can involve a heterogeneous variety of resources, interfaces, functionalities and algorithms (LAURELL; SANDSTROM, 2017; DE RIVERA et al., 2017). However, the structure proposes that the action of the platforms can generate several mediation processes that, analyzed by the concept of translation, go through, among others, the enlistment, involving and creating a body of allies, human and non-human, generating a similar behavior that is of interest to everyone involved in this process of assembling consumption (BAJDE, 2014; CANNIFORD; SHANKAR, 2016).

Therefore, these mediation relationships are influences or actions generated by digital platforms through resources, functionalities, interfaces and design (DE REUVER; SØRENSEN; BASOLE, 2018). Thus, digital platforms create meanings, engagement and relationships with customers and service providers through data intelligence that provides services, content and goods (SUTHERLAND; JARRAHI, 2018; BASILI; ROSSI, 2020). Recently, Martin; Upham, Klapper (2017) verified the existence of a strong influence of technological artifacts and actions based on their characteristics, specifications, functions, functionalities and data, which occurs within this relationship process, which involves individuals and providers in the SE. De Rivera et al. (2017) complements the issue and recognizes that platforms and technological structure (architecture, design, functionalities and interfaces with users) can provide dynamic production and consumption of inductive relationships and the creation of connective meaning for a business service. Likewise, Eckhardt and Bardhi (2016) reinforce the action of digital materiality on digital platforms in the development of relationships and consumption practices in the SE. Thus, digital platforms facilitate the creation of value and involvement in the context of sharing practices, for example, Uber offers mobility and delivery services using the same resources and tools, but with different strategies (CONSTANTIOU; MARTON; TUUNAINEN, 2017; GEISSINGER; LAURELL; SANDSTRÖM, 2018).

Thus, SE platforms establish data-driven strategies through online systems to manage service quality and communications between consumers and service providers (ZUO et al., 2019). However, Basili and Rossi (2020) believe that mediation occurs through platform reputation systems that adjust, manage and control connections, interactions, relationships and sharing practices. These mediation relationships can be visible, invisible, centralized, decentralized and controlled through

resources, systems, interfaces, design and algorithms (SUTHERLAND; JARRAHI, 2018). In addition, as recently noted by Perren and Kozinets (2018), some digital sharing platforms (for example, "matchmakers" like BlaBlaCar) can reduce our carbon footprint by sharing rides in the same car, while others (for example, Uber) can increase this. In addition, in this pandemic period of COVID-19, there are changes in consumption, entertainment and education habits through digital e-commerce, streaming and interactive platforms, which mediate our consumption and service relationships in different ways (MARTINS, 2020; SWEEZEY, 2020).

In this sense, the mediation of digital platforms presents itself as the least abstract in this thesis structure, but conceptually associated with consumers and the service context through ANT in a collective movement. Thus, the second proposition developed through this theoretical framework is presented.

**P2: Digital platforms, with their solutions, resources, tools, design and mechanisms, measure consumption and service relationships in the sharing economy.**

### **3.3 Flattening of Consumption and Service Relationships in the Sharing Economy**

The flattening relationships in the sharing economy are incorporated into the relational processes between consumers, producers, objects such as platforms and organizations. These flattening relationships take place between service providers and consumers who become prosumers, motivated by technological mediation, which becomes convenient and transparent (BAJDE, 2014; ECKHARDT et al., 2019). Consumers in this context of SE develop an assumption that consumption happens through the experience mediated by digital platforms, solutions and online communities (ECKHARDT; BARDHI, 2016; PERREN; KOZINET, 2018; ECKHARDT et al., 2019). Thus, the consumption and service relationships of the sharing economy receive an extensive meaning that is transformed and supported by digital resources, solutions and mechanisms (HARVEY; SMITH; GOLIGHTLY, 2017; BASILI; ROSSI, 2020).

In addition, digital platforms broke through established markets and flattened the relationship between consumers and service providers (BAJDE, 2013; DE

REUVER; SØRENSEN; BASOLE, 2018). Digital platforms use resources, data and algorithms to outsource most production and consumption activities to individuals who interact in a peer to peer manner and manage and control relationships (ZUO et al., 2019, ECKHARDT et al., 2019). Digital platforms allow you to remotely perform coordination and management tasks, such as communication, evaluation, classifications, information flows and prices through centralized and decentralized processes (BASILI; ROSSI, 2020). Often, these centralized and decentralized digital process actions can have a single action or a group of activities (DE REUVER; SØRENSEN; BASOLE, 2018; SUTHERLAND; JARRAHI, 2018). In addition, digital platforms broke through established markets and flattened the relationship between consumers and service providers (BAJDE, 2013; DE REUVER; SØRENSEN; BASOLE, 2018). Digital platforms use resources, data and algorithms to outsource most production and consumption activities to individuals who interact in a peer to peer manner and manage and control relationships (ZUO et al., 2019, ECKHARDT et al., 2019). Digital platforms allow you to remotely perform coordination and management tasks, such as communication, evaluation, classifications, information flows and prices through centralized and decentralized processes (BASILI; ROSSI, 2020). Often, these centralized and decentralized digital process actions can have a single action or a group of activities (DE REUVER; SØRENSEN; BASOLE, 2018; SUTHERLAND; JARRAHI, 2018).

Thus, these digital processes develop, facilitate and promote attitudes, correspondence and trust between individuals (consumers and service providers) (HAMARI; SJÖKLINT; UKKONEN, 2016; BASILI; ROSSI, 2020). Thus, the information system and the characteristics and structure of the digital platform agency develop, influence and transform a relationship between individuals who practice sharing (HARVEY; SMITH; GOLIGHTLY, 2017). Therefore, the digital platform agency realizes, transforms and means relationships between consumers and service providers through the process of assembling consumption (ECKHARDT; BARDHI, 2016). An assumption for this flattening process can be achieved by understanding the spontaneous free association of cooperation between the actors in the network with a proposal for business, consumption and services (CALLON, 1984; PERREN; KOZINET, 2018).

Likewise, these flat relationships make sharing practices more intuitive, close and transparent, as the digital platform transforms and carries the utilitarian and altruistic meanings of consumers and service providers (BAJDE, 2013; 2014; SCHOUTEN, MARTIN, DUFAULT, 2015; BELK, 2017). Thus, the third and last proposition of this study is:

**P3: Digital platforms, with their solutions, resources, tools, design and mechanisms flatten consumer and service relationships in the sharing economy.**

Therefore, this study seeks to use this structure and the proposed propositions to analyze how consumption and service relationships in the sharing economy are established when mediated and flattened by digital platforms. Thus, the next chapter presents the methodological procedures used to carry out this study.

## 4 METHOD

This study has as an ontological and epistemological reference the understanding that reality is and will be built from the participation and combination of multiple human and non-human actors. ANT's methodological precepts are essential to track, detail, translate, clarify mediations and flatten the relationships between network actors (CALLON, 1984; LATOUR, 2005; BAJDE, 2013). The theoretical proposal invites us to reflect on the concepts and relationships in the phenomenon of the sharing economy through the imperatives of the human agency, represented by consumers and suppliers, and the non-human agency of digital platforms, with solutions and resources. ANT adds to this proposal, intending to assist in a broader understanding of the collective action of the actors involved in mediation and flattening, which occurs in the dynamics of the relationship (LATOUR, 2005; BAJDE, 2013).

Therefore, Latour (2005, p.12) proposes that "the social scientist needs to closely monitor all the actions and practices of the actors involved and which associations are established". It is a matter of following the artifacts or things through the networks in which they are transposed and trying to describe them in their tangles and symmetry (SHIN, 2016). Thus, the exercise carried out in this research was to observe and question the associations and relationships developed between human beings (consumers and providers) and non-humans (digital platform), accompanying the actors and preserving the actions carried out by the social, natural and material in these translations and descriptions. ANT's precursor authors invite and challenge new researchers to understand the concepts as a possible way to understand the practices performed in the real world (LATOUR, 2004a; LAW; SINGLETON, 2013; BAJDE, 2013).

The data of this thesis were analyzed through the concept of translation (CALLON, 1984), with a proposal to understand the dynamics of the relationships between the actors identified in the trajectory in these platform cases. ANT was used to translate the problematization and mobilization process to analyze "technology in motion" in this context (CALLON, 1984, 2008; LAW, 2004). To examine this movement, it was decided to follow the actors through their construction, assembly, association and deconstruction in society and in the market. These moments are constituted after the different phases of a general process called translation, during which the actors'

identity, the possibility of interaction and the space for *maneuver* are negotiated, processed and delimited (CALLON, 1984; 2008). The translation processes are operationalized in four phases: problematization, *intéressement*, registration and mobilization" (CALLON, 1984; SHIN, 2016). In addition to these four phases, there is a mandatory crossing point (OPP) at which one or more actors become indispensable in the translation process (CALLON, 1984; SHIN, 2016, SHIN; SHIM, 2016). These phases reflect a theoretical-methodological process of actor-network theory used to translate events through the responses, practices and reactions of the relationships between humans and non-humans in a network (LATOUR, 2005).

The main objective of ANT's methodological analysis is to examine the translation process, where actors align the interests of others with their own (CALLON, 1984; LATOUR, 2004b, 2005). In other words, the ANT translation process is directly linked to the processes of negotiation, representation, mobilization and displacement between the elements, entities, places and actors that are part of the heterogeneous network in motion (CALLON, 1984; LATOUR, 2005; 2011). Thus, "translating interests means, at the same time, offering new interpretations of these interests and channeling people in different directions [...] the results of these translations are a slow movement from one place to another" (LATOUR, 2005, p. 194). In this way, translation means displacing objectives, interests, engagements, relationships and devices, which involve the human being's daily life (LATOUR, 2005; LAW; SINGLETON, 2013). ANT's translation process consists of a series of tools that help to transcribe, detail and analyze a scenario, practice and relationship (CALLON, 1984; SHIN, 2016). This process can translate the various and different phases of our daily life that can be combined with artifacts or things and, at the same time, in a movement (CALLON, 1984; LATOUR, 1987; 2004b; 2005; 2011).

Therefore, the study is characterized by qualitative longitudinal research conducted by a variety of elements, procedures and analyzes (WALSHAM, 1995). Thus, this study used the case study methodology (e.g., WALSHAM, 1995, YIN, 2015) to guide data collection and analysis. Besides, this research was based on the concepts of ANT, developed for a theoretical-methodological sensitivity that allows viewing large volumes of data associated with the phenomenon (LATOUR, 2005; CALLON, 2008). As it is not possible to reach its totality, two case studies of digital platforms of services available in the Brazilian market were chosen, this path took into



account instrumentals case studies (STAKE, 2005), more details in case protocol (Appendix I). The data were collected mainly through various observations, semi-structured interviews and monitoring the social networks of the platforms and the different members participating in each context analyzed. Thus, immersion in the research field occurred at different times, between October 2016 and September 2019, with the paths chosen and described in the next section, followed by the collection and coding and analysis of the data.

#### **4.1 Immersion in the Research Field**

The insertion of the research field occurred from the last quarter of 2016, in which the researcher had his first contact with academics and professionals involved in academic research and business in the sharing economy at the 9th CLAV (Latin American Retail Congress) at FGV EAESP, in São Paulo. The objective of participating in this event was to carry out a comprehensive exploration of the theme and research carried out at the national level. In addition, make the first contact with national and international researchers, such as Professor Russ Belk (speaker at this event) and market professionals such as the leaders of Uber, Airbnb, Mercado Livre and Google Brazil. During the congress, some informal conversations and notes were held with researchers, speakers and market professionals. These contacts made at the congress provided indications of studies, researchers and digital platforms inserted in the context of the sharing economy in Brazil and Latin America.

In one of these informal conversations, a researcher from the Federal University of Rio Grande do Sul - UFRGS commented on some regional digital platforms involved in the context of the sharing economy, such as *Loop* bike-sharing. After the event, the person responsible for the indicated digital platform was contacted. However, as they were in an embryonic moment of the development of their platform, it was impossible to start a more in-depth monitoring process. Thus, two exploratory researches were carried out to validate this study and for a preliminary test of the theoretical framework. The first case study was conducted with 25 users and a manager of the Bike POA bicycle sharing service in the city of Porto Alegre, from September to November 2017 (e.g., DA SILVEIRA; HOPPEN, 2019b). In the same logic of exploration, another case

study was carried out in Vancouver, Canada, in January 2018, with eight users Mobi by Shaw Go shared bike service platform (e.g., DA SILVEIRA, 2018).

The researcher also participated as a listener in two Zenit group events - "Innovation Wednesday" from the Federal University of Rio Grande do Sul – UFRGS, with the theme of collaborative consumption and the impacts of innovation in the sharing economy context, on September 2017 and April 2018. The exploratory research validated the choices and served to make adjustments in the paths to be followed in the second phase of immersion in the field. Thus, organizations were chosen with digital platforms inserted in consumption or *business to consumer* in the SE context. These platforms were chosen because they were supported by three actors participating in sharing practices - consumer, digital platform, and service providers. Following this path, the researcher started mapping and exploring digital media from regional and national platforms with actors of use and consumption and production of use and consumption (consumers and service providers). In this initial research, some initiatives in the national market, that were difficult to access, emerged, but a regional one with national scope drew attention. Thus, the digital platform Pet Kennel Rental was chosen, specialized in sharing hosting and care for pets. The platform has three actors sharing skills, time and space.

The first contact with the entrepreneur of the Pet Kennel Rental platform took place through text message via WhatsApp tool, and then we scheduled a face-to-face meeting in December 2017. At this meeting, the founding entrepreneur commented on the moment of the platform, the business and the market for sharing pet hosting and care. In this meeting, both remembered that they already had a past relationship of projects and professional partnerships. Besides, the researcher commented on his research and the challenges of exploring and participating in the development of a digital sharing platform without being a developer, user, provider, or entrepreneur. In December, other virtual messages were exchanged, and three more face-to-face meetings were held, in which notes and observations were made. As the conversations, knowledge, and experiences deepened, more information and knowledge being sharing.

Therefore, as the entrepreneur needed support to expand his network of contacts and better understand his network of actors involved with the platform, he invited the researcher to be part of the platform's team as an investing partner. This possibility

opened up a range of options so that the researcher could observe, in a participatory way, the development phases and the practices and relationships between the actors in the network. In January 2018, the researcher began a participatory observation process, in which he wrote notes and records in field diaries of the processes, practices, and relationships existing between the Pet Kennel Rental platform, its consumers, providers, technical supporters, partners and investors. Access to actors and practices helped the researcher to have a micro view of the existing relationships and dynamics. To Latour and Woolgar (1997), a researcher needs to develop a process with multiple inputs and outputs from the field, be present in dynamic and constant flows to create a link with the context or movement in its entirety.

The second case study chosen by the researcher initiated the third phase of immersion in the research field. Thus, the knowledge and choice of the second platform analyzed occurred when the researcher participated as a listener and debater of the workshop “Digital transformation of companies, how to stay in the future market”. The workshop took place as an activity of the ColaborAmerica congress, in Rio de Janeiro, on November 9, 2018. In this workshop, one service provider, who lived in Rio, presented the Goalkeeper Rental digital platform, reporting his own personal and professional experience with the platform and the contracting teams. In the workshop, some questions and conversations were carried out about the platform, environment and actors involved and the answer from the Rio de Janeiro goalkeeper was: *“To learn more about our group and network, you need to go to the soccer fields and listen to the goalkeeper who founded the digital platform”* (field diary).

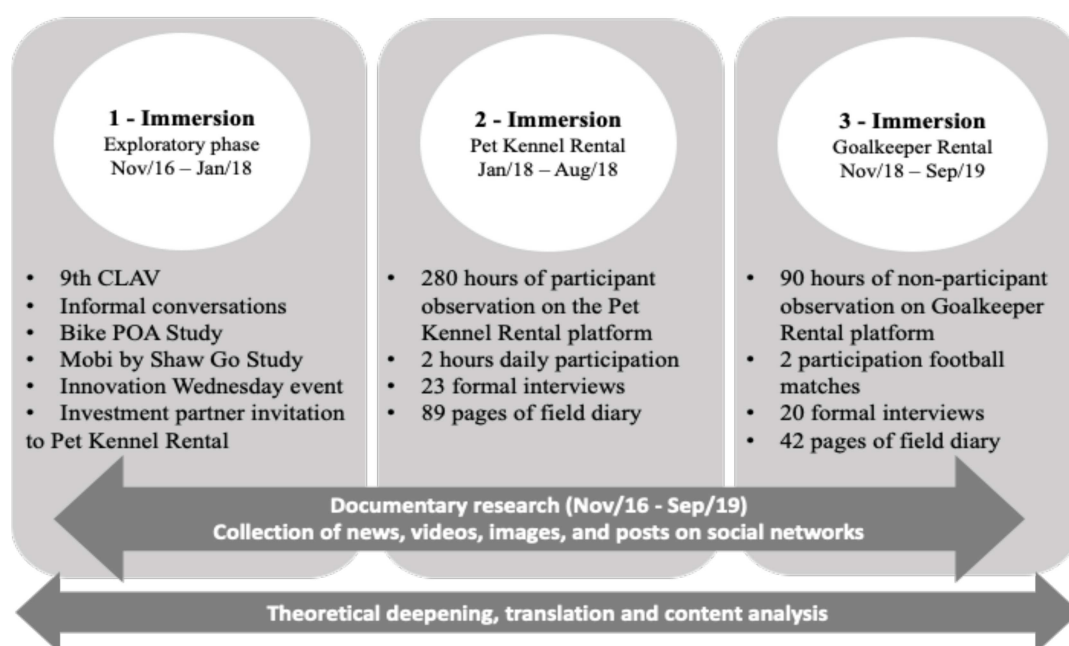
Therefore, with the support of the *carioca* goalkeeper, it was obtained the contact information of the founder of the digital platform. Thus, the first contact occurred at the end of January 2019, first by email, and then by two video conferences using Skype tool. In these conversations, the company's founder revealed that he was the first rented goalkeeper, and that the second one was the co-founder of the company. Thus, after these initial conversations, participatory observations were made on the soccer fields where goalkeepers performed their activities. On the other hand, monitoring the social networks of the founders and the company has also started. Goalkeeper Rental was chosen because it has the characteristic of a service sharing platform through the skills and talents of the goalkeepers. Besides, consumers on this platform also shared time and talents in the same place. Thus, access to actors and

practices helped the researcher to have a micro view of the existing relationships and dynamics.

The paths taken in the two case studies were added to processes and practices developed by the researcher to understand how the networks of actors, practices and relationships were developed and assembled. The events, practices, connections, mediations and flattening were observed, heard and described in this research from a longitudinal process (e.g., CALLON, 1984; WALSHAM, 1995; LATOUR, 2005; BAJDE, 2013). The purpose of combining and confronting techniques and instruments in a chain of physical and virtual inscriptions provided a varied and distinct range of facts, content and images used in the study. For Kozinets (2014), associating ethnographic techniques with new netnographic techniques can develop new visions and perceptions about a specific fact, event, or phenomenon.

Therefore, during this immersion, 370 hours of participatory and non-participatory observations were carried out, resulting in 131 pages of field diary with texts and images, 43 formal interviews (recorded and transcribed). Besides, some informal conversations during the immersion period in case 1, as an investor partner, in events, matches, and conversations held in Rio de Janeiro and Porto Alegre and accompanying the actors in case 2. Figure 2 details these paths and the three moments of immersion carried out in the research field for the two case studies.

**Figure 2 - Immersion phases in the research field**



**Source:** Created by the author

The field trips exit happened in September 2019, after the last virtual follow-ups and new informal conversations with the entrepreneurs of the two platforms surveyed. The next section details the data collection process.

## **4.2 Data Collection**

The data collection process started in January 2018 through observations from participants in the Pet Kennel Rental case. This process took place between January 10 and August 5, 2018. Throughout this period, face-to-face and virtual meetings, presentations, social media follow-up and notes in field diaries were held. The notes were made in 3 different field diaries that resulted in 89 pages to describe 2 hours daily for seven months of observations, totaling 280 hours of participation. The field diary records were made in meetings, conversations, and presentations, that is, the reports were made at the same time that the practices, activities and relationships were observed. Thus, monitoring and taking notes occurred at the same time as the practices of the actors surveyed (e.g., LATOUR, 2000; 2004b; 2005; WOERMANN, 2018).

In June 2018, after five months of participating in the practices around the platform, there was a process of interviews with other actors. These actors are consumers, service providers, entrepreneurs, investment partners and technical supporters. Thus, a semi-structured interview script was developed (Appendix II). The elements of the script followed the main elements of the research, being validated by two specialist researchers. The interviews were carried out after a conversation with the entrepreneur / developer who indicated the co-founder, the first consumer / tutor, the first service provider / pet caregiver and the technical support consultant involved since the beginning of the project. The chosen process assumes that all respondents have an essential role, but that they can indicate other actors belonging to the network with necessary and complementary information for the study (LATOUR, 2005; MONTENEGRO; BULGACOV, 2015).

However, this number of interviews was reviewed and supplemented based on the snowball strategy, suggested by the ANT methodology (LATOUR, 2004, 2004b; LAW, 2004). The snowball technique is used in social and technological research for which the initial participants indicate new participants and, in sequence, others until

the proposed objective is reached and saturated (for example, WALSHAM, 1995; FARAJ; KWON; WATTS, 2004). One of the advantages of adopting this sequential technique of the interviewed actors is to assume that the actors in the network identify and know another actor in greater depth than the researcher (CALLON, 1984; 2008; FARAJ; KWON; WATTS, 2004). The first actors contacted were the seeds that produced or exerted influence and experience within and outside the analyzed network. These actors needed to have knowledge, connections, relationships and experiences with other actors involved with the platform. Thus, the adoption of this technique was strategic for the development of the Pet Kennel Rental case study.

Considering the process of monitoring the actors, each interviewee was asked to indicate the interviewees that they considered relevant in the network. The interviews were conducted through phone calls, personal interviews and voice and image messaging applications, such as Skype and WhatsApp. The process of monitoring the actors made it possible to reach individuals at different times and locations, reaching a total of 23 interviews conducted between June 2018 and September 2018. To preserve the identity of the actors interviewed in the case, the names were excluded and numbered. Table 4 presents some information from the interviewees, such as age, gender, education, locality and roles played in the network.

**Table 4: Information from interviewees of the pet kennel rental digital platform**

Interviewee	Role in the Network	Genre	Age	Education	City	State	Interview form	Duration	Number of pages transcribed
E1	Entrepreneur/ Founder	Male	39	Postgraduate	Porto Alegre	RS	Presential	00:47	10
E2	Technical Supporter	Male	39	Postgraduate	Porto Alegre	RS	Presential	00:25	8
E3	Entrepreneur/ Co-founder	Female	38	Graduated	Porto Alegre	RS	Video conference	00:27	6
E4	Technical Supporter	Male	26	Graduated	Porto Alegre	RS	Telephone call	00:17	4
E5	Service Providers/ Pet Caregiver	Female	28	Graduated	Campinas	SP	Telephone call	00:15	3
E6	Consumer/ Tutor	Female	35	Postgraduate	Campinas	SP	Telephone call	00:20	4
E7	Technical Supporter	Female	47	Postgraduate	Porto Alegre	RS	Presential	00:36	7
E8	Technical Supporter	Male	28	Graduated	Porto Alegre	RS	Telephone call	00:18	6
E9	Technical Supporter	Male	53	Postgraduate	Porto Alegre	RS	Presential	00:16	3
E10	Technical Supporter	Female	26	Graduated	Porto Alegre	RS	Telephone call	00:33	7
E11	Technical Supporter	Female	22	Graduated	Porto Alegre	RS	Telephone call	00:26	5
E12	Technical Supporter	Male	27	Graduated	Porto Alegre	RS	Telephone call	00:21	7
E20	Technical Supporter	Male	28	Graduated	Porto Alegre	RS	Telephone call	00:35	8
E21	Investing Partner	Male	34	Graduated	Porto Alegre	RS	Telephone call	00:25	6
E22	Service Providers/ Pet Caregiver	Female	48	Undergraduate	Recife	PE	Telephone call	00:26	5
E23	Consumer/ Tutor	Female	30	Undergraduate	Recife	PE	Telephone call	00:18	3
E24	Service Providers/ Pet Caregiver	Female	32	Postgraduate	Porto Alegre	RS	Telephone call	00:14	3
E25	Consumer/ Tutor	Female	32	Undergraduate	Santa Maria	RS	Telephone call	00:12	3
E26	Service Providers/ Pet Caregiver	Female	24	Undergraduate	Maringá	PR	Telephone call	00:22	4
E27	Consumer/ Tutor	Female	35	Graduated	Maringá	PR	Telephone call	00:10	3
E28	Consumer/ Tutor	Male	29	Graduated	Maringá	PR	Telephone call	00:12	3
E29	Service Providers/ Pet Caregiver	Female	26	Undergraduate	Canoas	RS	Telephone call	00:11	3
E30	Consumer/ Tutor	Female	40	Graduated	Porto Alegre	RS	Telephone call	00:11	3

**Source:** Created by the author

Throughout the interviews, some texts, images and videos were collected on news portals and social networks. For Faraj; Kwon; Watts, (2004), processes of

research of technological artifacts are involved, but they can be visualized, mapped and described with the support of analytical techniques of secondary or longitudinal documentary data. Thus, the use of these techniques by the researcher consisted of accompanying the actors, examining the physical and virtual inscriptions produced in the field (WOERMANN, 2018). Thus, the profiles of the entrepreneur and the platform were followed on the social networks Facebook, Instagram, Youtube and WhatsApp. Although the observations, interviews and monitoring of social networks in case 1 are highly complex for the purposes of this study, he added another similar case.

After this first collection process, the case study of the goalkeeper platform started through interviews, observations and analysis of social networks. Thus, this contact took place with the founder of the platform at the end of January 2019. Before this first conversation with the founder of Goalkeeper Rental, some Internet searches were carried out to understand his offer. After that, more conversations took place with the founder over the Internet and in person. Thus, after these initial conversations, observations were made of the participants in the soccer fields where the goalkeepers carried out their activities in Porto Alegre. Following a similar procedure of that in case 1, the founder of the goalkeeper platform appointed other actors involved in this case. Therefore, the goalkeeper's founder appointed the platform's co-founder, who appointed a third supporter (IT developer), who appointed others. Thus, the same snowball technique was applied (for example, WALSHAM, 1995) with different actors involved with the digital platform.

All interviews were conducted using an open script (Appendix II). The script elements followed the main research elements, being validated by two specialist researchers. These interviews were carried out with 8 goalkeepers (service providers), 5 contracting teams (consumers), 2 entrepreneurs and 5 technical supporters through videoconferences and calls through voice messaging applications, such as Skype and WhatsApp. Through this process, it was possible to reach individuals at different times and locations, reaching 20 interviews conducted from December 2018 to April 2019. The collection process and the final number of interviews used the criterion of saturation and redundancy, seeking elements and contributions when the sample is not exhausted or lack of information (MONTENEGRO; BULGACOV, 2015).

Following a procedure similar to that of case 1, in case 2 a process of monitoring the actors, practices and relationships, which occurred in the development, assembly



and association of the network elements, was used (CALLON, 1984; LATOUR, 1987). Table 5 presents some information from these interviewees.

**Table 5: Information from interviewees of the goalkeeper rental digital platform**

Interviewee	Role in the Network	Genre	Age	Education	City	State	Interview form	Duration	Number of pages transcribed
E13	Service Provider/ Goalkeeper	Male	35	Graduated	Rio de Janeiro	RJ	Presential	00:33	5
E14	Entrepreneur/ Founder	Male	36	Graduated	Curitiba	PR	Video conference	00:47	9
E15	Technical Supporter	Male	38	Graduated	Blumenau	SC	Telephone call	00:30	7
E16	Technical Supporter	Male	35	Graduated	Blumenau	SC	Telephone call	00:22	4
E17	Technical Supporter	Male	25	Undergraduate	Curitiba	PR	Telephone call	00:14	3
E18	Entrepreneur/ Co-founder	Male	32	Graduated	Curitiba	PR	Video conference	00:42	5
E19	Service Provider/ Goalkeeper	Male	22	Undergraduate	Curitiba	PR	Telephone call	00:35	4
E31	Service Provider/ Goalkeeper	Male	27	Undergraduate	Porto Alegre	RS	Telephone call	00:15	3
E32	Consumer/ Contracting Teams	Male	27	Graduated	Curitiba	PR	Telephone call	00:14	4
E33	Service Provider/ Goalkeeper	Male	24	Undergraduate	São José dos Pinhais	PR	Telephone call	00:11	3
E34	Service Provider/ Goalkeeper	Male	24	Undergraduate	Curitiba	PR	Telephone call	00:12	3
E35	Service Provider/ Goalkeeper	Male	33	Graduated	Porto Alegre	RS	Telephone call	00:14	3
E36	Consumer/ Contracting Teams	Male	38	Graduated	Porto Alegre	RS	Telephone call	00:15	4
E37	Service Provider/ Goalkeeper	Male	44	Graduated	Curitiba	PR	Telephone call	00:21	5
E38	Service Provider/ Goalkeeper	Male	30	Graduated	Porto Alegre	RS	Telephone call	00:15	3
E39	Consumer/ Contracting Teams	Male	48	Graduated	Curitiba	PR	Telephone call	00:14	3
E40	Service Provider/ Goalkeeper	Male	24	Graduated	Florianópolis	SC	Telephone call	00:13	3
E41	Consumer/ Contracting Teams	Male	36	Graduated	Florianópolis	SC	Telephone call	00:20	5
E42	Technical Supporter	Male	32	Graduated	São Paulo	SP	Telephone call	00:15	3
E43	Investing Partner	Male	37	Postgraduate	Campinas	SP	Telephone call	00:43	8

**Source:** Created by the author

In addition, two non-participatory observations were made to complement the methodological process of the case study of the Goalkeeper Rental digital platform. In this case, the researcher did not become a member of the group of goalkeepers or contracting teams and did not participate or effectively participate in the actions and relationships carried out by the interviewees. Thus, the other data collections from non-participatory observations consisted of two games scheduled in Porto Alegre, in February and March 2019, to better understand the daily life and the development of relationships and activities in these goalkeeper sharing practices. Through non-participatory observation, data collection consisted of monitoring the daily life of the group, observing the progress of the actions that took place there, but not performing the same activities that the group performed.

The observations were recorded in notes, texts and photos, later transcribed to compose this second case study's analyzes. Thus, a registration system was established in a field notebook, which resulted in 42 pages, after 90 hours of observation in the games and monitoring of the virtual communities of soccer players and goalkeepers. These notes were later transcribed to compose the analysis of this thesis and joined the interviews, images and posts from the online communities. For this reason, methodological rigor was maintained in monitoring the actors in the network (human and artifacts), considering their registration and relationships carried out in the research field analyzed (LATOUR, 2005; 2011). In addition, five online communities on this digital platform were mapped and analyzed (Facebook, Instagram, Linked-in and YouTube). Therefore, the research field was conducted from November 2018 to April 2019, through participatory and non-participatory observation, interviews and monitoring of online social networks.

Thus, these data facilitated the construction of narratives based on two field studies. The following section details the organization of the data, the encoding process and the conversion method used in the analysis of ANT.

### **4.3 Data Coding and Analysis**

Qualitative longitudinal research can be conducted in various traditions, procedures and techniques (WALSHAM, 1995; SARKER; SARKER; SIDOROVA, 2006). In this way, ANT helps as a "device of the mind" (for example, SARKER;

SARKER; SIDOROVA, 2006) that allows us to interpret and elaborate retrospectively notes, texts, interviews, images and videos of the two case studies. In addition, the method was adopted because it allows progressively examining events, facts, practices and relationships as they occur in society, environment, culture or market (CALLON, 1984; BAJDE, 2013). Thus, the data collected were all organized and openly coded by case study, type of actor, trajectory, practice and relationship established and stabilized in the network. Thus, the methodological basis of ANT helps to translate and understand how the daily practices of individuals and objects emerge analyzing how they live in networks of unique interactions (CALLON, 1984; LAW, 1992).

Consistent with this perspective, the interpretation of these case studies was not based on systematic induction based on data extracted from a predetermined sampling strategy (SARKER; SARKER; SIDOROVA, 2006; LEE et al., 2015). Data collection is not objective evidence to support or falsify an assertion, but it is analogous annotations of transcribed texts, whose meanings may go beyond the original intentions and meanings attributed by their sources and inscriptions (CALLON, 1984; LATOUR, 2005). Thus, the central role of the researcher is to understand the environment, its facets, events, relationships and meanings from direct and long-term contact with practices and situations (EISENHARDT; GRAEBNER; SONENSHEIN, 2016), therefore, definitions and codifications of actors, notes, interviews, images, videos and social media posts were carried out with the support of Microsoft Excel® and Nvivo Pro12® applications.

First, the actors involved in the two case studies were codified. In both cases, there were different actors, but with similar and complementary roles and practices. Thus, the players in these digital platforms are consumers, service providers, founding and co-founding entrepreneurs, technical supporters and investment partners. Analytically, this classification presents the main roles in the case studies, considering that each actor can assume other roles and practices during relationships. To develop this classification process, the categorizations occurred at the time of the interviews with the support of the Microsoft Excel® tool. For this, seven different worksheets supported the construction of the codenames of the actors in this study. These code names the terms defined for each actor identified in the two case studies surveyed.

Thus, seven different terms for the analysis were defined (consumer, service providers, entrepreneurs / founders, co-founders, technical supporters, investors and partners).

In this study, consumers are users of sharing services on digital platforms. For example, pet tutors at Pet Kennel Rental and contracting teams at Goalkeeper Rental. On the other side of sharing practices, the group of service providers works by sharing their skills, talents, time and space through the solutions and resources of both digital platforms - identified as animal caregivers and goalkeepers for hire. Entrepreneurs / founders and co-founders are the actors who have dedicated themselves to the development of digital ventures for sharing solutions and services. These entrepreneurs are individuals who develop services based on for-profit digital platforms, whose objective is to approach and mediate consumers and service providers in the sharing economy. The group of technical supporters is the actor that promotes and participates in the sharing economy through technical support in management consulting, content, communication and digital systems and solutions. These technical supporters are professionals in information technology, digital marketing, product management, business consulting and operational support. At the same time, investors and partners are financial investors and market partners for the projects studied, cited by the entrepreneurs as a reference in the network of actors.

After the classification of the actors, the collected content was transcribed with the support of the happy scribe® tool. Thus, the observations, notes and interviews were transcribed and separated according to each case study. Social media posts and documents followed the same procedure. All data transcription procedures resulted in 374 pages (201 pages of interviews, 131 of notes for observations and 42 with images and videos from social networks). The organization and readings of the content followed a sequential process (for example, CALLON, 1984), with the content of the field diary, followed by interviews, documents and publications on social media. After transcription, all data were grouped in a single tool (Nvivo Pro 12® system), more details (Appendix I and IV). Thus, the data triangulation process occurred in different perspectives and methodological sources (observations, field notes, interviews, documents and publications from social networks) added rigor, richness and depth to the analyzed content (CALLON, 1984). The in-depth reading process helped to identify and define codes for each study analyzed.

The inductive process, guided by data and long in-depth readings of the results, provided ideas and themes for the research (for example, DECUIR-GUNBY; MARSHALL; MCCULLOCH, 2011). The ideas and themes that emerged from the data and content allowed the development of subsamples recorded in memos on Nvivo Pro 12®. These subsamples emerged from the raw data, becoming the basis for organizing the notes in the memos, as well as the doubts identified in the analysis (DECUIR-GUNBY; MARSHALL; MCCULLOCH, 2011; SALDAÑA, 2015). This process, using memos, helped to generate more detailed consultations and analysis for a better understanding of the questions and dimensions proposed in the study. Thus, the dimensions were openly coded and guided by empirical data (DECUIR-GUNBY; MARSHALL; MCCULLOCH, 2011; SALDAÑA, 2015). The raw data, added to the notes and ideas, allowed an expansion of the content, providing connections with the proposed concepts, such as its reconceptualization (for example, DECUIR-GUNBY; MARSHALL; MCCULLOCH, 2011).

Therefore, the connections between data, content, ideas and concepts supported the development of the first cycle of open coding (DECUIR-GUNBY; MARSHALL; MCCULLOCH, 2011; SALDAÑA, 2015). The first cycle of open coding using raw data resulted in 41 codes. After this process, a second round was carried out to synthesize similar codes, resulting in 26 sub codes. In this way, similar codes were grouped and combined because they were conceptually redundant and others that looked like good ideas were discarded (for example, SALDAÑA, 2015). In this perspective, the "grouping" and the "division" of the text can occur in different places, allowing a code to consist of a line, sentence or paragraph, as long as the essence is the same (DECUIR -GUNBY; MARSHALL; MCCULLOCH, 2011; SALDAÑA, 2015). Thus, this process resulted in seven metacodes based on the analyzed data. These codes represent and capture the original content and the essence of the data in these two case studies. Therefore, coding is not a precise science, but it is mainly an interpretative act (SALDAÑA, 2015).

In addition, coding is the transition process between data collection and analysis (DECUIR-GUNBY; MARSHALL; MCCULLOCH, 2011; SALDAÑA, 2015). In the third step, a code book (Appendix III) was developed to perform data analysis, resulting from a synthesis of the codes with their content descriptions (DECUIR-GUNBY; MARSHALL; MCCULLOCH, 2011; SALDAÑA, 2015). The code book helped with

queries and visualization and organization of codes. Just as a title represents and captures the original content and essence of a book, film or poem (SALDAÑA, 2015, p.3). However, it is essential to remember that creating a codebook is just the beginning of the coding process. The next steps are data and content analysis and interpretation (DECUIR-GUNBY; MARSHALL; MCCULLOCH, 2011; SALDAÑA, 2015). Thus, the actual coding process was an integral part of the data and content analysis process in both case studies (for example, WALSHAM, 1995; DECUIR-GUNBY; MARSHALL; MCCULLOCH, 2011; SALDAÑA, 2015). The application of the codebook to the raw content allowed the researcher to examine how his data supported or contradicted the study's guiding theory on the improvement of current literature.

After open and inductive coding, the coded and sub coded dimensions were standardized and crossed with the basic concepts of this thesis, especially sharing economy, digital platforms, relationships between consumers and service providers. In addition, consultations and analyzes generated from the materials and contents organized consider ANT's methodological procedures. Thus, this research was supported by many practices produced from hybrid relationships between humans and non-humans in a single network (LATOUR, 2005). Thus, the method of coding and grouping codes, themes, observations, notes, interviews, images and social media posts supported the development of the narratives of each case study.

Therefore, the concepts and methodological phases of translation (for example, CALLON, 1984) led the process of translation and analysis in this thesis. In addition, analysis using ANT frameworks can produce heuristic and interpretive insights (CALLON, 1984; SHIN, 2016). Thus, this study used the translation phases (for example, CALLON, 1984) that describe the actors with practices, relationships and associations that commit to doing something in a network. Following this reasoning, Table 6 summarizes the methodological elements of the translation process by ANT.

**Table 6: Translation process by ANT**

Process	Definition	References
Translation	<p>This method seeks to materialize the interests, intentions and actions of the actors in the network from a process. These translation processes must be implemented over time and consist of four interrelated phases (problematization, <i>intéressement</i>, registration and mobilization). The actors align the interests of others with those in motion.</p> <p>For this, the material collected in both cases was organized in chronological order. This decision allowed the reconstruction of the chronology of facts and events and the intersection of information between the cases. The process analyzed the movements of each platform in the relationship with consumers and service providers.</p>	<p>CALLON (1984); LATOUR (2011); LEE et al., (2015); SHIN (2016).</p>

**Source:** Created by the author

This process follows three basic principles: agnosticism or impartiality between the actors involved in the controversy; symmetry or commitment to explain conflicting points of view in the same terms; and the free association or abandonment of all distinctions between the natural and the social (CALLON, 1984). Thus, this research translates the symmetries and the free association of how digital platforms mediate and flatten the relationships between consumers and service providers in an SE. Thus, to describe and translate these two case studies, the four stages of translation were adopted (for example, CALLON, 1984; LEE et al., 2015; SHIN, 2016). This research first describes the details of each case, following these analyses through the translation phases: problematization, *intéressement*, enrollment, and mobilization (CALLON, 1984; SHIN, 2016).

During the first phase, the problematization, one actor or more frames the problem and defines the identities and interests of other actors consistent with their interests in the network (CALLON, 1984). Thus, the actor becomes essential when demanding that a process occurs under his control so that all actors reach their goals. Callon (1984) calls this process an obligatory crossing point (OPP). “OPP is usually in the direct path of the focal actor in relation to pursuing his interests, so other actors may be forced to overcome certain obstacles to cross the OPP” (SHIN, 2016, p. 439). In the second phase, the focal actor or actor executes these strategies to convince other actors to accept its proposed definition, objective, and role in their respective interests (*intéressement*). For Callon (1984, p. 8), *intéressement* is represented by a

series of processes and inscriptions by which the main actor negotiates with other actors for involvement in a program or context.

The third phase is formed by a set of strategies, in which the actors define and interrelate with the various roles assigned to others. Thus, the application also includes a definition of the role of each actor in a newly created network of actors. Registration occurs in conjunction with registration when actors in a network incorporate scripts for future actions and behaviors in that network (CALLON, 1984; SHIN, 2016). Mobilization is the final phase of translation, which refers to a set of ways used by a focal actor to ensure that all actors have legitimate speakers or representatives for them in the groups and to avoid betrayal by various collectives of the latter (SHIN, 2016 p. 440). In mobilization, primary actors borrow the strength of their passive allies and become their representatives or spokespersons. These spokespersons have several relevant collectivities that we can represent these collectivities and not be betrayed by them (CALLON, 1984; LEE et al., 2015). In short, translation is a process, never a complete achievement and may (as in the two empirical cases considered) fail or not be relevant to explaining a context. Table 7 presents more details of the process used in this research.



**Table 7: Phases of the Translation process in the light of the Actor-Network Theory**

Translation phases	Definition	References
Problematization	<p>"How to become indispensable." This situation occurs when one or more visible or invisible actors define, through their identities, actions, commitments and relationships, the nature of the problem and establish the roles of the others involved in the network to adapt or reformulate the proposed objective.</p> <p>This study described how and in what way digital platforms mediate and flatten the relationships of consumers and service providers in the SE.</p>	<p>CALLON (1984); LATOUR (1987); LEE et al., (2015); SHIN (2016).</p>
<i>Intéressement</i>	<p>It consists of the actions of the main actor who convinces the other entities or actors to agree with the interests defined for them in the network. Thus, paths and incentives are established that try to impose, stabilize, mediate, assemble or flatten the relationships of the actors according to the proposal of the main actor in the analyzed problematization. Besides that, <i>intéressement</i> process often involves negotiations between the actors.</p> <p>This research seeks to analyze how digital platforms through their resources, data, functionalities, algorithms, design, and mechanisms connect, mediate and induce consumers and service providers to engage, relate and participate in the sharing economy.</p>	<p>CALLON (1984); LATOUR (1987); SARKER et al., (2006) ; LEE et al., (2015); SHIN (2016).</p>
Enrollment	<p>The moment when the visible and invisible roles and actions of the actors are described and defined can be coordinated through a certain alignment of interests in humans and non-humans in the network. It establishes the role of human actors (consumers and service providers) and the visible and invisible resources and functionalities in the relationship process mediated and flattened by the main actor (digital platforms) in this analyzed context of SE.</p>	<p>CALLON (1984); LATOUR (1987); SARKER et al., (2006) LEE et al., (2015); SHIN (2016).</p>
Mobilization	<p>The stage at which the masses of actions, processes and relationships are represented by some actors or intermediaries, spokespersons for others involved in the various collectives gathered in a network. To achieve this objective or representation, there is a process of negotiation, exchange and sale of ideas, mobilization of interests, which are developed, registered and mediated by the entire network movement or in the network itself.</p> <p>In this research, the main question is to answer how digital (non-human) platforms mediate and flatten the relationship between consumers and service providers (human) in the sharing economy? Thus, analyze how the main actor (digital platforms) mediates and plans the relationships between consumers and service providers in the sharing economy.</p>	<p>BAJDE (2013); CALLON (1984); LATOUR (1987); SARKER et al., (2006) LEE et al., (2015); SHIN (2016). SUTHERLAND; JARRAHI (2018).</p>

**Source:** Created by the author

Although ANT does not offer a manual with detailed guidelines on how to operate the research from its perspective, paths, doubts, creations and practices for its development have emerged (LATOUR, 2005; BAJDE, 2013). For Latour (2005), the reality of ANT is unique, independent, and "out there" in the field is built from realities described and inscribed from dynamic relationships between humans and non-humans. Thus, the method applied in this research adopted the descriptive nature of ANT, focusing on the observable realities from the practices and relationships that are developed and produced by the multiplicity of "things" that are part of the object or problem examined, translated and analyzed (CALLON, 1984; LEI, 2004; LATOUR, 2005; BAJDE, 2013). Therefore, the data collected, described, translated and analyzed using these different means were cross-validated before use. Thus, this entire process of description, construction of narratives and translation until analysis took place between September and February 2019 (details in Appendix IV).

The ANT researcher needs to use a "diversified toolbox" to carry out the research practice, not focused on the final result, but on the process of events and movements that occurred within and outside the context researched (LATOUR, 2000, 2005; BAJDE, 2013). Thus, the study was carried out through several practical processes of observation, annotation, and interview, image capture, added to the operational process of transcriptions, encodings, descriptions, and translations and analyzes. Thus, the trajectory of the ANT lens not only privileges the nature of the data collected as the events developed by society, but also the exchanges of properties that occurred between the heterogeneous elements (LATOUR, 1994). The method proposed in this thesis follows the particularities, dilemmas and challenges of ANT, of the various elements that act, practice and relate within a network perspective (LATOUR, 1987; 2005).

Following this network perspective, the next two chapters describe and translate the two empirical cases of this research (Kennel Rental and Goalkeeper Rental). Chapter 7 presents the discussion held in the light of the ANT, which articulates and deepens the analysis with the support of the theoretical foundations and interprets the empirical data. Finally, the conclusions return to the main questions and objectives of the thesis, highlighting the contributions and theoretical and managerial implications, such as limitations and agenda for future research.

## 5 DESCRIPTION OF THE CASE STUDIES

This chapter presents a detailed description of the two cases researched in this thesis. Following this perspective, the next two sections describe longitudinal and historical details of the two empirical cases of this research (Pet Kennel Rental and Goalkeeper Rental).

### 5.1 Pet Kennel Rental

#### 5.1.1 The motivation and the beginning of the project of a platform for sharing hosting and pet care.

The digital platform for sharing hosting and pet care known as "Toca de Aluguel" was conceived in October 2016. The project arose from a personal need and motivation of the entrepreneur/founder, tutor of two cats in the city of Porto Alegre - Rio Grande do Sul - Brazil. Thus, the initial idea was to develop a tool or application to help people to access caregivers for pets. In this way, platform founder idealized, designed and developed the idea due to his background in systems analysis and past experiences in business supported by digital platforms. To validate this idea, the founder sought the partnership of two friends who were already providing services as caregivers of pets individually. Thus, Pet Kennel Rental started with a proposal to bring together, facilitate and reward people through hosting and pet care.

The initiative focused on the welfare of the pets hosted and the speed of care provided, either with the pet tutor (consumer), or the caregivers for pet (service provider). Therefore, the central objective of this business for the platform's founder was to mediate the care relationships between these actors (tutors, caregivers, and pets). In this sense, the strategic positioning of differentiation on the platform was structured to become a facilitator and a close partner of the pets, tutors, and caregivers. The pillars of market differentiation: affectivity, reliability and localism. The founder's speech represents these foundations.

We work hard to deliver the best service possible to bring comfort, trust, and affection to every home. After all, their pet is part of the family and Toca's idea is to treat them like real guests. E1 (entrepreneur/founder)

Thus, the first alternative found by the entrepreneur/founder and the two partner caregivers to promote the platform's services was to develop a fan page on the social network Facebook. This fan page aimed to invite other caregivers to be part of the community and arouse the interest of pets' tutors. Figure 3 shows this profile page on Facebook.

**Figure 3 – Toca's profile page on Facebook**



In this initial period, the digital platform consisted of a fan page, a WhatsApp channel, and direct contact with the founder through a mobile phone. In November 2016, the platform participated in the selection and was approved to incubate the project in the business laboratory of the incubator of the Escola Superior de Propaganda e Marketing Sul (ILAB - ESPM SUL). Thus, the development and implementation of the platform in digital systems began, with the objective of connecting and gathering caregivers and tutors.

#### 5.1.2 Developing the digital platform project

Pet Kennel Rental platform project, as a hosting and pet care sharing business, started to become a reality from the incubation at ILAB- ESPM SUL. However, before this incubation, some small actions were validated and carried out by the founder and the two partner caregivers (service providers). To be selected, the founder needed to validate the business model at a pitching startup with professors and consultants on the premises of the educational institution in Porto Alegre. For the professor and coordinator of the incubator and business laboratory of ESPM (E9), “The platform had a value proposition with excellent business potential, through innovation and scalability.” In this way, the professor highlights this impression in detail.

First, we identified some players in this pet hosting market, but none here in the South [...] the proposal was interesting, as it approached the caregiver with tutors through the local culture of each region. The platform played an important role in connecting and supporting care and relationship actions with this audience. E9 (ILAB ESPM - technical supporter)

At the event, the consultants highlighted the difference in digitizing this business of sharing animal care between tutors (consumers) and caregivers (service providers). This platform could bring together people who already carried out this activity informally in the city of Porto Alegre. The ILab coordinator highlights the differential of digitizing this relationship.

“Toca de Aluguel” digitalized an existing relationship between tutors and caregivers. The platform gives tranquility to this transaction, which involves emotion, security, and trust. E9 (ILAB ESPM - technical supporter)

The platform had a differential supported by a local community of caregivers (service providers) who focused on attending pet tutors. At the time of the validation of this project, there were already two other competing platforms, DogHero and PetAnjo, with operations in the southeast and northeast regions of Brazil. One of the differentials of Toca de Aluguel was in the process of relationship and regionality. Thus, all the connection and interaction actions were aimed at referring to this localism. The entrepreneur's statements represent this intention.

The initial idea was to develop something on the same model as Airbnb, but with regionality, providing quality service for all types of animals. The focus was on people and communities who like pets. E1 (entrepreneur/founder)

In January 2017, “Toca de Aluguel” was incubated at ILAB ESPM because its differential was to position itself as a regional platform in each new open market. This positioning was selected to generate a close relationship with the caregiver communities in each region. This way, the goal was to work on the differentiation with digital communication and interaction with other available tools, such as Facebook fan page, WhatsApp groups by city and region, Instagram by region, and a blog. Besides, a partnership with local pet shops was thought to promote the business together. As a result, the platform began to be developed with other tools, solutions, and communications. Thus, the first steps in the incubation process were to create a detailed business plan, a website, and a blog and professionalize social networks and

contact channels with caregivers and tutors. The adviser and responsible for the communication at ILAB comments on her first contact with the pet kennel rental platform:

My contact was through the approved projects for our incubation laboratory ... The business technically had a good connection with customers and caregivers, but in terms of communication, content and identity, it had to improve. In this sense, we see an opportunity for incubation. E7 (ILAB ESPM - technical supporter)

The technical experience of the founder/entrepreneur trained in computer science and with projects for other companies was a differential. However, the platform needed an identity and a communication strategy to get closer to its target audience. The platform's main resources were its functionality, simplicity and speed, as commented by some caregivers and tutors. The point of discussion was to make this connectivity automated by the platform nearby and in the minds of those involved in the business (tutors and caregivers). Figure (4) presents the initial proposal of the brand in line with this concept of proximity.

**Figure 4 – Toca's Brand**



Furthermore, to create the platform's identity, the ESPM incubation laboratory and content agency developed a slogan for the platform: "*Sem Stress, Só Carinho*"! (No Stress, Just Affection). This slogan referred to care, emotion, proximity, and security. As the entrepreneur was working on this incubation process to give the platform more technical strength, the recruitment of caregivers and tutors was being carried out with the ILAB-ESPM content and communication agency support. Thus, the agency's team suggested hiring a person to manage communication with the incubator agency.

In mid-March 2017, the entrepreneur invited his fiancée (E3), who at that time lived in São Paulo, to come to Porto Alegre to be his partner in this business. Thus, all communication strategies, content and digital marketing would be the entrepreneur/co-

founder's responsibility. The first challenge of the co-founder was to consolidate the communications and support the entrepreneur/founder in the product strategy. The entrepreneur/co-founder's statements are representative.

In this period, we left the structuring phase of the project to integrate with social networks (Facebook and WhatsApp) and improve the layout and brand. We then developed the first digital drives and automated care for caregivers. In this phase, we standardized content and digital advertising. E3 (entrepreneur/co-founder)

Thus, the proposal was to integrate the communication and automate some processes, developing tools for connection and interaction between entrepreneurs and caregivers. These automation processes through chatbots helped the caregivers and tutors to develop relationships. The action was to automate these processes to the fullest. In this way, the two entrepreneurs could invest their time developing activities, promotions, communications and content to attract caregivers and tutors. The entrepreneur/co-founder highlights these actions.

I believe that the automation of the registrations was a divider in these processes. Before that, this whole process took three months, between the caregiver sending the first forms with his initial data, answering the questionnaire, and then sending the final documentation for approval. When we integrated this with Facebook and Google, we saved time (we reduced it to one month), as we have already captured some information at this time. Then on the website, we started an automatic process with other police and credit card tools. With these improvements, we've inactivated bad records and registered interested people and partners. E3 (entrepreneur/co-founder)

Likewise, the process of automating communications through paid advertising and content developed for Facebook leveraged caregiver records. These processes also brought new caregivers closer to the platform's proposal. Thus, to give more legitimacy to the platform, a blog was developed and launched. The blog's objective was to bring relevant content to tutors and caregivers, bringing them together and involving them. Figure (5) shows a blog post.

**Figure 5 – Toca's Blog launch**



Figure (6) represents the platform's approach and regionality strategy towards target audiences (tutors and caregivers) through blog posts.

**Figure 6 – Toca's Blog Post**



In this development process, a YouTube channel with tips from caregivers is launched. The whole process of structuring other solutions to support the platform took place from March 2017 to December 2017. This strategy aimed to give identity, legitimize and approximate the proposal for sharing accommodation between caregivers and tutors. In the words of the co-founder (E3), "basically a joint work in which identity and communication helped to consolidate the interaction and automation of the platform's processes". Figure (7) presents this video developed to communicate, connect and approach this solution with caregivers.



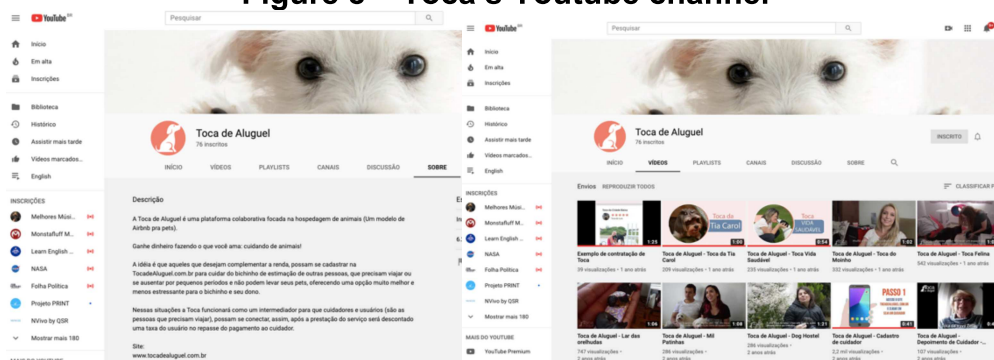
**Figure 7 - Toca's video's to caregivers**



Thus, with the availability on the Youtube channel, some caregivers were invited to give testimonials (figure 8). The proposal of this channel was to involve the service providers/caregivers with tutors, analyzing how this relationship was established. The speech of the entrepreneur/co-founder explains this process.

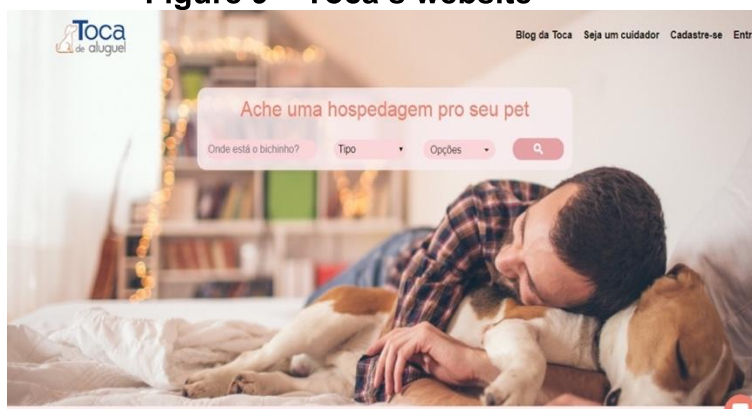
Currently the customer wants everything simple. We developed all the processes directly, access, images and registration integrated with other social networks (Facebook, Instagram, and Youtube), and forms of payment integrated with your bank account. We adjust our technique and processes together with the caregivers who are our partners in this business. E3 (entrepreneur/co-founder)

**Figure 8 – Toca's Youtube channel**



In January 2018, the commercial version of Toca de Aluguel was launched. This version aimed to bring relations with caregivers and tutors closer through a visual identity based on emotion, affection, care, safety and comfort. These attributes were designed, developed and implemented based on the feedback from caregivers and tutors in the beta version. Figure (9) shows this new website design.

**Figure 9 – Toca's website**



This development process of the platform was approximately one year. Besides developing the platform with an internet presence (website) and optimized this version for mobile devices (mobile site), profiles, and channels were developed on Facebook, LinkedIn, Youtube, and Instagram. We also developed messaging groups on WhatsApp with the providers/caregivers segmented by cities. In this incubation period, all these solutions were developed by the entrepreneur/founder, who also had a technical developer. The entrepreneur/founder received management support in digital marketing from the entrepreneur/co-founder and the technical supporters of communication and content at ILAB-ESPM. ILAB-ESPM's technical supporters were the professors, incubator coordinator and students from the institution's content and

communication agency. These movements generated interest in some media channels in Porto Alegre, resulting in spontaneous journalistic articles such as invitations to participate in local television programs. Figures (10 and 11) represent these events.

**Figure 10: Participation in Acerto de Contas program on radio and blog**



**Figure 11: Participation in Bibo Nunes program on channel 20 in Porto Alegre**



Thus, in the second year, the platform with functionalities, facilities and support tools began to act in the daily lives of pets, tutors and caregivers.

### 5.1.3 Implementing solutions to establish relationships between pet tutors and caregivers

In 2018, the scope of the platform was extended to individual actors and the environment. The first step was to develop digital artifacts (web site, fan page, Youtube

channel, blog, social networking profile, and WhatsApp message groups). The second step was characterized by the connection to generate the relationship with the providers/caregivers and consumers/tutors belonging to this service. Thus, together with the human actors (founder/developer, co-founder, and ILAB-ESPM technical supporters), digital solutions helped establish connections and relationships between caregivers and tutors in the daily lives of the pets.

By the end of 2017, the platform already had a considerable number of registered caregivers (50) capable of carrying out the activity. These caregivers were spread across Porto Alegre, Canoas, Gravataí, Cachoeirinha, Alvorada, São Leopoldo, Novo Hamburgo and Caxias do Sul. In January 2018, an operational version of the site was made available, and an icon (shortcut button) was delivered, optimizing the website for smartphones with Android and iOS systems. The statement of the entrepreneur/founder in the role of developer reveals this process.

“[...] we thought and developed a simple, practical, and agile site with access to several devices. Right at the beginning, this was not possible, but we learned in the development of the platform. The data and information about the platform presented options and paths. Besides, the caregivers who participated in the beta version helped us a lot, as they were always giving us feedback with tips for the development. The tests were done together, and we made the caregiver part of this joint construction [...] we made changes according to this partnership and even adjusted the visual identity in this movement, with the help of the caregivers and marketing and communication consultants of ILAB – ESPM. E2 (entrepreneur/developer)

Thus, the connection with new caregivers and tutors was made through digital campaigns through social networks and content marketing on the platform's blog. In addition, some actions were taken with caregivers and tutors to create bonds and closeness. The following lines represent this process.

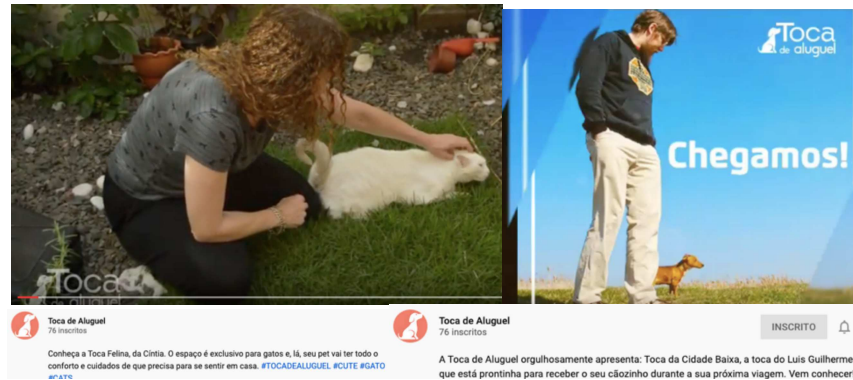
I found out on Google that a search resulted in an ad for a caregiver. This ad promoted the brand Toca. This service seemed like an interesting option to earn extra income. E22 (provider/caregiver)

I have a cat, which is a pet that is difficult to adapt. As I was scheduled to travel, I searched the Internet for an appropriate place to drop off my cat. In this research I found out Toca and the service offer of caregivers. E30 (consumer/tutor)

I found it through a promotion on Facebook. The disclosure offered an opportunity to be a pet caregiver. As I like cats, I thought it would be interesting as an extra activity with an extra income. E24 (provider/caregiver)

Consequently, maintaining this strategy of approaching caregivers, tutors and pets, some actions were implemented to promote videos on the Youtube channel. The images (12) present some of these actions.

**Figure 12 – Caregivers video's examples**



In addition, figure (13) presents an animated advertisement, designed to attract the attention and interest of pet tutors in hosting their pets through the caregivers available on the platform. This ad was posted to pet related communities on Facebook.

**Figure 13 – Toca's digital advertisement**



Therefore, communication campaigns for caregivers and tutors made the Toca de Aluguel platform known in the three southern states of Brazil. These communications generated approximately 80 new caregivers in 30 different locations, with an average of 100 accommodations / month. Thus, this process of implementing

actions to legitimize and create bonds between caregivers, tutors and the platform attracted even more attention from media, resulting in new investors entering the business.

#### 5.1.4 First attempt to establish relationships between pet caregivers and tutors

The first attempt to professionalize the platform's solutions and actions to strengthen the relationship with animal caregivers occurred with the arrival of new investment partners, as the entrepreneur / founder had participated in some reports in the newspapers Zero Hora and SUL. Thus, these articles caught the attention of the researcher who researched sharing platforms. The researcher explored the field and the movements carried out by the entrepreneurs of these sharing platforms in Brazil. The first contact took place via text message and then through a face-to-face meeting, in which the entrepreneur / founder commented on the moment of the platform and the business. In the second meeting, the researcher was invited to be part of the project to bring professionalism and attract investments. After this invitation, the researcher and future investor made the diagnosis about the proposal to invest or not in this business.

Therefore, the researcher's first diagnosis highlighted the need to develop some strategies to approach and involve consumers, providers, and partners around the platform. The objective of this involvement was to generate financial and market returns for everyone. These strategies were related to the professionalization of management, operation, communication and processes through technical supporters and business-critical investors. It was defined that professional supporters would be companies specialized in communication and digital development and partner investors would be accelerators to inject financial resources into the platform.

Thus, the researcher identified that the platform was robust due to the technical experience of the founder and co-founder in conducting online communications, but he lacked regularity, planning and a vision of the future for the company. This diagnosis detected the need for more professional management for digital marketing actions. It also identified the need to develop new features, facilities and products. Thus, a fourth member with experience in digital advertising was invited.

When I heard about Toca's proposal, I was very surprised by the investment and business opportunity. I highlight the community of caregivers who are ambassadors for the company, who provide the site with information for the database, making the search algorithm even more robust. This information and processes provide confidence and security to businesses and the relationships between caregivers and tutors. So, we access and use these tools almost without thinking about how it was at the time of Google and Facebook. My motivation was to participate in new business and help with my experience in digital communication. E21 (partner investor)

Thus, from March to August 2018, some strategic and operational changes were made in the platform and business, resulting in an expansion of caregivers and tutors. First, a continuous relationship rule was developed to bring caregivers and tutors even closer through actions on promotional dates, holidays, and weekends. New locations were also defined, such as São Paulo, Sorocaba, Americana, Rio de Janeiro and Recife. In addition to adjustments in the operation, the need to develop a mobile application was defined to provide agility and mobility in the process of searching, registering and capturing new caregivers and tutors. The first application developed and launched was for Android technology, due to its capillarity with the base of mobile devices installed in the Brazilian market (more than 80% of active smartphones in the country). In the second moment, the development of an application in iOS format for iPhone devices was planned.

The partners also noted the need to seek more financial resources to make these strategic definitions. Thus, the platform was validated and went through some acceleration processes of the companies Wow, Ventuir, Multiplus and Km de Vantagens in Porto Alegre, São Leopoldo and São Paulo. In mid-May 2018, the platform already had an average of 10 accommodations / day with more than 110 registered caregivers. The result was the result of seasonal promotional actions, organization of recurring communications and development of new features to improve connections and proximity to caregivers and tutors. The advertisement in figure (14) represents one of these actions carried out with the caregivers of WhatsApp groups of messages segmented by location.



**Figure 14 – Toca's advertisement send through WhatsApp**



These actions were carried out through message groups and a strategy was defined with the other search and digital communication platforms. At that time, a technical investor, with experience in digital marketing, was recruited by the investor (E21) to develop this process. The lines of the specialist in digital marketing represent this movement to connect with new caregivers and tutors.

I believe that for a new platform, not known in the market, the essential are two things. First, it is necessary to make an investment in Google Adwords, purchase of positioning and search ads. Second, it is necessary to improve the platform's interaction design and keywords. This second improvement process helps the Google and Facebook algorithm to highlight the relevance of the business. These two actions result in more access, both public and sector. E8 (technical supporter specialist in Google)

In addition, the focus on communication strategy, new features and automated processes has been integrated into the platform to involve caregivers and tutors. Resources needed to be straightforward with agile methods for everyone involved in this sharing relationship. An alternative was to develop a hybrid application, in which the website and the mobile application took advantage of the same technical design and communication concept. This alternative would position the platform in a transparent and meaningful way on Google, Facebook and Instagram. Thus, to carry out this activity, a supporter with a professional profile in application development was hired. The statement by technical supporters highlights this process.

Our initial idea was to analyze the information and data to develop a mobile application with the same automation and interaction features as the website, but what happened was a technical coincidence. We transformed the legacy



system of the website into a mobile application. This process resulted in a hybrid, that is, one application over another. For the caregiver and the tutor, everything was like the website in interactions and hiring. In addition, for research platforms, the relevance of helping in the process of recruiting new caregivers and tutors has improved. E4 (technical supporter developer)

This initiative provided caregivers and tutors with a platform with a friendlier and direct version. The action was supported in two ways, improving digital communications and the technical part. These improvements have made the platform simpler, more intuitive and easier for caregivers and guardians to relate to. These benefits and functionalities needed to represent something, as was already the case in other communication channels. These new functions and facilities themselves should help the process of bringing caregivers and tutors together. The speeches of caregivers and tutors highlight these processes.

I really enjoyed the registration process and the step-by-step on the website that guides us with simple and very intuitive questions and answers. Another interesting thing was the approach to be captured by Facebook. The in-app chat service is interactive like WhatsApp. The best of all is the payment process, which creates a virtual account with my credit card. E23 (consumer/tutor)

Payment and communication functions are basic and intuitive. The site manages my remuneration and deposits my amounts directly into my bank account. Communication between caregiver and tutor has improved a lot with the chat tools, so we no longer need to use WhatsApp. Another difference was the launch of the mobile application, as it offers access and mobility. The new layout of the website, the application, Facebook and Instagram helped us to do more hosting. Toca's website and application are simple and interactive and its tools work for us as caregivers of actions and digital advertising. E29 (provider/caregivers)

These actions were intended to bring caregivers and tutors closer together in their daily lives. Thus, the platform gained legitimacy and instability from its functionalities and solutions in social networks, the hybrid app, the website, the blog, and direct communications through the messaging tools. Despite all this effort, the promise of a return on financial investment did not come true. Even with a broad distribution in other regions, with new strategies and people to support and operationalize the platform and actions. It was also identified the need for improvement in interaction design, because tutors and caregivers were sensitive to commemorative dates and holidays that existed throughout the year. All the communications carried out had this objective. Still, they were not managing to make connections and

engagements with the tutors (consumers) on an ongoing basis to generate revenue through the hosting. Incubator supporter highlights this alternative.

Communication and interaction must be simple and intuitive. Many use models like WhatsApp because it is known. Thus, processes need to be integrated with this and/or other tools. It also needs to deliver the promised quality at first insight. In my specific case, I use a platform that delivers what is promised in the first experience. Toca did not have a good user experience, and I believe this has impacted on the low uptake of consumers/tutors. E7 (ILAB technical supporter)

In this way, the digital artifacts (web site, blog, social networks and communication channels of the platform) were able to connect and approach 130 caregivers and developed 300 relationships with tutors/month. However, new improvements were needed to find a closer relationship between caregivers, platforms, tutors and pets. The platform's functionalities and facilities aimed to generate engagement for the establishment of relationships. The objective was to expand sharing and relationships that involved emotions and feelings of caregivers, guardians and pets.

#### 5.1.5 Second attempt to establish relationships between pet caregivers and tutors

A second attempt was made to return the financial, technical and marketing efforts of human actors (entrepreneurs, investors, supporters and caregivers) and nonhumans (platform with their website, blog, and social network and message channel). The movement at this stage of the platform was based on the narrative of legitimizing a strait relationship with the caregivers, who had already transmitted this attitude. The adopted strategy aimed to make the caregiver a local ambassador of the platform, which would assist in attempts to establish relationships with the pet's tutors. For this, a survey was conducted with caregivers and tutors. The research sought to understand the perceptions of caregivers and tutors on the platform. The interviewees' statements reflect these feelings.

I believe there are many unnecessary things related to the tools, but I strongly believe in the evaluation and recommendation functionality. I also use WhatsApp chat list service a lot. These resources have made us consultants for consumer/tutor questions. E5 (provider/caregiver)

The website and the application provide us with a simple and quick experience for the community. The application hiring process takes place in two clicks. Also, I can exchange messages with the caregiver and schedule exclusive times for her to be with my puppy. The whole process is simple, easy and automatic. E6 (consumer / tutor)

[...] these platforms have provided access and facilities for tutors to find our hosting services. I offered this service alone on Facebook because I like to take care of pets. With Toca, I professionalized my service, interaction and communication. In Addition, I no longer have to worry about advertising and promoting services anymore. The application accelerates and offers mobility to the service. With this tool, I can manage my account, my remuneration and my clients in the palm of my hand in an easy, simple, agile and intuitive way". E29 (provider/caregiver)

After the results of the research, the four platform partners (E1, E3, PESQ1 and E21) sought out other supporters with technical knowledge in digital communication. This search was aimed at strengthening contact with tutors and strengthening the relationship with caregivers, further legitimizing the platform's facilities and resources. There was also a new adjustment in the corporate division with the departure of the entrepreneur / co-founder (E3), leaving only the entrepreneur / founder (E1) and the two partner investors (E21 and PESQ1). The platform already carried meaning and mediated the relationships between caregivers and tutors for being simple, intuitive and agile, with a sound system, payments and service provision. The challenge was related to strengthening the relationship with tutors, providing sharing of accommodation and care. To resolve this issue, the partners decided to seek help from professionals with experience in customer experience design, market relationships and digital personalization.

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professionals with experience in customer experience design, market relationships and digital personalization.

Consequently, the improvement proposal related to the digital strategy, the partners found in the market an agency specialized in serving startups with the same profile as the “Toca de Aluguel”. A professional named this Ventuir Accelerator agency in the investment selection process. The partners and the platform participated in several investment proposals and all feedbacks were negative. Negative feedbacks highlighted the difficulty of scaling the business due to competition in the market and the particularity of massive investment in communication and digital marketing. At that time, the partners were a little discouraged by these negatives, but as there were good returns from the caregivers, they decided to start this process with their investments. The platform was technically stable and had good performances from those involved (caregivers and tutors), but financially the return was not rewarding. The initial idea was to listen to these technical supporters and decide on new investments. The perceptions of the professional supporters of the contracted digital agency helped to expand and detail this commercial diagnosis.

I identified the business as something different, and with a few local competitors. The market is considered big and DogHero's service similar. Still, they had other possibilities that were not being absorbed by the partners, such as beauty, walking and partnerships with pet shops. E20 (BH agency - technical supporter)

I strongly believe in customer experience. When we analyzed Toca's experience and interaction design for the first time, we saw that there were opportunities for improvement. One proposal was to develop a scoring and gamification process to improve the relationship with the pet tutor and the caregiver. Still, when the business is small, it is difficult to implement. E10 (BH digital media - technical supporter)

Therefore, after these feedbacks and the knowledge that the platform was technically stable, the partners decided to invest in the Big House (BH) agency proposal. The first step was to adjust the customer experience based on design, followed by actions to grow the caregiver base to involve and engage new tutors.

Our first challenge was to build a set of simple actions, but at the same time, refer to this feeling of emotion or affection. The colors needed to be clear and light to generate tranquility and confidence. This strategy was adopted to speed up the hiring of accommodation, generating something that comes from the heart. As caregivers already work in this way, we try to automate this

action by improving the design. This action refers to an emotional relationship between caregivers and tutors. E11 (BH digital media - technical supporter)

Thereby, the whole work was to improve the graphic design, interaction, and relationship, providing an engaging and close experience with the tutors of the pets. At first, the return did not take effect. Still, later, due to the integration with the communication ruler (actions performed according to promotional dates, holidays and weekends); there was an expansion in the number of registered caregivers. These actions increased the registered caregivers, reaching 150 active caregivers in the platform. Still, the involvement with the pet tutors does not evolve at the same pace. Even performing several communication strategies and structural changes in the platform to improve the functionalities, design and resources to speed up the process of involvement with tutors, the result was negative. The figure (15) demonstrates the effort made in the second attempt to establish these relationships.

**Figure 15 – Toca's new landing page**



During these six months of investing time, work, technical and financial resources from the three partners (E1, E21 and PESQ1), with the help of the digital agency's technical supporters, there were new commitments to caregivers, but not to tutors. One of the causes raised was related to competition, with greater economic and technical power to carry out actions that involved and approached tutors. Another was the lack of structure and financial resources to better manage the platform and its technical supporters. The latter was related to caregivers, who used the platform only as "bait", through digital communications, to contract hosting and service outside the platform system.

However, at the end of August 2018, the investing partners (E21; PESQ1) decided to terminate the partnership due to the lack of strategic and financial alignment. Thus, the two investing partners sold their shares stakes to the entrepreneur/founder, who decided to make another attempt to establish relationships with pet caregivers and tutors.

#### 5.1.6 Third attempt to establish relationships between pet caregivers and tutors

After the departure of the three partners, the founder decided to invest alone in a third attempt to bring the platform closer to the tutors. Between September 2018 and January 2019, many actions were taken to stimulate this relationship with the tutors, but due to the national economic moment and the competition from an already structured platform (DogHero), only caregivers and not tutors of pets appeared. Thus, partnerships were resumed with ILAB-ESPM to help in the generation of content, maintaining the consulting of the digital agency to work on digital marketing actions. The strategy stipulated to achieve this closer relationship with tutors was "digital growth marketing," focusing on providing new connections and engagement. The communication pieces (figure 16) were developed to help in this process and they were also incorporated into the website, blog, Facebook profiles and Instagram.

**Figure 16 – Toca's digital advertising**



This strategy was based on strengthening relationships with caregivers and engaging tutors to generate hosting. Besides, actions were taken in the search engines (Google and Facebook ad). The interview of the technical supporter highlights this movement.

We develop actions to bring together emotion and practicality [...] because a puppy, to be cared for, needs emotion and passion. For this reason, we focus

on the proximity of this relationship [...] people use these applications because of their ease, trust and security”. E12 (BH digital media - technical developer)

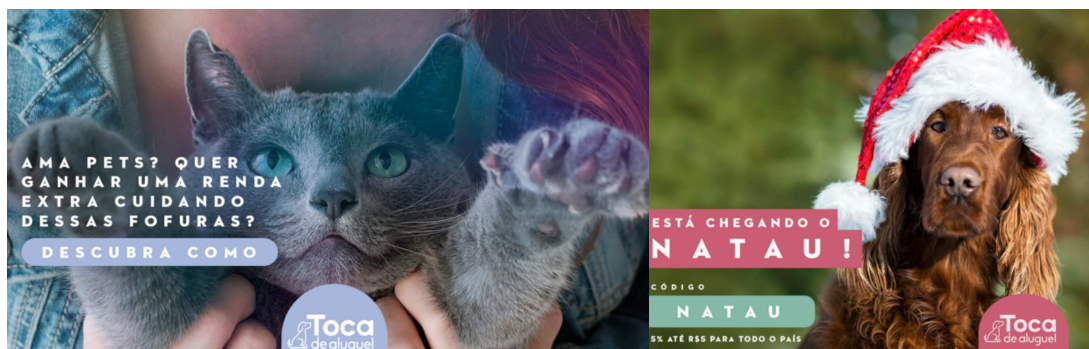
Thus, this strategy was based on targeting keywords in search engines and social networks with communications directed at different times to the target tutors. All of these tools had actions through the platform (website and blog) and social media, and direct communication via WhatsApp messaging application. Figures (17) show these targeted communications.

**Figure 17 – Toca's advertising send by WhatsApp**



Besides, the platform had a notification tool that sent specific messages at different times, as represented by the figures (18).

**Figure 18 – Toca's advertising sent by notifications**



These actions of proximity and closer relationships brought more accommodation and new caregivers to the platform. In addition, the entrepreneur participated in the startup project RS (Sebrae) with the support of Semente Consulting. In addition, the platform was incubated by POA HUB, participating in various events to improve business management and attract investment. After this process, in



November 2018, the new version of the mobile application was launched. Figures (19 and 20) represent these events.

**Figure 19 – Toca's mobile app**



**Figure 20 – Toca's Incubation at PoaHUB**



Therefore, these actions and improvements in the platform generated relationships with caregivers, but again did not result in new accommodation and ongoing relationships with tutors. At that time, the entrepreneur / founder was at a crossroads, insisting on the process, selling the base of caregivers or just closing everything. The network was stable, with more than 200 caregivers, but the founder had no more financial funds to invest. Finally, the entrepreneur / founder decided to finalize the contract with the digital marketing agency and manage the platform alone, sealing the beginning of the end. Therefore, these actions and improvements in the platform generated relationships with caregivers, but again did not result in new accommodation and ongoing relationships with tutors. At that time, the entrepreneur /



founder was at a crossroads, insisting on the process, selling the base of caregivers or just closing everything. The network was stable, with more than 200 caregivers, but the founder had no more financial funds to invest. Finally, the entrepreneur / founder decided to finalize the contract with the digital marketing agency and manage the platform alone, sealing the beginning of the end.

#### 5.1.7 Closure of the pet kennel rental project

The kennel rental platform has undergone many transformations and has recruited many caregivers and supporters but has failed to strengthen the relationship with animal tutors. The platform's community of caregivers was robust and engaged with the proposal to share accommodation and care, but at the same time, they perceived this as just another service intermediary. This type of intermediation was also generated by other platforms in the national market, such as DogHero and PetAnjo. The refusal of some investors to make financial contributions has always been related to competition in the market, lack of differentiation for tutors, uncertainties regarding the national economic situation. At the beginning of the proposal, the platform was differentiated by proximity, practicality, security and relationship. These competitive differentials were maintained throughout its three years of existence, but a closer relationship with consumers / tutors was lacking. The statements of some caregivers portray this contradiction.

The start with the platform was fantastic. Platform's resources and tools were the hard part of the capture and relationship process with tutors [...] WhatsApp communications, advertisements and transmission lists helped manage our hosting and earnings. E24 (provider/caregiver)

I created a network of other caregivers near my home and neighboring neighborhoods and sent it to the platform staff to earn a better commission on hosting. I had a benefit in the platform in which I rewarded those caregivers with more hosting and indications of caregivers. So, my commission got better, from 70% initial to 85%, this is a good differential. So, I used my location to generate new business and earn more ... with Toca and the competition. E22 (provider/caregiver)

Therefore, the pets' caregivers did not have a close relationship with the pet kennel rental platform. The engagement was due to the platform's resources in facilitating the disclosure and payment of their hosting. Toca had a differential related to competition by charging a lower commission rate and had agility in communicating

and passing on these payments to the caregivers compared to other competitors. The big challenge was to connect, engage and approach new tutors. This point of discussion led many caregivers to work with those platforms with a higher power to communicate and develop tools associated with the evaluation of their hosting. The tutors' statements verify this reality.

Making an evaluation is the basis for this type of service, as it helps in the process of hiring a hosting. We get to know people and services more by the information, comments and ratings of others. I trust more in evaluation than in paid advertising on the web, because it causes confidence and influence in our choice. The recommendation and evaluation generate a certain convenience and practicality when choosing a new caregiver. E25 (consumer/tutor)

I believe in these tools and resources that have testimonials, stars. "Toca" has this process, but it could be further explored. I chose my caregiver for the testimonies of the people who used her services, as they commented sincerely. E27 (consumer/tutor)

Likewise, caregivers looked for particularities on the platform for a better commission, targeted communication, and personalized service. On the other hand, tutors were looking for mobility, agility and simplification. Thus, the network was formed and had some dynamics, remaining stable over time and flattening relationships with caregivers and platform closer, but timidly with tutors. Some statements portray that the platform's functional and mediation proposal worked, but it did not generate financial returns for the entrepreneur and his partners due to market and organizational situations. The speeches of the entrepreneurs at different times highlight this perception.

The automation together with the intelligence and positioning in the search tools helped us to stand out in this business done in partnership with the caregiver. The caregiver helped by bringing information from the tutor, and our data development was fed and improved to generate business and hosting. The highlight was to integrate and work in a logical way, using the data to manage the relationship between all involved and improving the experience of the services, but unfortunately it did not involve the tutors (consumers), and we had no more funds to invest in digital media. E1 (entrepreneur/founder)

I remember the insertion of several filters in Google keywords to search for caregivers in paid and unpaid ads. Little by little, we didn't need to do this process anymore, because it came organic or even a caregiver indicated. So, little by little, the platform was giving us more information about the journey of the consumer/tutor. This process was crucial to improve the involvement and experience with consumers and providers. Still, the competition took us out of

the business because they had more capacity for professional investment, commercial, and relationship. E3 (entrepreneur/co-founder)

Thus, partner and researcher (PESQ1) made some observations as a participant for eight months (January to August 2018) and non-participant during the following period (August 2018 to September 2019). These observations highlighted that many problems were related to a lack of organization and anxiety on the part of the entrepreneur/founder to generate revenues. The lack of patience resulted in disorganized processes and a lack of support with the platform's functional characteristics to strengthen the relationships with the caregivers and tutors of pets. Besides, the platform made a good connection with the pet caregivers and caregivers with the pet tutors. Still, there was a lack of a better relationship with the tutors and the platform to generate the hosting. In this sense, the platform had a life of its own and was doing its role of connecting, inducing, mediating and flattening relationships with many caregivers from its resources and solutions that facilitated and simplified the sharing of hosting and care.

However, the platform could not do the same processes with the tutors. One of the points raised was associated with the communications made through the platform and its other channels (social networks, blogs, and messaging applications) to generate this link. These communications at the beginning of the process helped a lot, but depended on a high investment to support its continuity. The website had a showcase role with hosting offered, but the real interaction took place through social networking and communication via WhatsApp. At this point, there was a lack of greater involvement and control to generate more hiring by tutors. Due to this, freedom is given to caregivers, many hosting and revenues were lost, and many businesses passed off the platform, not generating the expected engagement.

Many of these accommodations were made by caregivers looking for a new income to complement the existing one. On the other hand, many caregivers had this activity as their only income. The platform ended up doing the work they couldn't afford, as a technician on a website or mobile app or payment processor. For many caregivers, the platform connected, generated and brought relationships with tutors through resources, content and digital communication. This process for caregivers was expensive in terms of time, technique and financial resources. Although the platform managed to carry out this relational involvement with caregivers, it was not the same

with tutors, due to the lack of connection and engagement at the previous moment and after hiring accommodation and care.

Many practical surveys were carried out with caregivers and few with tutors, and this was a disagreement between the partners, as the founder believed that he needed to pay more attention to the caregivers. Meanwhile, the others believed it was necessary to understand the tutors to generate more sharing of hosting. Another negative aspect was the reliance on hosting on holidays and weekends and on affective questions, that were always questioned by tutors and caregivers. In addition to the high technology investment, required to implement relationship and engagement tools available on the market, which could assist in this process of involvement with tutors.

Therefore, to circumvent this cost problem and generate this involvement with tutors, some actions were carried out through WhatsApp, Google and the robots inserted in the website and the application. This process brought an increase of more than 400% in connections and interactions. Thus, the videos and communications provided by the platform and the support solutions were essential to establish this relationship. In addition, the communication process through the installation of a "Chatbot" connected new caregivers from other states. Adjusting keywords for organic searches better positioned the platform on Google and Bing search engines. As the investment in the registration and fundraising processes was adjusted, most tutors and caregivers took into account the changes in the experience on the website and the application. For example, it reduced registration, hiring steps, increased clarity on what they were hiring, payment information and insurance for their pet.

However, engagement relationships only occurred with caregivers who sought the platform due to the financial attractiveness and quick service. Toca had a lower commission rate than other similar platforms on the market and provided personalized, simple and easy service. Also, competition from DogHero and PetAnjo worked very hard on communication and loyalty questions with tutors with notification capabilities. The platform notification process left something to be desired due to the lack of technical resources. Thus, the search for making the platform close to tutors and profitable for entrepreneurs has not taken place. The platform played its role in mediating, connecting, inducing and flattening relationships with caregivers, but a link was missing in this dynamic to flatten relationships with tutors. The tutors' precarious

relationships with the platform's proposal resulted in the project being closed in September 2019.

#### 5.1.8 Summary of the actions and events of pet kennel rental project

It is not too much to clarify that establishing relationships between platforms, caregivers and pet tutors did not have the return expected by the entrepreneurs. The timeline mentions the effects of development, implementation, establishing relationships and closing the network. The researcher's efforts were to map the existing connections between the platform, caregivers and tutors. Also, the research sought to understand the formation of relationships between digital solutions and individuals. A dynamic of the relationships mark the stages of formation of this artifact (Toca de Aluguel platform) and is associated to digital solutions (blog, YouTube channel, application, Facebook profile, Google, Instagram, and groups of messages on WhatsApp). This relationshipal dynamic involved entrepreneurs, investors, technical supporters, partners, caregivers and tutors of pets.

The many stages of transformation of the network have proved vulnerable. These transformations had the objectives of developing a strait relationship between caregivers, tutors and pets. The consolidation stages of the human agents and the platform keep a process marked by several events. Many of the solutions, tools, and channels developed were associated with the platform's proposal, but some created an imbroglio between the expectations of entrepreneurs, caregivers and the market. Attempts to establish relationships have resulted in good technological and consumer practices, but with little emphasis on the human actors' personal and financial efforts.

This description of the case is marked by a broad breakdown of the processes and relationships between human and nonhuman actors. The proposal was to explain the actions and events that happened from the project's conception to the total discontinuity of the platform. The paths taken by tools, materials and actions of human actors were pursued. The platform itself left much information along the same route. It was allowing this exercise to identify relevant activities and events highlighted in different formats such as texts, images, videos, speeches, activities and strategies. The interviews conducted with supporters of ILAB-ESPM and the BH agencies reveal many of these reasons, demonstrating the role and relevance of the platform.

Significance and role not understood or captured by the tutors of pets. ILAB-ESPM supporter highlights these problems.

The automated functionalities and processes help in this search between the customer and the others involved, who can be providers. I believe that evaluation resources, referral and promotional codes through notification, robots, or WhatsApp help to generate relationships. Toca had an interesting strategy focused on connection, proximity, intermediation and moderation pillars involving the participants, in this case, the tutors and caregivers. In my opinion, the problem was that the tutors did not understand this strategy and did not get involved with the platform proposal. E9 (ILAB-ESPM - technical supporter coordinator)

Therefore, the process of consolidating the network took place, but it did not bring everyone involved in the relationship together. For the entrepreneur/founder (E1), "there was a lack of scalability, relevance and understanding of the platform proposal by the tutors" in his last statement in May 2020. The scalability commented by the entrepreneur represented, for the caregivers, the failure of the platform to generate a working relationship with the tutors. The platform had reasonable proximity to the community of caregivers but was unable to use this differential to be more relevant as a close option for pet tutors. Thus, the platform with its functionalities and other facilities were not enough to maintain the unique network, generating mediation between pet caregivers and tutors.

This case description demonstrates an attempt to maintain this close, close and collective relationship between the platform, caregivers and tutors. The materials, tools, functionalities supported this dynamic, as well as the communications provided by the platform, technical supporters, partners, caregivers and tutors during its operation. From October 2016 to the beginning of September 2019, several situations occurred at different times, from the project to the platform's closure. Thus, table 8 describes a summary of the actions and events chronologically.

**Table 8: Chronological overview of actions and events - Pet Kennel Rental project**

Dates	Overview of actions and events.
Idealization and project start stage of the "Toca de Aluguel" platform.	
Oct/16	Toca de Aluguel platform is idealized and designed.
	Partnership with two caregivers close to the founder.
	First disclosure of the platform through the founder's fan page on Facebook.
	Provision of a communication channel via WhatsApp between the founder and caregivers for hosting.
Nov/16	Participation in the selection for incubation at ILAB-ESPM SUL.
	Development of canvas for validation of the platform business proposal.
Dec/16	Presentation in the start-up pitch for incubation at ILAB-ESPM 2017.
	Chosen as one of the startups to be incubated at ILAB-ESPM 2017.
Stages of development and implementation of the platform project.	
Jan/17	Start of incubation at ILAB-ESPM 2017. Beginning of the platform development (website, solutions, and tools).
Mar/17	Creation of the logo and slogan to give identity in the communication of the platform. The founder's fiancée becomes his co-founder - responsible for digital communication solutions and relationships with caregivers and tutors.
Jun/17	Launch of Toca's blog to make content related to pets available to approximate the relationship with tutors and caregivers.
	Launch of Toca's Youtube channel to provide content, witnesses, and videos for involvement with tutors.
	Actions with videos and images through WhatsApp, Youtube, and Facebook for recruitment and registration of caregivers.
Jul/17	Participation in television and radio programs to publicize the platform for caregivers and tutors.
	Promotional and publicity actions for caregivers to involve their tutors. Expansion of the process of recruitment and registration of caregivers in the cities of the metropolitan region of Porto Alegre, Serra, and other cities of RS.
Oct/17	Beta launch of Toca de Aluguel's website.
	First communication actions to connect pet caregivers
Dec/17	Participation in reports for local newspapers in Porto Alegre and RS. Expansion of the process of recruitment and registration of caregivers for cities in the state of Santa Catarina and Paraná.
Stages of establishing relationships between the platform, caregivers, and tutors.	
Jan/18	Expansion of the company with two new partners with experience in management and digital communication.
	Launch of a new version of the platform website.
Mar/18	Launch of the shortcut button that modulated an application to support access to Android smartphones. Re-planning of caregiver connection actions and involvement of pet tutors.
Apr/18	Development of a new digital communication ruler with the support of technical supporters.
	The exit of the co-founder of the platform operation. Expansion of connection and caregiver registration campaigns for the SP, PE, and RJ markets.
May/18	Participation of 4 acceleration processes in search of financial investments to leverage the platform's business.
	Beginning of the development of the Android application for smartphones.
Jun/18	Beginning of the partnership with the professional agency specialized in communication and digital development.
	Implementation of integration with the platform's internal communications for tutor involvement.
Aug/18	Launch of a new optimized version of the website for web and smartphone with a unique interaction and graphic design.
	The exit of the other two partners from the operation with the sale of quotas.
Sep/18	Reformulation of social networks and digital media channels with the platform's new graphic identity.
	Beginning of digital growth marketing actions to attract new pet tutors.
	Beginning of incubation in the project Startup RS with support from Sebrae and POAHUB.
Nov/18	Launch of mobile applications on the Android operating system.
	Several actions and videos were made with the caregivers to involve and approach the relationships with the pet tutors.
Jan/19	End of the partnership with the agency specialized in digital communication.
	Resumption of the partnership with the communication agency of ILAB-ESPM.
Feb/19	Resumption of content actions for involvement with the pets' tutors.
Jul/19	Participation in the regional yearbook of innovative platforms based in RS.
Closing Stage of the "Toca de Aluguel" Platform	
Sep/19	Platform closure due to a lack of involvement with tutors.

**Source:** Created by the author

## 5.2 Goalkeeper Rental

### 5.2.1 The Motivation and the beginning of a goalkeeper sharing platform project

In January 2015, the digital platform for sharing soccer goalkeepers known as "Goleiro de Aluguel" started in the Brazilian market. This goalkeeper rental project arose from the personal motivation of the entrepreneur/founder (E14), an amateur goalkeeper from Curitiba - Paraná – Brazil, in love with football. The founder developed the platform design to offer his rental goalkeeper services. Initially, this goalkeeper/founder proposed to carry out this service and pass on the financial gains to social projects in his city. The, the project took a different direction involving other players, investors and partners, becoming a profitable business for all.

Therefore, to validate this initiative, the founder started offering his goalkeeper rental services through an advertisement on his personal Facebook page. In the first month, after the effort of the goalkeeper / founder, 13 matches were played, with a turnover of R \$ 390. In the third match, the goalkeeper / founder was interviewed for a local radio and was unable to meet the demand. In the interview, the goalkeeper / founder invited other players to participate in the community, generating more than 30 connections from people willing to participate in the project. Figure (21) shows the first announcement made by the goalkeeper / founder on Facebook.

**Figure 21 – Goalkeeper's profile page on Facebook**



In this way, the platform was designed and developed by the founder himself due to his past experiences in technology-based business. The platform's project focused on connecting and bringing goalkeepers (service providers) and football teams (consumers) closer together. The founder's initial strategy was to engage the community of amateur players in a social cause, leaving them extra income in the



background. Thus, the central objective of the digital Goalkeeper Rental platform was to facilitate, engage and reward people through sports relationships across the country. The goalkeeper/founder's speech highlights these goals.

At first, I didn't know that people were willing to pay to have a goalkeeper. I had no idea how big this market was. After a year and a half working and doing everything by hand, I found out that in our whole country 1 million games a month take place on the courts in an amateur way. So, the renting goalkeeper can connect and help all these people through this service. E14 (entrepreneur/founder)

In this initial period, a goalkeeper with administrative experience emerged to assist the goalkeeper/founder in developing and implementing the platform. Between the years 2015 and 2016, the goalkeeper rental platform was developed and supported by a fan page, a Google spreadsheet, a blog, a website, a mobile app, a WhatsApp group with direct contact with the founder and co-founder. In June 2016, the Goalkeeper Rental participated in a selection to participate in the Shark Tank Brasil program, in which the business was approved to participate in the program in December of the same year. Therefore, a process of development of the platform started to strengthen relationships between goalkeepers and football teams.

### 5.2.2 Platform development project

The goalkeeper rental platform project, as a football talent sharing business, began to materialize after a few matches and interviews of the founder on radio, television and news portals. In the beginning, the platform was rudimentary, with scattered solutions supported by a spreadsheet on Google, a fan page on Facebook and some groups of goalkeepers and teams in the WhatsApp messaging application. All goalkeeper calls were made using WhatsApp. Each game cost 30 reais, of which 12 reais were transferred to the platform. Thus, part of the revenue collected at the beginning of the project was used to purchase sporting goods, such as balls and gloves, donated to charities. In a second step, the idea was expanded to the adoption of a children's goalkeeper institution in Mali, Africa. Therefore, the platform project had its scope expanded to other actors and their market environment. For this reason, a goalkeeper uniform was developed with the support of a sporting goods supplier and

sponsored by a private college in Curitiba. Given this opportunity, the idea went from project to professional activity. Figures (22 and 23) highlight this fact.

**Figures 22 and 23 – Goalkeeper's first uniform**



In addition, the unintended disclosure by the media channels occupied the goalkeeper / founder weekends. The businessman comments in detail.

In the beginning, the demand from friends was huge, I started to realize that I was playing many matches as a goalkeeper every week [...] after the interview to local radio in Curitiba, when I invited other goalkeepers, appeared about 30 willing to help in the region and interior, but the organization of this demand was challenging. E14 (entrepreneur/founder)

Therefore, to organize the demand and validate the proposal of the goalkeeper sharing platform, the founder decided to develop a beta site supported by a free tool. This first website was developed by the founder himself and integrated with other free tools from Google and WhatsApp. The objective was to facilitate connections and communications between goalkeepers (service providers) and football teams contracting the service (consumers). The founder in the developer role describes this initial process.

In 2011, I had a technology company and was left with a huge debt. Thus, I decided at first to validate the Goalkeeper's proposal without much cost. I worked as a goalkeeper and a developer. So, I developed the website using free WordPress. The goalkeeper and team registration resources were supported by Google forms, which turned this data into a spreadsheet. When a soccer team called a goalkeeper, I would take the data from that spreadsheet and copy it to the goalkeeper group in WhatsApp with the field address, field type, and match time. These groups of goalkeepers were separated by region. When the first goalkeeper answered the call for the match, I closed the process. After the match, the goalkeeper received R\$ 30 and transferred on my part, all based on friendship and trust. E14 (entrepreneur / founder)

Furthermore, this process of developing the platform and the goalkeeper community brought the founder closer to other goalkeepers, particularly to his future partner and later co-founder of the platform (E18). Thus, the co-founder saw an opportunity to do what he liked and receive extra income, playing as a goalkeeper for rental. Co-founder's statements express this motivation and interest.

I found the proposal and the idea of playing football for an income exciting. I contacted the goalkeeper / founder to talk about the service and see how I could help with community management. E18 (entrepreneur / co-founder)

The co-founder's attitude brought to the platform a person who met the need to organize the processes that were taking too much time from the founder. The co-founder's past experiences were in administrative, accounting, and billing functions, making him a key piece in the assembled processes' initial puzzle. The founder's comments highlight these functions supported by his co-founder.

The co-founder is great with spreadsheets, accounting processes, administration and collection. At the beginning, he developed a manual copy and paste process, which people thought we had made a "little robot" to improve the functioning of WhatsApp [...] He developed another spreadsheet that warned when the goalkeeper reached the value of R \$ 300 per month to transfer the remuneration. Everything was developed based on trust, but people in the community helped us. E14 (entrepreneur / founder)

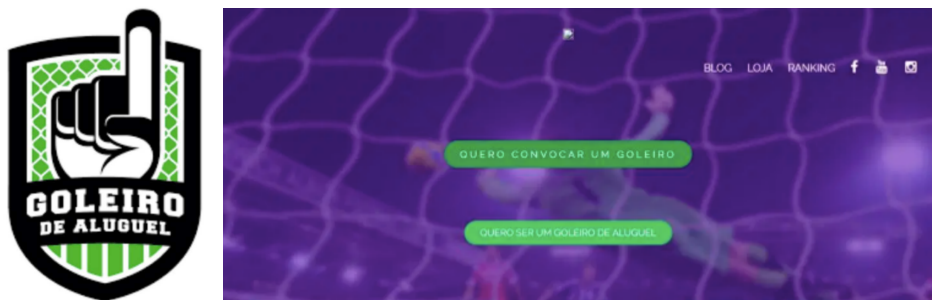
Thus, this process of registration, connection and relationship with the goalkeepers and teams started to get complicated and costly for both founders, as they had many groups in WhatsApp and many spreadsheets to manage. The administration of this process was done through a simple cell phone, which could not handle the volume of messages generated by the groups of teams and goalkeepers. Thus, to support this volume of connections between goalkeepers and clubs, the platform partners' first investment was the acquisition of an Apple-branded iPhone smartphone. This type of device supported the volume of messages without crashing and could better assist the processes developed by the partners. The co-founder's speech highlights this moment.

In the beginning, all processes were done manually by WhatsApp. When we purchased the iPhone, we took turns on duty each week to manage the calls and messages. We would receive game requests through the fan page and send the calls to the goalkeepers through the messages in WhatsApp. We had spreadsheets, and we would google maps and do everything manually

with four different systems. For example, the goalkeeper would get the rent money and pass it on to us. I had a big risk of default, but I developed an application with a spreadsheet to charge the goalkeepers and take care of the volumes of the calls. E18 (entrepreneur/co-founder)

Hence, to make the relationship with goalkeepers and football teams aligned with the platform proposal, the partners developed a logo, a brand and a beta site. The strategy was to automate the manual processes, resulting in identity and agility without losing existing relationships' simplicity. Figures (24 and 25) demonstrate these objects.

**Figures 24 and 25 – Goalkeeper's brand and the beta website**



Besides this development of the platform's identity, processes were implemented to automate the spreadsheets for registration, call, and relationship with goalkeepers and teams. The process automated the spreadsheets of registrations and calls to the website as the messages sent by the groups of messages on WhatsApp. This action solved manual operational problems, providing founders with time and operational resources to develop new applications and communications. The co-founder's comment is representative of that decision.

First, through this system, we integrate all spreadsheets and processes linked to the WhatsApp messaging application. The idea of this process was to improve communication, so that we could reach contractors (football teams) more effectively and quickly, giving an idea of the quality of the services provided. E18 (entrepreneur / co-founder)

Although the processes were manual in the first six months, the platform was already with 150 registered goalkeepers and performing an average of one match per day. The automation provided the founders with time to generate actions and solutions to approximate the relationship with goalkeepers, besides expanding the idea to other locations in the metropolitan region of Curitiba. One of the initiatives was to develop a

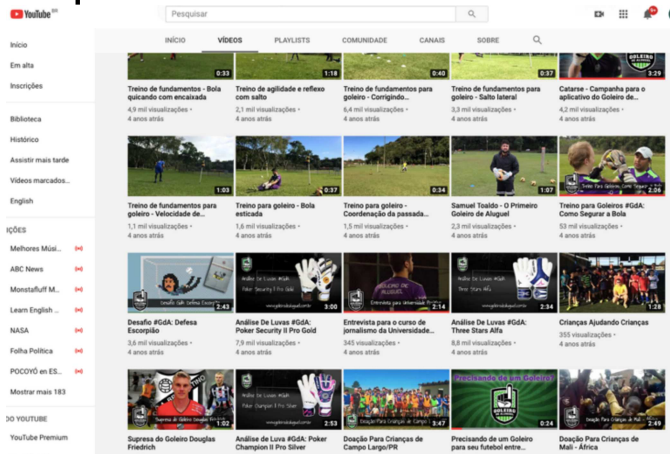
standard uniform for goalkeepers' rental with logo, brand and the electronic site address, so that they could be recognized in the fields and football courts.

In the process of developing the solution, a blog and a YouTube video channel were integrated into the platform. The blog had the function of providing relevant content about the world of football, with tips from "goalkeepers to goalkeepers". The blog content was aimed at goalkeepers, with issues related to how to take care of equipment, technical tips, interviews and stories about exponents of the position in national and international sport. The YouTube channel aimed to provide videos of interviews with the founders, videos of social actions and videos to invite football teams to rent a goalkeeper. Both solutions were integrated into the initial menu of the website to strengthen the relationship between goalkeepers and contracting teams. Figure (26) shows the first blog posts.

Figure 26 – Goalkeeper’s first blog posts



Figure 27: Goalkeeper’s first videos made available on YouTube channel



Following this strategy of getting closer to the goalkeepers and teams, match statistics, goalkeeper ranking, and an online service chat was developed and made available. This match statistics served as support, with information for goalkeepers and teams. The ranking aimed to create competition and involve goalkeepers with the quality and efficiency expected by the contracting teams. On the other hand, the online service via chat gave agility and simplicity to the communication between goalkeepers and teams. The speeches of the entrepreneurs / founders highlight these actions.

The ranking was developed to retain the teams and make the goalkeeper our service partner. The goalkeeper and the contracting team receive monthly information on the ranking and matches, whoever rents the goalkeeper evaluates with this score on the website, and then we automate everything in the application. The incentive to involve goalkeepers is to award sports equipment (gloves, t-shirts, bags) to the best in the region and the country. E14 (entrepreneur/founder)

Our idea with online chat and direct messages was to integrate channels and make access easier and simpler, to connect users anywhere and anytime, in addition to having a more quality interaction. E18 (entrepreneur/co-founder)

Figure (28) shows the ranking of goalkeepers with information about the matches.

**Figure 28 – Goalkeeper's ranking tool**

Pos	Nome	Cidade	Estado	Jogos	Pontos
1	Gustavo Peyerle De Oliveira	Curitiba	PR	18	404
2	Charles Guelff Alves	Osasco	SP	11	287
3	Jayson Fabio Da Silva	Curitiba	PR	10	236
4	Juliano De Quadros	Curitiba	PR	6	174
5	Roberto Conrado Da Silva	Curitiba	PR	7	167
6	Samuel Toaldo	Curitiba	PR	10	140
7	Jacimar De Jesus Sousa	Curitiba	PR	6	131
8	Marcelo Do Amaral	Curitiba	PR	6	130
9	Diego Ercole	Curitiba	PR	6	118
10	Caio Henrique Villapol	Curitiba	PR	4	108
11	Claudio Felipe De Franca	Rio de Janeiro	RJ	5	105
12	Eric Ferreira Schatz Carmel	Curitiba	PR	5	90
13	Marcus Vinicius Fovali Marsulo	Curitiba	PR		
14	Wagner Tadeu Ribeiro	Curitiba	PR		
15	Bruno do Nascimento	Curitiba	PR		

Thus, developing other support solutions for the platform took place from February 2015 to July 2016. In the first year of the development of the platform, the founders executed together all technical, operational and management activities. On the other hand, the initial financial returns were reinvested in these developments, social actions and some actions to attract goalkeepers and teams through the Facebook social network. In the first half of 2015, the two partners decided to conduct



a collective financing campaign through the Catarse.me platform to finance the development of a mobile application. In this way, this mobile application had the objective of automating the registration and summons processes through mobility, agility, precision and simplicity. The figure (29) presents the application development proposal.

**Figure 29 – Goalkeeper’s app development proposal**



Although this initiative was exciting, it did not get the expected return. Therefore, in October 2015, entrepreneurs decided to invest their savings and revenues from the matches in hiring a company specialized in application development. The partners were expected to deliver the first version of the application in January 2016, but the delivery did not occur. In April 2016, the entrepreneurs decided to close the contract with this company, accounting for a loss of seven months of waiting and R\$30 thousand reais. During this period, they were invited to participate in the Shark Tank Brasil reality show selection process. Thus, for the platforms to be chosen, the founders needed to have a mobile application. As entrepreneurs needed to have the application to participate in the TV program, they looked for specialized people who could help. This search resulted in the recommendation of two developers from Blumenau, with experience and availability. The entrepreneur/founder's commentary details this fact.

A friend commented that he knew a developer in Blumenau who could help us. We sent the developer a PDF document with the application design. He remodeled the front-end and appointed another professional to improve the graphic design and interaction [...] as we needed the application for the television program, we took on the challenge. With the help of both developers, in just 20 days, we had a working version to test. With this application, we went to the Shark Tank and got an investment of 300 thousand reais. Then, the two developers became partners of the company and became

responsible for all aspects of development, technology and data intelligence.  
E14 (entrepreneur/founder)

The technical partner's interest (E15) in participating of this project explains some relevant points in this process.

I noticed that the solution was interesting to solve the goalkeepers' relay problem. I always liked applications that promote this empowerment of people to control their time and income. Friends who are keen to be goalkeepers say that the money is cool, but many say that sometimes it's not the most important thing because they consider themselves part of a much larger community than the football match. E15 (technical supporter)

Therefore, to define the scope of application development, the two technical supporters (E15 and E16) needed to understand the manual processes and functionalities existing on the web platform. The scope of development chosen was an application for the Android operating system. This choice was due to the more meaningful existence of smartphones with this system between goalkeepers and contracting teams participating in the platform. The definitions related to the characteristics, functionalities and interaction design were intended to give agility and precision to the teams' calls and involve goalkeepers with the categories and ranking. The speeches of the two technical supporters describe these definitions.

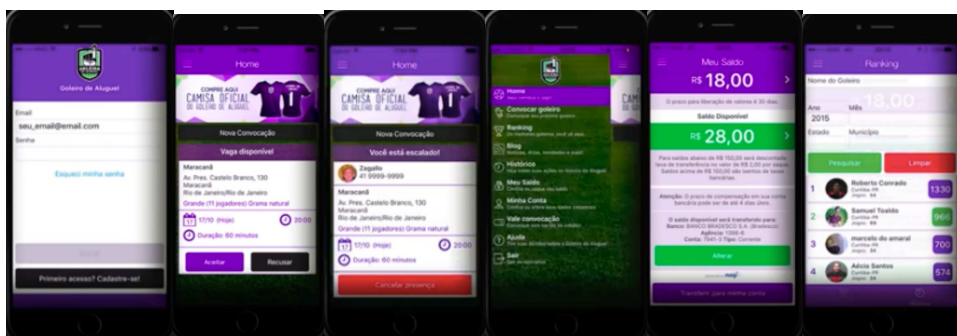
We develop simple, automatic and worry-free processes for the people of the contracting teams. The initial idea was to develop an application like Uber or Airbnb. In this process, the person from the contracting team registers with their personal information and card data only once and no longer needs to worry about the next calls, because everything is safe and secure. Moreover, it has a function for relationship and communication between goalkeeper and teams, to define details of the call and departure. The credit card charging function and direct communication between goalkeepers and teams did not exist before on the site, and in WhatsApp, it took a lot of work to control and manage. E15 (technical supporter)

My initial idea was to understand the manual process and then understand the demands. The application needed to have automatic processes, so simple paths were developed in the same logic of applications like Uber. The interaction design was designed to support users' actions in a few clicks; in a simple, intuitive and agile way [...] I also highlight the integration performed with the groups' Facebook communities, notifications and segmentation by proximity and neighborhood using geolocation. The idea was to deliver the best user experience for the contracting team and goalkeeper functions such as game ranking, behavior, indications and actions in the gamification logic. E16 (technical supporter)



In August 2016, the operational version of the goalkeeper application was released. Thus, this first version aimed to improve existing relationships with goalkeepers and teams, through tools that refer to a precise, agile, intuitive interaction. Figure (30) presents this first version.

**Figure 30 – Goalkeeper's app first version**



Therefore, this process of developing the platform with its solutions took approximately one and a half years. In addition to developing the platform on the Internet (website, blog and app), pages on Facebook, Linked-in, Youtube and Instagram were also designed. All communications with registered goalkeepers took place through the WhatsApp messaging application. During this period, an online store was also launched with exclusive sporting goods for goalkeepers. On the other hand, the solutions developed supported the first relationships between the almost 435 registered goalkeepers and the more than 500 contracting teams. Thus, the platform, with its resources and tools, integrated new processes to improve visibility, engagement and the relationship between goalkeepers and contracting teams.

### 5.2.3 The platform's action to establish relationships between goalkeepers and contracting teams

In 2017, there was a milestone for the development of new recruitment processes to establish relationships with goalkeepers and contracting teams. The first approach came after the founders participated in the television program Shark Tank Brasil, aired on Bandeirantes in December 2016. On the occasion, the founders presented the platform and the proposal to attract investments to expand their operations to other Brazilian states. The initial order of the entrepreneurs was an

investment of 250 thousand reais for 10% of the platform / business. The presentation showed the interest of Polishop and Topper investors. The investors suggested an investment of 300 thousand reais for 50% of the business, accepted by the partners. Participation in the television program is shown in figure (31).

**Figure 31 – Goalkeeper in Shark Tank Brazil**



Thus, with the financial contribution and support of new partners with technological and marketing expertise, the Goalkeeper Rental platform began expanding. These first steps were to invest in new tools and functionalities for the website and the application. During this period, the investment in digital media actions stimulated the registration of goalkeepers and drew the contracting teams' attention. With the exposure resulting from participation in the television program, there was a great demand for goalkeeper excellent other states. The new goalkeepers began a process of expanding the community of teams in the southern and southeastern states of Brazil. The goalkeepers' speeches express this recruitment process.

I heard from a friend who was already using the service. First, I searched on google and accessed the founder's fan page on Facebook. Then I read the comments on how it worked, signed up and started the activity. The application helps to meet people from the goalkeeper community and the teams provide extra income. E19 (provider/goalkeeper)

I played a day in a field in Porto Alegre and saw a different poster. I was curious and looked for more information on the Internet. I found a Shark Tank video about entrepreneurs and the platform. The following week I downloaded the application and registered. I was called up the same day I played as a rental goalkeeper. E35 (provider/goalkeeper)

These first moves generated more than one game per day, increasing more than 100% in the goalkeeper's record. The goalkeepers in this process became partners of the platform, carrying out actions to publicize the platform. In May 2017,

more than 1,000 goalkeepers were qualified to play in games in the five states of the country. Some contracting teams became aware of the platform due to the joint effort of the platform with the unintended disclosure of goalkeepers. Some contracting teams comment.

I watched for the first time a report by the goalkeeper / founder in the newspaper on Florianópolis television [...] later, another group that played on our court recommended the goalkeeper services through the application. We talked to this group that recommended the goalkeepers and the app. We decided to download the application and in the beginning everything was very easy, fast and intuitive. Access was quick and practical to call a goalkeeper. E41 (consumer/contracting team)

I found out through other teams and later through internet searches, after exchanging messages via WhatsApp in groups of amateur players who recommended the service for its practicality and quality. With this recommendation, I downloaded the application and registered. Thus, the rental goalkeeper solved the problem of the team and also the payment of the field, because he has a virtual wallet, in which we put the credit and we can call the goalkeeper and plan the costs of our matches. E32 (consumer/contracting team)

Therefore, the recruitment of goalkeepers and new teams took place through word of mouth actions between groups of messages via WhatsApp, the Internet and spontaneous media. In addition, the founders participated in many interviews for television, radio and Internet portals. The following figures (32 and 33) exemplify some of these interviews.

**Figures 32 and 33 – Goalkeeper founder's interviews**



Thus, new investments were made, such as the lease of a space in the cooperative village of Curitiba. In addition, an intern and an advertiser were hired to assist in online and offline actions. During this period, a contract was signed with the

sports equipment company TOPPER, to make the products available in the online store. Figures (34 and 35) characterize these events.

**Figure 34 and 35 – Goalkeeper's office and sponsor**



These founders' initiatives and the spontaneous media received through various media brought people together from different corners of the country. Many goalkeepers became partners and disseminators of the idea of the platform fostering community and service. Many have conducted interviews, and others have used their social networks to promote the platform and its services. For example, figures (36 and 37) characterize these two goalkeepers' actions from different regions of the country. The first travels over 200 km to play ball and participate in the community, while the second promotes services in his city.

**Figures 36 and 37 – Goalkeeper's providers online posts**



In the first quarter of 2018, the goalkeeper rental platform had 2,100 goalkeepers and 1,000 teams registered. The platform received spontaneous advertisements on various media channels across the country. At this time, the founders decided to hold a workshop for the community of goalkeepers and contracting teams. Two participants highlight this workshop.

I rent goalkeepers through the app and website. Earlier this year, I was invited to participate in the goalkeeper workshop. Participants received discount vouchers and some gifts. At this event, we were invited to give tips and we saw some actions taken by the application team to seek these stimuli and engagements with the teams and goalkeepers. In our specific case, as a contracting team, some notifications alert about the points and promotions of the loyalty program for calls and purchases in the sports equipment store available in the app. E41 (consumer/contracting team)

This workshop was good for meeting other colleagues and being able to participate in the event with tips. I was invited to speak with the new goalkeepers from Curitiba and some from Porto Alegre. In Porto Alegre, I am an elite goalkeeper and participate in several events and interviews, representing the goalkeeper rental, a kind of spokesperson for the application and service in my city. E31 (provider/goalkeeper)

Figure (38) show how this first workshop was attended by goalkeepers, teams, technical supporters, sponsors and founders.

**Figure 38 – Goalkeeper's first workshop**

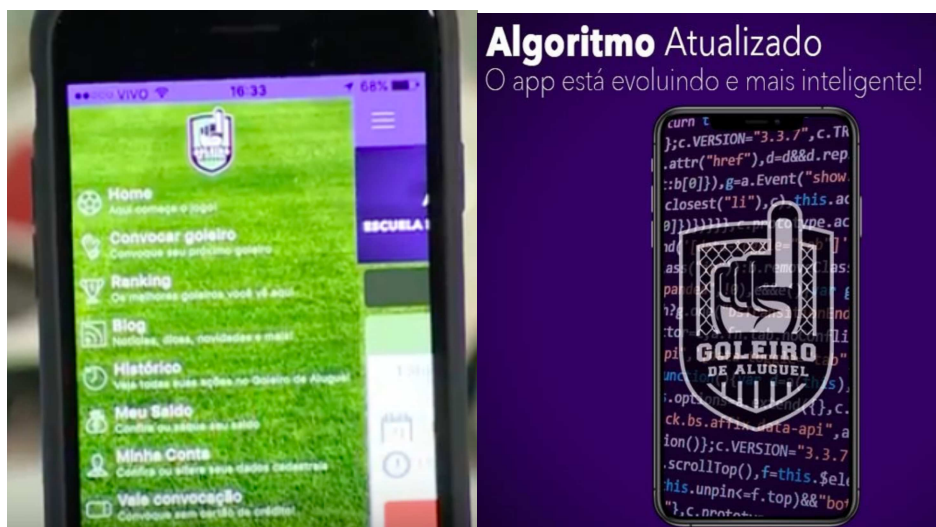


In this workshop, lectures were given with goalkeepers and teams that had a more constant participation on the platform. Goalkeepers who played more than 100 matches through the app received promotional t-shirts, goalkeepers with fewer goals and complaints received gloves, and the national goalkeeper received two pairs of gloves, cleats and a trophy. The idea of the workshop was to bring the community of goalkeepers and teams together, making everyone ambassadors for the platform. In this case, a new version of the application was launched, with an update of the



algorithm's resources. Figures (39 and 40) present this update of the search, segmentation and games algorithm.

**Figures 39 and 40 – Goalkeeper's app update with new algorithm**



Thus, these updates, added to the disclosures made by the community, provided new spontaneous exhibitions in the media, such as interviews in the Globonews Studio I, newscasts of TV Educativa and Jornal Nacional of Rede Globo. This movement of interviews was driven by goalkeepers and teams with exposure in Sports Portals such as TV Esporte, Jornal do Brasil and Terra. At the end of 2018, one of the platform's goalkeepers gave a lecture at the ColaborAmérica event, telling a little about his experience of participating in the community. The following statement describes this experience.

The Goalkeeper Rental is very good for my life, because I'm managing to participate in events, and I'm the ambassador of the application in my state. The best thing about it is to show that there are other possibilities to receive money. Here in Rio, we are already thinking about expanding the community to other locations and segments. Besides, the application increasingly understands or helps us make people understand our purpose. We are listened to, and when we put tips in the suggestions link, we always get feedback from the app or the company's WhatsApp group. E13 (provider/goalkeeper)

Therefore, the actions carried out between 2017 and 2018, with the goalkeeper communities and teams, took the platform to a level of 3,500 registered goalkeepers in 7 states of the country and 1,500 matches played per month. In this process, many other goalkeepers and teams used the platform, which started to bring more fans closer

through its functionalities and resources. Some goalkeepers and contracting teams describe this process.

I was most impressed with the Uber-like location or geolocation function. The registration at the time I joined the community did not have the profile quiz, now, this improvement helps us in ranking and segmentation. E34 (provider/goalkeeper)

I highlight the range of options you have on the website and app. There are a lot of people registered as goalkeepers divided by region, skills, games, profile and categories. I was very impressed with the options and choices. In the new version, it is interesting that you can redeem the data from the previous call. The application saves in the history the goalkeepers called and blocked [...] the whole process is very interactive, intuitive and connects us with other teams and other goalkeepers in a large group of people or community that likes to play ball weekly. E32 (consumer/contracting team)

The first thing I noticed was the practicality of the service. Everything is very practical, simple, fast and intuitive. The service works very well, the only problem was at the beginning, with few matches per day, but that later improved with the work of communicating with us, through social networks and the communications campaign out by the application with the notifications. E40 (provider/goalkeeper)

In this way, the initiative to update the website and the application resulted in greater proximity between the community of goalkeepers and teams, who understood the proposal to make this version an even more friendly and simple vision. Thus, the process was based on two paths to which paid and spontaneous digital communications were aligned with the technical part and make the platform easier, and more intuitive to bring relationships between goalkeepers and teams closer together. Hence, the platform became more relevant in this amateur football group.

#### 5.2.4 Establishing relationships between goalkeepers, platforms and contracting teams

The actions of the digital artifacts (website, blog, social networks, messaging tools, spontaneous and paid digital communication) were making the platform better known and closer to its community. By the beginning of 2019, there were more than 4,300 registered goalkeepers and thousands of matches played. The actions of establishing these relationships between the goalkeepers, platform and contracting teams made the collective and mutual relationships between the participants. The community participated with ideas and effort together with the founders of the platform

to develop a new communication campaign. This campaign was carried out to publicize and strengthen relationships with new and regular consumers and service providers. Figure (41) presents this campaign launched on social networks, websites, apps and digital media in the first quarter of 2019.

**Figure 41 – Goalkeeper’s digital marketing campaign**



In this communication process, new sports materials were also developed for goalkeepers. A new t-shirt was launched to highlight the importance of technology in the quality of service provided by goalkeepers (figure 42).

**Figure 42 – Goalkeeper’s new t-shirt**



Another initiative was the launch of the new ranking model among goalkeepers for engagement, loyalty and exchange of points. This ranking became more robust, in line with the behavioral actions and attitudes of goalkeepers before, during and after the matches. Thus, a segmentation system was developed to support this process and to orchestrate the division and categories of goalkeepers. Figure (43) shows it.



**Figure 43 – Goalkeeper's new ranking model**



In this way, collective action between goalkeepers, platforms and teams were established to share experiences, service and business. Increasingly, goalkeepers felt part of the community and became relevant to new teams' connections in the generation of matches. Some commentaries present this cooperative union.

The goalkeeper community is very nice, we have groups on WhatsApp, we exchange game tips, and we have barbecues to celebrate the gains generated by the rankings. The app unites goalkeepers and teams that like to play ball. The application's tools and solutions made it easy for us to connect, communicate and engage [...] we do this because we like and improve our amateur matches with the help of the available digital information and resources. E38 (provider/goalkeeper)

We use the community to analyze the rankings and to create a more serious competition. These tools are great in this process and make the user experience intuitive with great efficiency and quality. Also, the platform intelligently coordinates the competitions between goalkeepers and teams with prizes, categories and ranking. The best of this community is to be able to participate in events, hold lectures and meet new people. E13 (provider/goalkeeper)

These classification and segmentation tools among goalkeepers brought a competition to the community, which added quality and cooperation between the participants. For the goalkeeper / founder (E14), "The ranking aims to give more quality to the goalkeeper's services and generate competition for the improvement of quality, through attributes evaluated by the teams before, during and after the matches". This assessment includes speed in answering the call, uniformity of the goalkeeper for the game, behavior of the goalkeeper towards his teammates, goalkeeper technique and offer of new services. Figures (44 and 45) exemplify this monthly ranking.

**Figures 44 and 45 – Goalkeeper's monthly ranking**



Consequently, evaluation and recommendation tools were the basis for the development and maintenance of the monthly ranking. The goalkeepers themselves stimulate the teams' evaluations, which use this tool to choose new goalkeepers with better ranks. This qualification process helped to develop the segmentation of goalkeepers between new, experienced and elite. This segmentation provided collaboration and competition between goalkeepers and teams. The following statements highlight the use of this mechanism.

We use the tool because you have to evaluate the goalkeeper. This generates points for the goalkeeper and helps in the ranking of points and prizes in the application. We do this because the goalkeeper needs these points to go up in the category. This way, we improve the quality of everyone involved in the community. E39 (consumer/contracting team)

The evaluated items are important for the ranking and the categories. For example, the technical parts, the goalkeeper's personality, the use of the uniform, punctuality are four elements that we are evaluated that demonstrate the character of the goalkeeper. Thus, the person responsible for the contracting team can rest assured, because he has certain security for efficiency and quality of the match. E37 (provider/goalkeeper)

To illustrate, figure (46) demonstrates one of the notification actions carried out by the application for goalkeepers and teams. These electronic communications serve to bring the community closer together and make the platform more relevant to this sports group.

**Figure 46 – Goalkeeper’s notification action**



Some comments from goalkeepers and teams characterize the importance of these automatic notifications of communication from the platform.

I used these discount vouchers to hire another goalkeeper. This is an intuitive and intelligent process provided by notification. This system is very easy to use the coupon, which also appears in the match's memory and timeline. When we do not call a goalkeeper in a week, because we did not have a game scheduled, the application encourages us sending tips, content, discounts and information. This mechanism encourages the calling of goalkeepers at a good discount. E36 (consumer/contracting team)

Yes, I already made it available to those teams that I play weekly and to new ones. For example, there is a team that I have been playing for more than a year with the same group. Whether they want to go ahead or not, they will always have more discounts with me. This generates a joint action between us, so we win together with the benefits of the application. E34 (provider/goalkeeper)

This relationship process between those involved with the platform (goalkeepers and teams) brought new partners to this community. For example, a glove sponsor and a goalkeeper jersey sponsor. Figures (47 and 48) show these partners / sponsors.

## Figures 47 and 48 – Goalkeeper's sponsor partners



Therefore, the relationship between goalkeepers, platforms and teams resulted in the second goalkeeper workshop. This event was organized through a survey between goalkeepers and teams through social networks and the application. Figures (49 and 50) highlight the event.

## Figures 49 and 50 – Goalkeeper's second workshop



Thus, engagement actions with the platform have made relationships between goalkeepers and teams. Many use the platform to meet friends, participate in events, give lectures, and fulfill a childhood dream of being a football player. Besides, the gamification system has developed closer relationships through the exchange of knowledge through tips and experiences. The founders and the platform knew how to use this process to recruit new partners, supporters and players, making the whole process action of consumption and shared service. Figures (51 and 52) show this

process, in which two goalkeepers receive t-shirts with the numbers 1,000 and 500 of participation in matches through the goalkeeper platform.

**Figure 51 and 52 – Goalkeeper's online posts**



#### 5.2.5 Summary of actions and events of the goalkeeper rental project

The good technological and social practices, generated by the established relationships, developed collectively consumption of services, bringing new allies to the community and the platform. This detailed schedule mentions the effects of development, implementation, relationship building, and the diversity of actors involved in the project. The research efforts were to map and detail the platform's relationships with goalkeepers and contracting teams. These efforts sought to understand how the relationships between the actors were established to support digital solutions and actions by entrepreneurs and technical supporters. The stages of forming the relationship of this and its allied solutions (application, blog, YouTube channel, Facebook profile, Instagram and WhatsApp app) are marked by a relationship dynamic that involves entrepreneurs, technical supporters, investors, goalkeepers, teams, sponsors and media channels.

In addition, the case description is marked by a complete detail of the processes and relationships that occurred between human and non-human actors. These relational processes and movements managed to establish continuous relationships between goalkeepers, platforms and teams. The support stages of the rental goalkeeper platform maintain a process marked by several events. Many of the



solutions, tools and channels developed involved the proposal of the entrepreneurs, the platform and the goalkeeper community, generating attitudes that exceeded expectations. Topper's investor discourse characterizes these practices and results.

I highlight the main objective of the platform, for example, you visualize the name, the design and can understand its use and purpose. For those who are amateur soccer players, the platform represents a facility that connects the community of amateur players. Common today in the main capitals of Brazil, you already enter the football complexes and see someone with the shirt of the goalkeeper for hire. This process radiates, brings energy and benefits to the business and the platform. I believe that the fact that entrepreneurs have developed a platform that directly addresses a routine need in a simple, interactive and intuitive way is the key to the success of the platform, the service and the business. E43 (Topper's investor partner)

Thus, establishing relationships between all those involved with the project took place in a continuous, stable and collective way. The founder and investors believe that this process occurs due to the platform's purpose of engaging the community of goalkeepers and amateur football teams. The stimuli, bonds and relationships occur with the platform, which conveys meaning to the player community's goalkeeper activity. Goalkeeper Rental generates this proximity with the players through its solutions, functionalities, design and support tools online and offline, such as uniforms, posters, spontaneous and paid media. An example of this engagement with the platform's purpose can be found in the various spontaneous interviews, which the founders conducted in 2015 until the researcher left the field in September in 2019. Figure (53) exemplifies one of these interviews conducted in September 2019, for the Globo News television with national coverage.

**Figure 53 – Goalkeeper founder's interview**



Therefore, the network was consolidated, involving everyone in the establishment of relationships to share services with sports talents. For the entrepreneur / founder (E14), "the participations are recurrent, because the goalkeepers receive recognition through the classification, while the players solve the problem of relaying the matches. These matches became more competitive and with more quality for everyone", affirmed the founder, in the last statement in May 2020. Thus, the description of the case presents the actions and events that occurred in the establishment of relationships between platform, goalkeepers and contracting teams. This dynamic is based on the ideas, solutions, tools, functionalities and spontaneous communications provided by the platform, technical supporters, goalkeepers and teams. From January 2015 to the beginning of September 2019 (field trip), there were several situations at different times in the project for the full and collective performance of the actors. Table 9 chronologically describes a summary of the actions and events carried out.

**Table 9 – Chronological overview of actions and events - Goalkeeper Rental project**

Dates	Overview of actions and events.
Idealization stage and start of the Goalkeeper Rental project	
Jan/15	The Goalkeeper Rental Platform is idealized and designed. First disclosure of the platform through the founder's fan page on Facebook. Realization of the first ten matches as a rental goalkeeper. Provision of a direct WhatsApp communication channel between the founder and goalkeepers for calls and hiring.
Feb/15	Participation in interviews for local radio and TV channels in Curitiba/PR. Participation in the startups fair in Curitiba at ExpoUnimed.
Mar/15	Spontaneous recruitment of the co-founder by the platform. Beginning of the actions with the goalkeepers through the message tools.
Stages of development and implementation of the platform project	
May/15	Start the development of a website in the Wordpress tool. Start platform development (website, app, and other solutions).
Jun/15	Creation of Goalkeeper's brand. Launch of the website with forms and spreadsheets for registration. Realization 30 matches/month, an average of one goalkeeper rent per/day.
Jul/15	Launch of the Goalkeeper's blog to provide content related to football matches to bring the relationship with goalkeepers closer. Launch of the Goalkeeper channel on Youtube to provide content, testimonials, and videos for involvement with the community of goalkeepers and contracting teams.
Oct/15	Participation in television and radio programs spontaneously. Expansion of the Goalkeeper to cities in the metropolitan region of Curitiba. Start the fundraising process for mobile application development.
Nov/15 to Apr/16	Development of the first version of the application. Participation in Campus Party Brasil - SP. Interviews for the Globo TV (JN) and Record TV (Record News). Closure to the contract of the company that developed the application.
Mai/16 to Dez/16	Invitation to the selection process for the Shark Tank Brazil program. Finalization of the application development and operational launch. Participation in the Shark Tank Brazil program.
Stages of establishing relationships between the platform, goalkeepers, and teams.	
Jan/17	Expansion of the partnership with two new partners with experience in technical and commercial development (Polishop and Topper). Launch of a new version of the website and an online store.
Mar/17	Rental of the space in the coworking village in Curitiba city. Reaching 1,500 registered goalkeepers and 500 teams on the platform.
Jul/17	Start of sponsorship and partnership with Topper on online store. Interview for a television program - Small companies' big business. Expansion of the platform to southern and southeastern states.
Aug/17 to Dez/17	Conducting online and offline media actions (banners on soccer fields). Increase of the team to support customer service and digital marketing campaigns.
Jan/18	The first workshop of goalkeepers and contracting teams. Reaching 2,100 goalkeepers and 1,000 contracted teams.
Mar/18	Release of a new version of the application with a unique interaction and graphic design. Update of the geolocation algorithm, summoning, and categorization of goalkeepers.
Apr/18 to Oct/18	Reformulation of social network communications. Participation in several interviews with national coverage. Reaching more than 3,500 registered goalkeepers and two matches per/day.
Nov/18	Lecture participation at ColaborAmerica in Rio de Janeiro.
Jan/19	New digital identity for the application and website. Launch of a new digital campaign with the participation of the most active goalkeepers in the platform.
Feb/19	Launch of the High-Tech T-shirt to goalkeepers.
Mar/19	Second workshop with goalkeepers, teams, and entrepreneurs.
Apr/19	Updating the ranking with the point's gamification and loyalty system for goalkeepers and contracting teams.
Jun/19	Start of the partnership with POKER glove and new sponsorship in the PIPEFY T-shirt.
Aug/19	Reaching of the 12 thousand registered goalkeepers and 14 thousand teams with more than five games played per/day in 7 states in Brazil.
Research field exit	
Oct/19	GloboNews- founder interview - The best of Brazil is the Brazilian

**Source:** Created by the author



## 6 TRANSLATION CASES

Translations phases refer to the variety of steps and paths by which human and nonhuman actors seek to persuade others and enroll them into an irreversible alignment with an existing or prospective network. Thus, to Callon (1984) “moments of translation”, are the four phases in the translation process: problematization, *intéressement*, enrollment, and mobilization. The problematization is the first phase of the translation process; in this phase, the nature of the problem is defined, and the roles of actors are defined, so that other actors adapt to the proposed objectives and interests. *Intéressement* is the second phase of the translation process that the principal actor establishes the attraction and convinces other elements to participate in the proposal of the problematization. In the final, problematization phase, and the first moment of the *intéressement* phase, they have developed incentives for the actors to deviate from their paths and go through the PPO stipulated by the main actor (SHIN, 2016).

The third phase is enrollment; at this moment, there is an alignment of interests between human and nonhuman elements in a network. Mobilization is the final moment of the translation phases. Thus, the mobilization occurs when the solution proposed in the problematization phase gains acceptance between the actors. In this last phase, the various actions and some spokespersons, supposedly relevant, can speak on behalf of all, providing a collectivity (CALLON, 1984; LEE et al., 2015). Through these translation phases, actors attempt to create a forum or a central network, in which all of the actors agree that the network is worth developing and stabilizing (CALLON, 1984). Besides that, all actors need to pass for an obligatory passage point (OPP). OPP is the path chosen by the main actor, concerning the pursuit of his interests. Thus, other actors may be required to overcome certain obstacles in the network to get through the OPP (SHIN, 2016).

Therefore, this chapter analyses the four translation phases of the two cases researched in this thesis. Following this approach, the next two sections seek to describe, detail and interpret the inductions, connections, mediation, and flattening relationships in consumption and service in the sharing economy context.

## 6.1 The Translation Process - Pet Kennel Rental Platform

By adopting an ANT framework, this research describes and translates the activities, movements and interactions of the actors involved in the development of the pet kennel rental platform's project. Table 10 shows the translation phases performed, detailed and interpreted in this empirical case.

**Table 10: Analysis of the translation phases of the Pet Kennel Rental platform**

Translation phases	Translation phases description	Interpretative detailing
Problematization	This phase defines the questions of how and why to "facilitate the sharing of hosting and care for pet".	It describes how and why human and non-human actors were induced, connected, mediated and leveled by sharing hosting. This phase identifies and details the motivations, functions and objectives of these actors.
Intéressement	Stage that the main actors (entrepreneur/founder and platform) seek to convince, attract and establish relationships with the "pets' lovers" providers/caregivers and consumers/tutors of the pets).	This stage details how caregivers, tutors, technical supporters, co-founders, investors and traditional media were attracted and encouraged by the main actors in the network (entrepreneur/founder and platform) to deviate their paths through the mandatory crossing point for reaching relationships by means of; <b>Interests, extra incomes and playful care for the pets.</b>
Enrollment and Inscription	Phases of explaining how the actors' objectives were achieved. How the various attempts to engage the actors (caregivers, tutors, platforms, digital media, technical supporters and partners / investors) took place in consumer relations and sharing service for pets.	This phase reflects the negotiations, registrations and involvement between the heterogeneous actors in the relations of consumption and sharing service through: Digital communication actions and digital mechanisms to promote accommodation and playful care for pets.
Mobilization	This phase explains how the main actors (entrepreneur / founder and platform) mobilized the community of providers / caregivers and how they were unable to mobilize the community of consumers / tutors to participate in the consumption and service relationships of sharing hosting and pet care.	Details of how the paths for conducting inductions, connections, mediation and flattening of relations between the actors of the collective consumer network, technology, service and business actors were accepted. Through the mobilization spokespersons; Digital communication tools, platform features and financial benefits for caregivers.
OPP: Obligatory Passage Point	Path chosen by the main actors (entrepreneur / founder and platform) to simplify and facilitate the processes of accommodation and care of pets.	This point highlights the paths determined by the main actor (s) for the other actors involved in the consumption and service relationships they represent; Digital media, facilities and platform features.

**Source:** Created by the author

### 6.1.1 Problematization

During the problematization stage, the main actor determines possible problems, controversies, decisions and relationships (LEE et al., 2015; SHIN, 2016). In this phase of translation, the facts, events, questions and decisions of the main actor(s) are presented to define a problem (CALLON, 1984). In the pet kennel rental platform, the decision to be solved is related to its founder's question: How and why "to facilitate the sharing of pets hosting"? The entrepreneur/founder's motivation arose from a personal need to have accommodations for their pets when traveling for work and outings. The goal was to propose a different application from the traditional hotel services for pets already on the market. "Toca de Aluguel" intended to approximate, facilitate and reward people who had or liked pets by providing tutors with a feeling of affection and trust. "My idea was not to show a hotel's cold relationship, but a relationship of sharing affection and personal care." (E1) (entrepreneur / founder)

To develop this relationship with providers / caregivers and consumers / tutors, the entrepreneur sought to carry out digital communication actions, presenting the playful attributes of feeling, comfort and trust. Thus, the entrepreneur / founder and the platform aimed to make connections with the consumption and service actors through digital communication resources external to the platform. Consequently, to stimulate connections between providers / caregivers and consumers / tutors, the entrepreneur invested financial resources in digital communication actions, with paid content and advertising on social networks, digital media portals and platform resources. In this sense, the inductions occurred directly and indirectly to seek a relationship between consumers and service providers.

To improve the bonds and relational stimuli between caregivers and guardians with the platform's proposal, to offer accommodation and affective care for pets, some decisions were made by the founder, such as developing a fan page, a website and partnering with two caregivers of animals. The speech of the entrepreneur / founder highlights this initiative.

I knew the DogHero platform, a market competitor with national scope, but which left something to be desired for not accepting cats. Doghero also had the problem of being a national platform, not focusing on the tradition of each region. My initial idea was to develop some applications in the same format, but with acceptance of all types of animals, especially cats, with a local

position. The focus should be on people who like pets, facilitating and involving local communities. E1 (entrepreneur/founder)

Therefore, the founder's goal was to develop and structure a digital platform to become a facilitator close to the communities of "pet lovers" (caregivers and tutors). The first movements of the entrepreneur/founder connected caregivers, co-founder, technical supporters and partners/investors, who helped in the initial process of development and implementation of the platform. The heterogeneous network was developed from human actors (founders, caregivers, tutors, technical supporters, and partners/investors), and nonhuman actors (fan page, website, blog, Youtube channel, WhatsApp groups, social networks, smartphone application, Instagram profile). For this, the pillars of affectivity, practicality, proximity and trust were used as differentiation.

Affection was related to the feeling of affection, that is, the idea was to leave the animal in the care of people who liked pets and who were also animal tutors. Practicality and simplicity related to the simple processes of connecting or creating links between caregivers and tutors. The practical and direct way was developed through some steps, resources, systems and bureaucracies to generate connections between caregivers and tutors. In turn, the strategy of proximity and trust was related to linking and encouraging people close to the community with the same affective and confident profile with pets. These strategies were used to connect and induce new caregivers and tutors to use or be part of the pet lovers' community, which used the "Toca de Aluguel" platform in Porto Alegre. The first ways to connect and induce these consumers and those interested in the service were through digital communications and content dissemination through WhatsApp messaging groups, social networks and digital media.

The Internet, social networks and digital media were essential players in the first connections between the caregivers and the entrepreneur/founder and platform. Profiles on Facebook, WhatsApp and Instagram and social networks were essential as nonhuman elements to promote the first relationships between the actors involved in this sociotechnical network. Digital media was paid for and driven by the entrepreneur/founder to support the platform. This action was essential to stimulate or induce caregivers to the platform proposal. For the interviewee (E24), their link or

connection occurred due to the knowledge of the platform through digital media, in groups of lovers of pets and on the social networking platforms of the internet.

I arrived through an ad that I viewed in a community of pet lovers on Facebook. This ad invited me to be a caregiver [...] I analyzed the proposal and thought it would be interesting to have this activity to generate an extra income. E24 (provider/caregivers)

This promotion stimulated through digital media in the specific groups of people called pet-lovers, connected the traditional media (television, radio, and newspapers) to Toca de Aluguel's proposal. The conventional press helped the founder to disseminate the platform's plan to the target audience - pet tutors.

I heard an interview with the founder on a radio [...] the service seemed interesting because ordinary people who like dogs and cats could take care of, host and disseminate the services through a website and social networks. E28 (consumer/tutor)

The entrepreneur/founder and the first caregivers' initiatives have drawn the attention of technical supporters to the platform, such as professional supporters with experience in digital development, interaction design, graphic design and digital communication. These experiences added to the technical and business skills of the founder. The first connections occurred through the selection for the incubator and laboratory of the Escola Superior de Propaganda e Marketing do Sul (ESPM - South School of Advertising and Marketing). Thus, the supporters provided the founder with knowledge, techniques and experience for the development and implementation of communications, content, actions and relationships to connect and induce other caregivers and tutors to the proposal of the pet platform.

At first, we noticed confusion, so we started to organize the platform's website, fan page and social networks. Then we adjusted the relationship with caregivers [...] this diagnosis generated planning and directed some actions [...] we also conducted a survey with some caregivers and tutors to discover the motivations for access and support with actions, content and design relevant to the platform strategy. E7 (technical supporter)

Although the platform was incubated and developed in the ESPM SUL laboratory, other technical supporters were involved in improving the identity and communication content during the implementation. The founder and his partners

recruited these supporters at a company specializing in digital marketing. The objective of the partners / investors with this action was to highlight the platform's attributes before the target audience (pet tutors) to make the service more known, relevant and an option for this group of consumers. In addition, they highlight the main characteristics of simplicity, practicality and speed of the platform, pointed out by caregivers as a differential. However, this action did not originate new connections (links) and inductions (stimuli) to generate sharing relationships between caregivers and tutors. A technical supporter highlights this moment.

Toca's goal was to connect technology with care for pets through a strategy of digital dissemination. When we started our partnership we realized that all this strategy was irregular, so we started to do something more organized to approach the target audiences (caregivers and tutors) [...] we suggested a strategy with keywords in the Google search engine, because we verified that there were already searches and searches through this channel [...] besides investing in digital advertising, it was necessary to search these tools to understand the behavior of these searches, hiring and behavior of tutors and caregivers. E5 (technical supporter)

The partners/investors were relevant actors for the development and implementation of the platform and the actions of connection and induction with the caregivers and tutors of pets. The first partner/co-founder was invited by the founder to qualify the communications, contents and relationship actions with the caregivers and tutors. The co-founder's goal was to put her experience in digital marketing communication in a business based on a digital platform.

[...] I was invited by the founder to be part of the business at the beginning of his incubation at ILAB. So, my experience helped to develop the first communications and digital marketing actions to disseminate services commercially to caregivers and tutors. E3 (entrepreneur/co-founder)

The partner/co-founder had an essential role in structuring the content for digital communications, such as the launch of the blog, video channel on Youtube and profile on Instagram. All the administration of paid and unpaid digital communication and management of technical partnerships provided the platform with these digital inputs (ILAB, Facebook, ESPM content agency and designers). Thus, this partner/co-founder was essential to develop a close relationship with caregivers, where the goal was to highlight the platform's functional and practical attributes. This movement stimulated or induced the curiosity of the other two partners/investors of the platform. First, the

PESQ1 partner had as motivation "to research, know and finally invest in innovative business." The knowledge of this business, based on a platform, occurred through the communications made through digital and traditional media. Thus, digital communications induced the researcher to analyze the company to propose a financial investment.

This investment for society aimed to bring to the platform more professionalism in management, partnerships and relationship management with caregivers and tutors. Partner PESQ1 recruited the fourth partner to improve digital communication actions to encourage and link new tutors for the generation of pet hosting. The partner (E21) details his interest in being part of this project.

When I heard about Toca's proposal, I was very surprised by the investment and business opportunity [...] I thought it was a great idea, and particularly I didn't know this type of service per application to host and care for dogs and cats [...] I believe that these applications or services that provide this line of business for digital platforms want to solve a problem in a simple, practical and agile way [...] these solutions make links with transparency and frequency, making the relationship very personal and personalized with the target audience. E21 (investing partner)

In setting up this collective network, animal caregivers aimed to make the platform stable and to put it in production to generate their lodging and extra income. For caregivers, the platform provided benefits such as practical communication, functional connection with tutors, bureaucratic and financial solution for generating their business. These benefits were related to the stimulation (induction) and linking of the pet's tutors, through actions such as digital communication, informational content on the blog and functional practices for the management of the accommodation, such as service, payment and relationship between the parties. When setting up this collective network, animal caretakers aimed to make the platform stable and in production to generate lodging and extra income. For caregivers, the platform provided benefits such as practical communication, functional connection with tutors, bureaucratic and financial solution for generating their business. These benefits were related to the stimulation (induction) and linking of the pet's tutors, through actions such as digital communication, informational content on the blog and functional practices for the management of the accommodation, such as service, payment and relationship between the parties.

[...] I believe that I have good support with the processes and functions to be a good service provider. The functionalities both in the application and on the website provide this interaction and relationship both with the platform team and with our customers through chats, WhatsApp and videos [...] another interesting point is the integrated payment with my bank account [...] the registration process, which is also interactive because it has a very simple tutorial explaining everything [...] I also highlight as a differential the insurance for pets. E20 (provider/caregiver)

[...] the platform facilitates the way to generate business with simplicity in one or two clicks [...] now, with the application, the whole process is better, because, with a click on the palm of my hand anywhere, I can manage my account, my remuneration, my customers and I can also exchange messages. The entire process happens in the application, without the use of social networks or emails. Everything was very easy, simple and intuitive. E29 (provider/caregiver)

In turn, pet tutors were able to make an objective search for a caregiver who was affectionate in shared care and welcoming. Through the platform, tutors sought to connect with reputable caregivers, that is, based on useful comments and grades given to the services provided. The connection occurred through the analysis of comments from other tutors, notes and videos available on the platform. Some tutors comment on how they performed these analytical processes for their choices.

The photos and images on the website caught my attention. In addition, the videos with the testimonials [...] I accessed Facebook for more information, read the comments and chat with people who had hosted their pets with caregivers on the platform. The website helped me to find great service. In addition, everything is very functional and easy. The hiring and payment process is very simple; I can use a card or PayPal. E21 (consumer/tutor)

The app's features like recommendations, comments and ratings were essential for my choice. Certainly, finding this kind of service was awesome, because caregivers care for our pets as a family. In addition, service becomes more personal through the platform, which sustains and builds trust. E23 (consumer/tutor)

The platform has been developed with the other support solutions of the hosting and pet care sharing business. During this period, the business brand, a new version of the site, the blog, a Youtube channel, the message groups on WhatsApp, the Instagram profile and the mobile application for smartphones were developed. One partner/investor reports the platform development process.

Looking at the platform's website and online services, I make a parallel with the same hotel service for dogs, but with safer transactions, offered in an easier and less bureaucratic way [...] I believe that automation occurs from the first access, in the register, and then on a daily basis. The solutions and resources act in the loyalty, developing an involvement between consumers

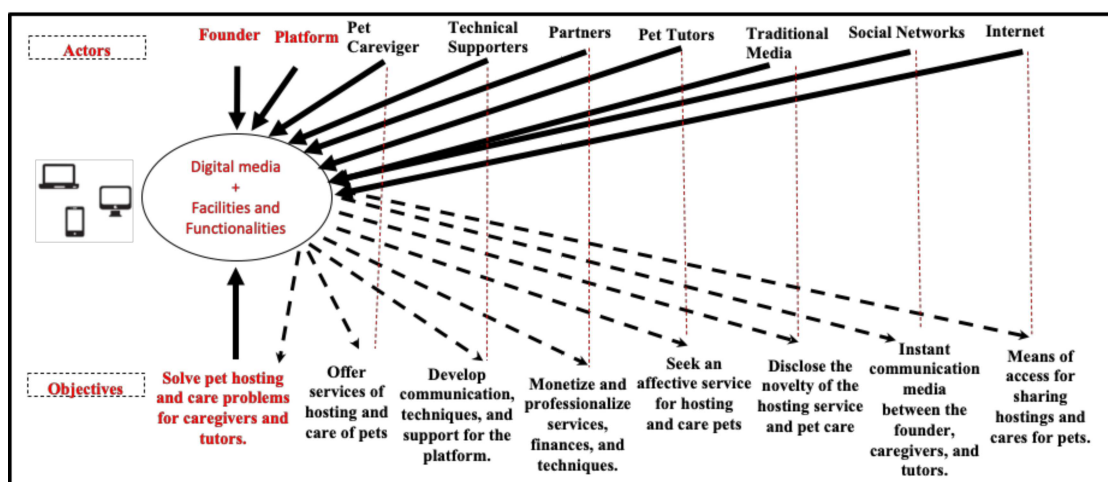


and suppliers. These solutions and resources create reputation, trust and all that involvement. For example, through these tools, we comment, suggest and participate in these communities. E21 (investing partner)

Therefore, the problematization presents the motivation of the entrepreneur / founder to develop and implement this business through the digital platform. The actions of the entrepreneur / founder and the platform established activities for inducing and connecting caregivers, partners / investors, technical supporters, tutors and digital and traditional media. The whole process went through continuous actions of stimulation and contact with caregivers, but they did not have the same intensity of relationship with the pet's tutors.

After identifying the roles of human and non-human actors, with their goals of belonging to the pet lover's network, this study analyzed how and why caregivers and tutors are induced, connected and mediated by the platform. Mediation was represented by the platform's action to convey meanings and senses to the stimuli and bonds established between the actors belonging to the network. Thus, figure 54 highlights the mandatory crossing point for these sharing consumption and service relationships.

**Figure 54: Problematization: obligatory passage points in the Pet Kennel Rental platform**



Source: Created by the author

The figure presents the roles, the objectives of human and nonhuman actors, and the network's crossing points. The actors belonging to this network needed to go through the path chosen by the main actors (entrepreneur/founder and platform) to achieve their objectives. Thus, to fulfill their goals, each actor was convinced, attracted

and stimulated directly by the digital media and platform functionalities. These OPPs facilitated the resolution of the problem of hosting and care for pets.

The digital media associated with the functionalities and facilities were also the initial spokespersons for the network. Spokespersons are actors who speak on behalf of other actors to mobilize the network for a common purpose.

In the case of "Toca de Aluguel," the digital media and the platform's functionalities were the obligatory passage points, such as the spokespeople in the problematization, as in the first attempt to mobilize the collectivity of actors for the structuring of the hosting and pet care business. For example, the providers/caregivers, to achieve their purposes of hosting and caring for pets, needed the support of digital media with advertising, facilities with access and functionalities of the platform to carry out the communication stimuli (inductions) to make transactional links (connections) with consumers/tutors of pets.

Therefore, through Facebook, Google, and Instagram, digital media were essential to encourage the pet-loving community to participate in the pet hosting and pet care sharing platform. For the pet lover community (caregivers and tutors), digital media supported the dissemination of the service, with advertisements that encouraged the creation of links to carry out the service. The digital media induced the articles and interviews on traditional media channels (television, radio, and newspapers) due to innovation. Meanwhile, technical supporters and partners/investors connected with the platform's proposal to monetize their services, finances and techniques.

Thus, the digital media and the platform's functionalities facilitated the realization of the inductions and connections between the providers/caregivers to generate an extra income and the consumers/tutors to host and care for their pets with affectivity, practicality and proximity. Besides, the platform has initiated a mediation work, carrying meanings for the consumption and service relationship, through its access, communication, payment, and evaluation functionalities.

### 6.1.2 *Intéressement*

The main actor in this process adopts a strategy to convince the other actors to accept its problematization (CALLON, 1984). Many attempts have been made to establish relationships between human and nonhuman actors with the platform proposal. Most of these attempts were stimulated by the main actors - entrepreneur/founder and platform. The most active artifacts were the digital media, social networks and the platform's functionalities. The association of digital media, social networks and the platform's functions were generated through an organization carried out primarily by the action of human actors (founder, co-founder and technical supporters). In the second attempt, the platform's solutions allowed a more significant attraction with the proposed problem (how and why to facilitate the sharing of hosting and care of pets). The entrepreneur/co-founder highlights this process.

[...] we left the structuring phase of "Toca de Aluguel" for the integration with social networks (Facebook, WhatsApp, and Instagram), then we improved the layout and the brand. Then we launched the first digital drives and automated contacts for caregivers with support from the platform's chatbot. E3 (entrepreneur/co-founder)

The attraction aimed to generate relationships between human actors, especially the caregivers and tutors of pets. With their adopted digital solutions, the media played an essential role in the offer of the founders to the caregivers and tutors. The digital advertising used through social networks aimed to present the platform with its solutions, resources and facilities for caregivers. For the tutors, the focus was to show practicality, affectivity and proximity to the caregivers. The attributes of safety, effectivity and trust were also worked out, highlighting the caregivers' welcome with pets because they were also pet tutors.

I saw an impact ad, which caught my attention on Facebook [...] I entered and was directed to the website and made my registration. "Toca" at the time did not yet have a mobile application, but you could access the website from a mobile phone, it looked like an application. I don't know how they do it, but it was easy to navigate. On the website, I looked for more information about how it worked; I found a text with a tutorial and all the explanations [...] that tool was very interactive and simple. E24 (provider/caregivers)

This app drew attention to a more personal type of service, due to the recommendations, evaluations and videos [...] the simple way to be able to talk to the caregiver by chat and to be able to pay by credit card, bank transfer

or bank slip [...] today, with the new version of the service, through the application, I can follow the promotions notifications. This tool is very nice to save and plan accommodation, as it has a discount of up to 50%, depending on the day, time and place of the caregiver. E23 (consumer/tutor)

Consequently, technical supporters were attracted by the opportunity to develop a differentiated platform with technological and local relevance. The supporters' objective was to use this case as an example of the development of similar businesses for the country's southern market. Pet kennel rental platform had a service offering base, with caregivers and tutors, very similar to those already on the market. Therefore, supporters had a market challenge in making the platform known as relevant to national competitors.

I believe that the puppy and kitten tutor is looking for a caregiver to take good care of your pet. When using this type of service or another, it is because it seeks a closer connection, which will generate trust and security. People looking for this type of application look for much more than a connection between people [...] look for that sense of closeness [...] our role is to translate and communicate this feeling in a free, interactive, emotional and collective way. E11 (technical supporter)

The idea has always been to work locally, giving relevance to proximity and its differentials. The founder had MVP thinking about not losing this localism, even when he expanded his business to other regions; bringing proximity through caregivers [...] our challenge was to make this proximity a good differential for the business. E9 (technical supporter)

The entrepreneur and his partners/investors believed that they could profit from their time, knowledge and financial efforts with the platform's implementation and stability. The platform's leaders made several movements seeking to negotiate actions with the technical supporters to attract tutors and caregivers. These movements were carried out in three attempts: first, through an initiative of the founder with two caregivers, then with three different partners and finally alone. In all three attempts, the spokespersons were nonhuman artifacts, such as digital media, communication tools, such as WhatsApp, the Internet and the platform's facilities and resources. These digital artifacts, directly or indirectly linked to the platform, provided support to entrepreneurs with their solutions, resources and facilities, seeking to attract and convince the target audience (caregivers and tutors). The researcher describes attempts to establish relationships through the notes in the field diary.

The sensitivity of the change in the behavior of caregivers and tutors is an interesting point to be analyzed [...] every simple change made in the scope

of the platform, related to the design of interaction, relationship and or the user experience, developed new learning to be analyzed and reformed, our objective, in addition to hosting pets, was to add many services to the platform, such as transportation, tours, beauty and products. But to leverage these businesses, we needed a lot of financial investment in paid media. Caregivers saw us only as a means of access, which facilitated their business. Meanwhile, tutors did not approach the platform naturally, without us having to invest in media. Something else was missing to generate relationships. (Field Diary/ PESQ1)

The digital solutions around the platform developed connections, inductions and mediations with providers / caregivers and consumers / guardians of pets. The platform's digital solutions make sense, as they facilitate the activity of suppliers, through the possibility of extra income. Consumers were attracted by the attributes of safety, comfort and proximity. Thus, to convince tutors, communications were carried out digitally, messages by instant communication applications and keyword programming in Internet search engines such as Google and Yahoo.

The mediation of the platform with the tutors was explored to make sense of the evaluations, comments, testimonies and scores of the caregivers about the services provided. However, there were not many recurring links with tutors, due to the diverse interests of affection, proximity and security during all attempts to establish relationships. As interests varied between actors, there were many technical and commercial attempts to consolidate the network of heterogeneous actors. Therefore, the attraction process was partially accomplished. This process did not attract other spokespersons for the entrepreneur / founder and the digital platform.

### 6.1.3 Enrollment and inscription

In this translation phase, the actors get involved following their strategies to stabilize the network (CALLON, 1984, LEE et al., 2015). The "Toca de Aluguel" platform was designed in October 2016 by its founder to support two caregivers. As of 2017, the platform was developed with the help of technical supporters and a co-founder. The role of these actors was fundamental, at this moment, for the organization, development, implementation and operationalization of relationship actions with caregivers / providers. On the other hand, consumers / tutors were impacted by the implementation of support actions in digital media. The journalistic articles carried by the traditional media also encouraged consumers to connect with

the animal care platform. Although this process has connected, induced and mediated some tutors, there was no attraction in this first movement to generate the volume of welcoming and caring for caregivers. In this sense, the following speech highlights these inscriptions.

There was confusion between the technical area and the communication area. Our first initiative was to organize the website and social networks, but we were unable to achieve regularity. This procedure took six months to make the strategy work. It was not possible to carry out the project because the platform team did not have the focus and resources to develop a quality website, application and communication to reach the target audience. E7 (technical supporter)

Thus, to involve the target actors (caregivers and tutors) spontaneously, several solutions, functionalities and facilities were implemented around the Toca de Aluguel platform. In this process, brand, logo, slogan, contents, images, videos and digital advertisements were added. All the assembly of this professional partner network was focused on connecting and inducing caregivers and tutors to the platform's proposal of offering a practical, close, effective, safe and secure service.

[...] We created an agile, intuitive website and available on several devices, but in the beginning it was not possible. During the platform development process, we learned from the solutions and data that presented paths for adjustments and technical lessons. In addition, the caregivers who participated in the beta version helped a lot in this process, as they were always sending feedbacks with improvements and tips. [...] we made many changes as a result of this partnership and even adjusted the visual identity as a result of this collective action, with the help of ILAB - ESPM caregivers and marketing and communication consultants. E2 (founder/developer)

Thus, in order to strengthen the relationship with pet tutors, caregivers were segmented by types of pets (cats, dogs, rodents, birds, among others), and distributed by location, experience and assessments. The first strategy adopted was to establish relationships with tutors through content marketing through the platform's blog, fan page and YouTube channel. In the second attempt, the strategy was adopted to develop a relationship agenda with promotional dates, expand to other locations in the country, reformulate the website and publicize the pieces.

In the third and last attempt at relationship, the strategy of “digital growth marketing” was adopted, using the tools Google, Facebook and Instagram to reposition the direct communication with the tutors. In this last attempt, the application for

smartphones with the Android system was launched commercially. The app aimed to facilitate connections and the establishment of relationships through mobility, practicality and agility. A technical supporter (E8) highlights these processes.

I believe that the media made by these platform-based companies can communicate to the customer the benefits of the tools through texts, images and videos directly. These interactions occur through content and services, connecting providers and customers to their network, generating a fast, intuitive, interactive and personalized connection. [...] "Toca" has managed to attract and be close to caregivers, but not to tutors, because it has not been able to impact the daily life of this audience through the attributes of emotion, confidence and security. E8 (technical supporter specialist in digital marketing)

The peak of the mutual relationship of the "Toca de Aluguel" platform with caregivers, tutors, supporters, digital media, partners / investors occurred between November 2018 and August 2019. During this period, the entrepreneur / founder and the platform participated in the Startup Sebrae RS, project being incubated at POA HUB. At the end of this period, the platform had already registered 200 caregivers in a database, carried out transactions with 100 tutors, in 8 Brazilian states, in several cities. Thus, caregivers and guardians became involved with the platform to make the act of hiring accommodation for their pets uncomplicated using the solutions, facilities and digital mechanisms to give agility, practicality and mobility to the shared relationship.

Therefore, the attempts to maintain these cooperative relationships between human and nonhuman actors constituted a series of actions, negotiations and convictions around the proposal to facilitate the hosting and care of pets through the pet kennel rental platform. Platform mediation through solutions and functionalities facilitated the relationships of connection, induction and flattening between caregivers and tutors. This platform mediation process was crucial to keep the sociotechnical network stable during the three years of operation. However, although there were inductions, connections and stabilization of the network of actors during this period, the platform could not engage consumers/tutors for the proposal on an ongoing basis.

#### 6.1.4 Mobilization

At this point in the translation, a single heterogeneous network is assembled with diverse interests, in which the main actor can mobilize and speak on behalf of the other actors (CALLON, 1984, SHIN, 2016). Thus, the network is stabilized, mediated and flattened in a relationship and/or process (LATOUR, 2005; BAJDE, 2013). In the “Toca de Aluguel” platform, the collective of actors was set up on the initiative of its entrepreneur/founder, partners and technical supporters. After this process of setting up the network, the platform with solutions, functionality and facilities became relevant to other interested actors. At this point in the translation, a single heterogeneous network is assembled with diverse interests, in which the main actor can mobilize and speak on behalf of the other actors (CALLON, 1984, SHIN, 2016). Thus, the network is stabilized, mediated and flattened in a relationship and/or process (LATOUR, 2005; BAJDE, 2013). In the “Toca de Aluguel” platform, the collective of actors was set up on the initiative of its entrepreneur/founder, partners and technical supporters.

However, there was no recursive involvement between the main actors in the course of the relationships. The entrepreneur/founder, with his technical supporters and partners, used various techniques as marketing strategies through digital media to induce, connect and mediate the caregivers and tutors. Digital media was used from the beginning of the platform project until its closure. The techniques used were supported by communications, content, images, videos and instant-messaging tools. The first caregivers and tutors were associated with the platform due to the Internet, social networks and digital media. The role of the caregivers in this first moment was crucial to spreading the founders' purpose and platform.

In this sense, caregivers became spokespeople for the platform, highlighting the benefits of hosting and care for pets through communication tools. In turn, the technical supporters and partners joined the proposal because they were aware of the trajectory of the founding actors through communications made by traditional media. Although digital media provided some inducements for connections, the platform and its functionalities provided several material inscriptions during the attempts to establish relationships with caregivers and tutors. The digital platforms mediated the flattening relationships with technical supporters, caregivers and partners, such as that which



occurred in the ILAB 2017, Startup RS 2018, and POAHUB 2019 incubation program. Many of these platform action registrations and their solutions were considered successful. In the sequence, some actors report these relationships.

I believe that the key to these businesses lies in ease, practicality and transparency [...], for example, it is necessary to have clear rules and paths for registration with a simple and intuitive message. Services involving third parties or objects need a differentiator, so we suggest offering health insurance for dogs and cats. E9 (ILAB ESPM - technical supporter coordinator)

I accessed the site and viewed several ads with many photos and different prices, giving personality to the service. I managed to make a very nice and easily accessible ad [...] So the platform was fundamental in intermediating payments and connecting with customers, through their communications and digital ads through Google, Facebook, Instagram and coupons sent by WhatsApp [ ... I believe that we have a collective work between the platform and us caregivers, generating these services, benefits and revenues. E24 (provider/caregivers)

Consequently, various inducements, connections, mediations and flattening relationships were set up through a network of heterogeneous actors in a direct, stimulated and constant way. In particular, connections were induced by digital media while establishing relationships through solutions, functionalities and facilities of the platform. The consolidation of relationships between caregivers and tutors occurred due to the utilitarian interest in the platform's facilities and functionalities. Thus, content, communication and platform promotions solutions supported the inductions, connections and relationships between caregivers and tutors. The payment, location and insurance resources provided agility, practicality, simplicity and security for caregivers and tutors. The entrepreneur/founder's insistence on the business provided an ongoing relationship with caregivers, but not with tutors. Thus, the platform's mediation in generating meaning to the financial and recreational benefits was not essential to keep the network activity for all other actors in the network.

Therefore, the result of the network's solidity was the fact that the platform intermediates business for providers / caregivers and consumers / tutors with a more utilitarian than altruistic bias. At this point, the links were not well resolved between the platform proposal designed by the entrepreneur / developer and what the market expected or was interested in.

The solutions around the platform developed the connections and induced the caregivers, tutors and pets to strengthen relationships with the platform, but there were

many interests at stake. (a) The interest of the entrepreneur and the partners/investors in scaling and making the most of their personal and economic efforts. (b) Second, the interest of technical supporters in keeping the platform stable sets an example with other partners or customers/entrepreneurs. Lastly, (c) providers/caregivers' interest in keeping the platform stable for generating revenues, services and business, as well as consumers/tutors in safe and effective care.

In this way, (1) the process of stabilizing an artifact, even though it has relevance within the network, only occurs through a collective understanding of the actors. (2) The platform's transformations have not provided closer relationships between the entrepreneur/founder, caregivers, tutors and pets. On the other hand, even having several stages with improvements in functionalities, interaction design, communication and processes, it did not provide the expected experience. (3) The network forces, that had a symmetric relationship between artifacts and humans, did not drive the platform's business proposal. In some cases, they were inspired by humans (motivations, interests, actions and decisions taken by the entrepreneur/founder and partners). Others were driven and mediated by nonhumans (automatic registration processes, payment and communication facilities). In sum, (4) all these implications must be highlighted and revered to understand how the platform used its mediation role to induce, connect and strait relationships with pet caregivers and tutors.

Therefore, the socio-technical network was structured, inducing, connecting and strengthening relationships with actors who had diverse personal and professional interests. However, the relationships of induction, connection, mediation and flattening occurred with the providers / caregivers. This was due to the support of information and communication technologies, represented by the social networks, functionalities and facilities of the platform. However, it did not happen with consumers / tutors, who expected a close relationship, in addition to the relationship of consumption and shared service.

## **6.2 The Translation Process - Goalkeeper Rental Platform**

Following the translation approach of ANT, this section interprets and analyses the details of the events and facts of the empirical case of goalkeeper rental. Table 11 details the four translation phases performed at Goalkeeper Rental platform.

**Table 11: Analysis of the translation phases of the Goalkeeper Rental platform**

Translation phases	Translation phases description	Interpretative detailing
Problematization	This phase defines the events of the question of how and why to "become a rental goalkeeper"?	It describes how and why human and non-human actors were induced, connected, mediated and flattened sports service sharing relationships. This phase identifies and details the motivations, functions and objectives of the actors in the network.
<i>Intéressement</i>	Stage in which the main actors (goalkeeper / founder and platform) seek to convince, attract and establish relationships with the "amateur players in love with football" (suppliers / goalkeepers and consumers / contracting teams).	It details how goalkeepers, teams, co-founders, technical supporters, media (traditional and digital) and investors were attracted and encouraged by the main actors of the network (goalkeeper / founder and platform) to deviate their way through the mandatory crossing point; Interests, playing football with a fixed goalkeeper, extra income, amateur games with more quality.
Enrollment and Inscription	This phase explains how the actors' objectives were achieved. How the actors (goalkeepers, co-founders, teams, platform, digital and traditional media, technical fans, sponsors / partners and investors) became involved in the consumption and shared service relationships of amateur soccer professionals.	This phase reflects the negotiations, registrations and involvement between the heterogeneous actors in the relations of consumption and shared service through: Instant messaging by groups on WhatsApp, digital media communications, social media profiles, spontaneous dissemination in communities of amateur football players, goalkeeper segmentation tools.
Mobilization	This stage describes how the main actors (goalkeeper / founder and platform) mobilized the community of amateur soccer players (provider / goalkeepers and consumers / teams) to participate in the consumption and service relationship of amateur soccer professionals.	This phase explains how the ways to make inductions, connections, mediations and flatten the relations between consumption, technology, service and business actors were accepted. Through the mobilization spokespersons: Quality sports experiences, recreational, financial and technological benefits.
OPP: Obligatory Passage Point	Path chosen by the main actors (goalkeeper / founder and platform) to simplify and give practicality to talent sharing relationships in amateur football.	This point highlights the paths chosen by the main actor (s) for the other actors involved in the consumption and service relationships of the goalkeepers they represent: Amateur football community and digital social network.

**Source:** Created by the author

### 6.2.1 Problematization

During the problematization stage, facts, questions, events, controversies and decisions of the main actor (s) of the network are presented (CALLON, 1984). Besides, the main actor determines possible problems, controversies, decisions and relationships (LEE et al., 2015; SHIN, 2016). In the case study at Goalkeeper Rental platform, the decision to be resolved is related to the following question from the goalkeeper/founder: How and why "become a rental goalkeeper"?

At this point, some decisions were made by the founder, such as: developing a fan page, a uniform for the goalkeeper for hire, a WhatsApp group to communicate the base of friends and acquaintances about the willingness to be a goalkeeper for hire. The founder's speech (E14) highlights this initiative. "[...] the initial motivations were to play ball, exercise and bring the community of amateur players closer to a social cause through the income generated by the matches". The individual but organized act resulted in 30 calls and 13 different matches with groups of amateur football players.

Thus, social media applications started a mediation process, bringing meaning to the bonds between players and stimulating their relationships. In the problematization stage, social networks were the founders' tactical spokespersons for communicating with the player community. The goalkeeper / founder strategy was to motivate the amateur player community to participate in a social cause, leaving the extra income in the background. In the beginning, part of the revenue generated as a goalkeeper was intended for the purchase of soccer equipment, such as balls and goalkeeper uniforms, for donation to needy children in the city of Curitiba. In the second moment, the idea was expanded to a children's goalkeeper institution in Mali, on the African continent. Part of the income, generated from the rent of the goalkeepers, goes to the social project.

Internet, social networks and traditional media (television, radio and newspapers) were essential actors in the first connections between amateur football players and the goalkeeper/founder. Facebook and WhatsApp social networks were necessary as nonhuman elements to promote associations between the various actors involved in this sociotechnical network. For the interviewees, the participation occurred through social networks in the groups of amateur football players on the Internet. Interviewee speech (E18) exemplifies this evidence.

At first, I saw the founder's fan page. I was motivated by the proposal to be able to play ball, earn an extra income and be able to help other people through social actions. I was impressed with the image and proposal of the founder's fan page, which used the Facebook channel to move his community of friends, and later friends of friends, through WhatsApp. E18 (entrepreneur/co-founder)

The unintentional disclosure in the groups of amateur soccer players, induced the goalkeeper/co-founder to connect with goalkeeper platform. The operational management experience of the goalkeeper/founder was added to the technical and practical experience of the goalkeeper/founder. Besides, the sharing of the founder's fan page as the dissemination of instant messages by amateur football groups attracted interest from the traditional media (television, radio, and newspapers). The journalistic reports carried out by the traditional media attracted other amateur soccer players, who did not participate in the communities and/or groups of the goalkeeper/founder. The providers/goalkeepers (E33; E31) comment on this movement.

[...] I saw a report on television here, in Curitiba, Paraná. Then I went to consult this goalkeeper platform on the internet and made my registration; after this process, I made my service available in May 2017 [...]

[...] I saw, for the first time, an article in the newspaper printed here in Florianópolis. Then I heard on a local radio an interview with the goalkeeper / founder of the app, explaining what it was like to be a goalkeeper for hire [...]

According to the interviewees (goalkeepers, amateur players and technical supporters), the spontaneous media connected the platform with the communities of amateur football players in Curitiba and the mass of weekend players in Paraná state and other states of Brazil. This spontaneous advertising connected more interested parties to participate in the rental goalkeeper community, making the relationship between the actors's closer. This widespread demand by message groups, communities in social networks and articles made by traditional media enabled the founding goalkeepers to develop a more robust project with technical support. In turn, the technical supporters aimed to put their expertise into practice to develop and be part of the platform project. A speech by the interviewee (E15) highlights the moment.

[...] I don't play football, but I have friends who play, and I hear from these friends the difficulty in getting goalkeepers for matches. Besides, nobody wants to play and take turns in this position. I verified in the application a good idea to solve this problem [...] I always liked this kind of sharing app, and I

visualized a professional opportunity to participate in the project. E15 (technical supporter)

Technical supporters also reported an interest in being part of the project to empower the amateur football community with connectivity and sharing of solutions and features. In addition, they wanted to develop something relevant for the participating individuals, with a differentiated activity that would provide extra income with tangible and intangible benefits. However, the goalkeeper rental platform started operations through the goalkeeper / founder social networks in the first quarter of 2015. All the development processes of the platform, with its applications, resources and mechanisms took place until the second half of 2016. In this period, the brand, the first website, the blog, the YouTube channel, the ranking spreadsheets and the first version of the smartphone application were developed. Thus, a technical supporter comments on the second moment of the problematization.

The most interesting comment I heard from the beginning was that goalkeepers and players bought the idea. These goalkeepers bought the idea not only for the business, but for the proposal to help other people in the social actions carried out with children. They comment (goalkeepers) that money is good, but many say that sometimes this is not the most important thing. They consider themselves to be part of an ecosystem or a larger community than just a weekly departure through the platform. E15 (technical supporter)

For technical supporters (E16), social network communications and the first actions through the rankings, developed by the founders, were already establishing relationships between the goalkeepers and the football players' communities.

[...] I highlight as a differential the beginning of integration with the football communities through the manual processes carried out by the founders [...] below, we developed and improved this process, automating the relationship with notifications and segmentation by neighborhood, using geolocation [...] now, we are developing internal gamification to deliver to the consumer / x times the best experience and to the provider / goalkeeper, more functions and rankings not only by game, but by behavior, actions, indications and product sales.

The comments of the founders and technical supporters highlight the first movements of development, induction, connection and establishment of relationships between the platform and the community of amateur football players (goalkeepers and teams). These first movements generated, until May 2017, more than 1,500 goalkeeper registrations on the platform. These inductions, connections, mediations

and close relationships with the goalkeepers occurred with each new dissemination by the traditional media and through the exchange of messages in community groups. Most of these participants, identified with the business proposal, noted that the platform brought them together to play ball with fixed people for the goalkeeper position. In addition to inducing, connecting and mediating these groups, the platform has become the relationship bridge with the main stakeholders. The interviewee (E34) reports this evidence.

The goalkeeper platform brought together amateur players who like this weekly habit. This application allows us to exchange tips and make a healthy competition. This is very good, because we meet new people and form new groups through the platform, its mechanisms and tools. E34 (provider/goalkeeper)

For some interviewees, the collective of goalkeepers and amateur soccer players occurred because both had a common goal - to play quality football. Most of those involved did not have extra income as their main factor, but the practice of amateur sports with weekly effectiveness. The interviewee (E40) comments on some of these motivations.

[...] Playing ball is a passion and a hobby. The goalkeeper's apps of rent allowed us to connect, know and be part of other groups with this same feeling of playing ball, in this sense the extra income is a consequence of all this relationship. E40 (provider/goalkeeper)

Thus, the goal of playing ball linked goalkeepers with the community of amateur players, who always had trouble finding people for this position. For the “boleiros”, it was a problem to choose someone to go to the goal, but little did they know that many people were willing to play in this position to have frequency, games, receive an evaluation, an extra income and gifts. These communities attend amateur soccer courts across the country, holding weekly meetings to play ball with friends. The problem has always been recruiting people to play in the goalkeeper position, with these amateur teams adopting the relay practice. Many reported that the games lost quality and seriousness, but with the goalkeeper's platform, these problems are over, because they made the weekly games with more quality. Respondents (E36; E32) highlight this evidence.

This app was a lifeline for us, who like to play ball. Because we always need players in the goal, but, with the goalkeeper's service, the matches have become more professional, with more quality and emotion. E36 (consumer/contracting team)

The application solved this relay problem and brought us a more professional game. The goalkeepers called up by the platform give us confidence, tips and quality for the matches. E32 (consumer/contracting team)

The actions to establish relationships with the players took place between 2017 and August 2019. These actions developed the realization of approximately five daily matches, with 14 thousand teams registered in Brazil's seven states. In this process, many other groups were associated, making the platform a key partner for the realization of matches weekly. Thus, the community grew around the goal of playing amateur football, resulting in a community with more than 12,000 providers / goalkeepers willing to provide a professional quality service.

Consequently, sponsors and partners/investors were attracted to participate in this collective of people and artifacts. The platform's high level of exposure through traditional media channels has generated interest from investors. The first investment contribution occurred through participation in the reality show Shark Tank Brazil. After the presentation of the platform as a business, the founders received an investment of 300 thousand reais through the directors of Topper and Polishop companies. Topper and Polishop had the interest due to the relationship with a specific community being segmented, where they could offer their products to generate business with high added value. One of these investors comments this evidence.

I saw on the rental goalkeeper platform a simple and innovative solution to solve a routine problem of amateur soccer players in Brazil [...] I have this problem in the weekly games that I play with my friends [...] I understood in the presentation that platform could scale, adapt to our products and generate a national and even global business opportunity. In short, it was the mental model developed to invest in the business. E43 (Topper's partner investor)

The participation in the reality show connected the platform to sponsors such as Poker, Pipefy, Boleiros Academy and Goalkeepers Academy. These sponsors aimed to offer their products and services through the base of providers/goalkeepers and consumers/teams. For example, the glove sponsor Poker offers exclusive products in the platform's online store. At the same time, Pipefy offers gifts, discounts in the shop, and the providers/goalkeepers' workshops. Thus, the founder and the platform have

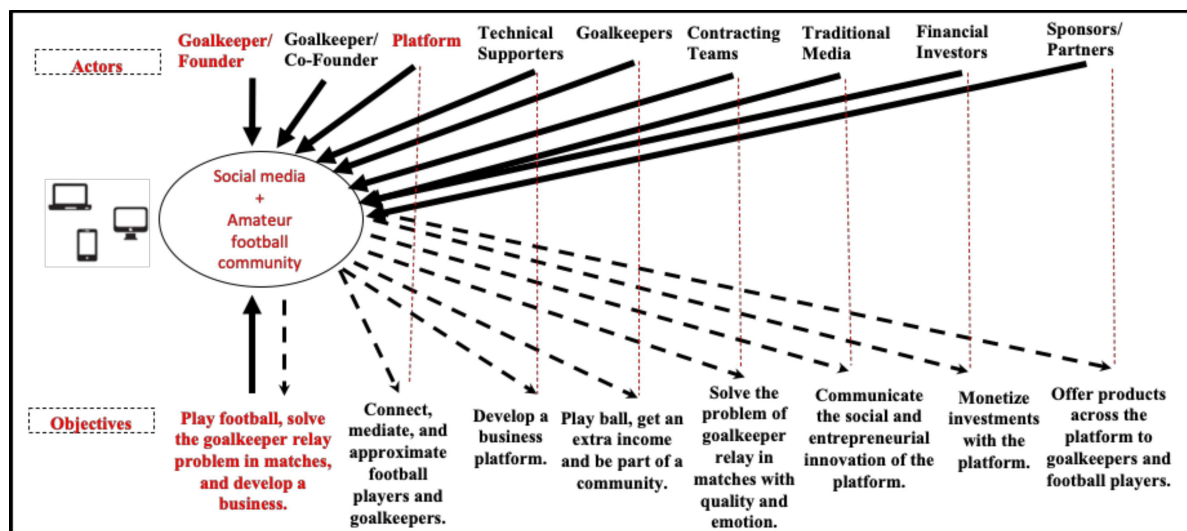


induced, connected, mediated and flatten relationships with several heterogeneous players for goalkeeper rental.

All these processes went through relationships developed in a non-spontaneous and spontaneous way. The first actions were stimulated by the goalkeeper/founder in a non-spontaneous way by the social networks. The goalkeeper/founder's efforts through the social networks provided casual relationships of the goalkeeper/founder, technical supporters, traditional media, providers/goalkeepers, consumers/teams, partners/investors and sponsors. Therefore, the goalkeeper/founder's decision to design and develop a platform of goalkeepers for rent has provided collective and shared consumption and service relationships.

After identifying human and nonhuman actors, this study observed how and why providers/goalkeepers and consumers/teams were induced, connected, mediated and flattened with the platform, tools and solutions. Thus, figure 55 presents the **obligatory passage point** used by the actors to reach their proposed objectives in this sharing consumption and service relationships.

**Figure 55: Problematization: obligatory passage points in the Goalkeeper Rental platform**



Source: Created by the author

The figure highlights the roles, objectives and paths played by human and nonhuman actors in a network. To achieve their goals, the actors belonging to this network need to go through the way chosen by the main actors (goalkeeper/founder and platform). Thus, these paths are identified as social networks and amateur football

communities. Social networks and amateur football communities have attracted other actors to solve their problems and objectives. Therefore, the amateur football communities, together with the social networks, are initial spokespersons to induce, connect, mediate and flatten relationships with the collectivity of actors involved in the goalkeeper sharing business.

Consequently, for the founders, amateur football communities on social networks were essential for the disclosure of the goalkeeper's rental proposal. Social media apps and messaging (WhatsApp, Facebook and Instagram) were essential to induce, connect, mediate and promote the platform plan for goalkeepers, teams, fans and the media. In addition, social networks provided information on how to sign up and how to use the platform for suppliers / goalkeepers and consumers / teams.

Traditional media was attracted by the novelty of social entrepreneurship provided through social networks and the community of amateur football players. Technical supporters, investors and sponsors were interested in the business, product and service proposal. Thus, the goalkeeper / founder, amateur football communities, social networks and the platform structured the network of players with the common goal of playing quality ball, developing relationships with personal, social, technical and economic benefits.

### *6.2.2 Intéressement*

In this phase, the actor or main actors adopt a strategy to persuade the network of actors to accept their problematization (CALLON, 1984). Thus, negotiations can occur between the main actor, representatives and human and nonhuman spokespersons on behalf of other actors in this relationshipal process (SHIN, 2016). During the relationships between the actors involved with the goalkeeper's proposal, many connections, negotiations, mediations and flattened occurred. Several of these relationships were stimulated first by the interests of the founding goalkeepers, followed by the amateur football communities (goalkeepers and teams). The personal interests were related to having a quality football match through the fixed goalkeeper, without the need for a relay with the other players. In this moment of attraction, social networks and traditional media were the nonhuman spokespersons representing the founders and communities of amateur football.

The attraction of new contracting teams and goalkeepers happens due to the help of social and traditional media. Currently, our focus is on expanding the provider and consumer base through Facebook, Instagram and Youtube. We use all the information and data from these applications to improve the platform's communication and relationship with our audience. E14 (entrepreneur/founder)

The connection of these actors (founders, communities, social networks, traditional media and platforms) allowed a greater understanding of the proposed problem (how and why to become a rental goalkeeper). This understanding of the proposal generated the first relationships between the actors, as during consumption and service actions. In the first quarter of 2015, traditional media was attracted by the novelty of the founding goalkeepers, followed by the benefits of the platform's enterprising social innovation. The proposal, on the other hand, invited the community of amateur players to no longer worry about getting a goalkeeper for the weekly matches, in addition to receiving the promise of being able to play their games with quality through the goalkeepers selected by the platform. Goalkeepers were attracted by the offer of free games, and by receiving extra income and personal recognition through ratings, comments, rankings and awards. Comments from the provider / goalkeeper (E19):

The goalkeeper rental app has professionalized the amateur football community by developing a new, more select group that seeks to give more excitement and seriousness to the games. These departures can now be every day, anywhere, anytime, with different people and groups. This is great, as we have increased our network of friends and people who like to play ball weekly.

Thus, the practice of amateur football attracted other players, such as technical supporters, investors and sponsors. These actors saw a segmented community in this field, with the potential to financially increase their business, investments, products and solutions. Thus, the association between human and non-human actors provided a socio-technical relationship, being organized in the first instance by the goalkeeper / founder, assisted later by influential spokespersons. The communities of goalkeepers and amateur players on social networks, traditional media and platform, with their solutions, carried out a speech process on behalf of the goalkeeper / founder. These spokespersons helped in the process of convincing other goalkeepers. A technical supporter (E17) highlights this situation.

[...] My initial interest was to put into practice my ideas, proposals and solutions for the platform [...] The company has a strong focus on innovation and the founders like and want to receive new ideas. These ideas are used to leverage business and develop the player community and the platform.

In this way, founding goalkeepers continue to organize actions to stimulate connections and relationships between goalkeepers and football players. However, these actions are directly supported by representatives such as the Internet, search engines as Google, messaging applications, social networks, platforms and traditional media. Thus, this structure of cooperation between human and non-human actors has been negotiating an evolution in the development of the flattening of relations between the actors of consumption, business, technology and service. Therefore, this alignment between the different groups consolidated the interests in a heterogeneous network, focused on a single objective: to play ball without the concern of recruiting, attracting and choosing a goalkeeper for the weekly amateur games.

### 6.2.3 Enrollment and inscription

In this phase, the actors get involved and follow their strategies to consolidate the network (CALLON, 1984; SHIN, 2016). Thus, the inscriptions are movements and patterns established by the artifacts to define inductions, connections, mediations, and flattening in the relationships between the other actors associated with the heterogeneous network (CALLON, 1984; BAJDE, 2013). In 2015, the goalkeeper rental platform was conceived and designed by its founder, the main actor of this network until development. As of 2017, the platform incorporated the position of the system's main actor, strengthening the relationship with goalkeepers, teams, technical supporters, media, partners / investors and sponsors. Although this transition is not so clear due to the variety of events, the translations highlight a collective in both actions and relationships in the network of actors. Thus, the detailed evidence in the case description shows the platform's mediating role in relations with the other actors involved in the creation of this heterogeneous network. The speeches of the goalkeeper / co-founder (E18) observe this inscription.

Before the website, the blog and the application, the process was all manual and we had to register everything in the spreadsheets and groups of WhatsApp [...] now, with the form, this process has changed a lot and

automation has helped us to segment the games by location, according to the addresses registered by the goalkeepers. We have an internal geolocation tool, which uses algorithms to make the calls [...] the data and the application's algorithm manage the calls by game type, location, assessments, behavior and technique. Thus, the platform coordinates requests, considering the assessment and classification of goalkeepers. This process improves the experience of the contracting team and benefits the best rated and ranked goalkeepers.

The Internet, platform, solutions and social networks were not simply mediators in the relationship between goalkeeper and contracting teams. The artifacts in this process are not only connected but involved, expanded, influenced and strengthened relationships with goalkeepers and players with tips on techniques, behaviors and equipment to improve the development of football matches. For example, the rankings developed were aimed at assessing and developing a reputation with goalkeepers. This process generated by the platform segmented goalkeepers as beginners, experienced and elite. The objective of this segmentation was to offer to the contracting teams a service with greater effectiveness, quality and professionalism. On the other hand, goalkeepers use this mechanism to create a competitive experience and receive benefits offered by the platform. Goalkeeper (E13) and contracting team (E36) comments these processes.

These processes are simple and facilitated by the tool and its solutions. The design is simple and the call and communication processes are interactive [...] this application solved the rotation problems and gave quality to the matches. The app's goalkeepers made matches more competitive and serious. E13 (provider/goalkeeper)

“For us, the difference lies in choosing a goalkeeper with random or specific options. The application builds a memory of the chosen, called and evaluated games and goalkeepers. This process is good for the next games and consolidates our experience with the service [...] this memory developed by the tools ends up giving more quality to the games. I believe that we are learning from the app and the app with us. This memory of interactions and evaluations improves our calls and relationships with goalkeepers. E36 (consumer/contracting team)

The process of establishing relationships between goalkeepers and teams, coordinated by the platform's solutions, has supplied the other players in the network with information, data, images and videos. Traditional media, partners/investors and sponsors used these means to get to know, follow, interact and be part of the network. In the second quarter of 2015, the goalkeeper/founder conducted the first interviews with media channels about his proposal. These interviews connected the founders to

present the platform in the Shark Tank Brazil 2016 edition program. The experience in participating in the reality show connected two new partners/investors to the platform. This process took place spontaneously through the dissemination of the platform proposal in communities of amateur football players and digital entrepreneurs. The investor's statement (E43) highlights this process.

[...] Goalkeeper founders were two visionaries and, at the same time, professionals very capable of absorbing and solving the real needs and problems of these football communities [...] the test laboratory was the manual process with the social networks and spreadsheets. Then the mobile application and the solutions connected and brought football player communities closer to the media, the market and investors. E43 (Topper's investor partner)

These relationships between the human and nonhuman elements constituted a series of connections, inductions and continuous mediations developing a collectivity around the proposal of being a rental goalkeeper. The platform draws the attention not only of actors directly involved in the business, but also of specialized media related to startups, universities and researchers. The founding goalkeepers are currently well-known figures in several dedicated channels and websites, being requested for interviews and specific programs on innovation and digitalization of business in the country. In turn, goalkeepers have developed groups as associations between amateur players, being active and essential in workshops held in 2018 and 2019. In contrast, the sponsors use these events to offer benefits and promote direct sales of their products and services to a segmented group with high added value.

The apex of collective relationships between the platform, goalkeepers, teams, media, supporters, investors and sponsors took place in March 2019 at the second goalkeepers' workshop. At this event, the new version of the application was launched, with a remodeled geolocation and gamification algorithm. This new version was reported and disseminated by community message groups and specialized sports media. Thus, until the exit of the research field in September 2019, the platform connected more than 26,000 providers/goalkeepers and consumers/teams in 7 states of the soccer country. Thus, goalkeepers and teams established flat relationships with the platform, seeking to make the act of playing ball uncomplicated, making the playtime more professional and qualified.

#### 6.2.4 Mobilization

In the fourth phase of translation, actors seek support to achieve their objectives in the relationship, process or environment researched (SHIN, 2016). At this stage, the main actor has already attracted, involved and mobilized all the other actors, by inducing, connecting, mediating and flattening into a single heterogeneous network (CALLON, 1984; BAJDE, 2013). Thus, the heterogeneous network develops a stable or self-sustaining network (CALLON, 1984; LEE et al., 2015). The network stability of goalkeeper rental resulted in a collective symmetry flattened in consumption and service relationships. This collective flattening of the relationships between heterogeneous actors with diverse interests occurred after two multiple stages of problematization.

In the first stage of project, conception to development, the main actors were the goalkeepers/founders. While in the second stage of implementation, production and establishment of relationships, the main actor was the platform with its solutions and applications. The other actors became spontaneously involved with the main actors, as the connections and relationships became flat. Thus, through his initiative, the goalkeeper/founder approached the goalkeeper/co-founder three months after he launched his idea and project to be a rental goalkeeper. The traditional media started a relationship with the goalkeepers/founders from the beginning of the service's launch, due to the entrepreneurial and social novelty.

First, providers/goalkeepers and consumers/teams joined due to the Internet, social networks and amateur football communities that disseminated the founders' purpose and platform. The technical supporters adhered to the proposal since they were already aware of the trajectory of the goalkeepers/founders through the traditional media. Once all the actors involved in the first stages of the platform's trajectory became popular, other actors with interests aligned with the proposal were incorporated into the network. Thus, the partners/investors visualized an opportunity to monetize their financial assets as developing an innovative business with the chance of a global scale. At the same time, sponsors viewed the platform to offer their products and services to a segmented group with high added value. On the other hand, the goalkeeper platform generated several material sign-ups during the period of implementation of relationships with these groups of amateur football players. Also,

digital solutions mediated close relationships with investors and sponsors, for example, the participation in Shark Tank Brasil 2016, holding goalkeeper workshops in 2018 and 2019. The materialization of the inscriptions was detailed throughout the platform's entire trajectory (from the idealization to the consolidation of relationships with goalkeepers and teams). Many of these platform inscriptions and their solutions are successful, as the actor's comment.

[...] Algorithms process and data treatment of the platform helps us to understand how teams hire and how we can have the best goalkeepers for this relationship [...] this process is automatic and helps the promotions, relationships and communication for all involved in weekly matches. E14 (goalkeeper/founder)

Today I wouldn't have the option to play with my colleagues without the application, because we wouldn't be able to have a game with quality. The advantage of the service available through the platform is to provide this collective need with quality". E32 (consumer/contracting team)

This cooperative relationship was flattened through a network of heterogeneous actors with a long and secure connection in a cooperative way. The dimension of the inductions and connections was given by amateur soccer communities (goalkeepers and soccer players). The relationships took place through social networks and were supported by the platform's tools, resources and mechanisms. Thus, the spokespersons were social networks, communities of amateur players, traditional media and the platform. The platform's heyday was to participate in national television programs in October 2019. This relationship occurred due to the collective symmetry of the amateur football communities and later by the platform's right solutions (notifications, geolocation, chatbots and gamification), such as parallel ones (blog, Youtube, and Instagram). These tools provided agility in the connections and induced the relationships to occur in a direct, interactive, continuous and mutual way.

The result of the network's solidity is because the platform connects, induces, mediates and flattens the relationships between goalkeepers and teams with a balanced bias between utility and altruism. At this point, the links were well resolved between the proposal thought by the entrepreneurs and the cooperative relationships developed by the goalkeepers, platform and teams. Thus, the materials around the platform developed the connections and inductions, mediating and flattening the relationships between goalkeepers and teams through various interests. In particular, (a) entrepreneurs and investing partners' interest in scaling and making the most of



their personal and economic efforts; (b) Technical supporters interest in keeping the platform stable to have this model technically approved. Lastly, (c) the interest of providers/goalkeepers and consumers/teams in keeping the platform stable for generating their sporting experiences with quality and economical, recreational and mutual benefits.

Thus, (1) the platform with the solutions consolidated mediations, connections, inductions and flattening relationships. (2) The platform's evolution provided support for understanding how the narrowing of collective relationships between entrepreneurs, goalkeepers, teams, technical supporters and the media occurred. (3) The forces of the network that had proportional relationships between artifacts and individuals boosted and disseminated the platform's business proposal. Some relationships were driven by humans (motivations, actions and decisions made by the entrepreneurs/founders and goalkeeper communities). Meanwhile, other relationships were driven and mediated by nonhumans (automatic registration, geolocation, segmentation, categorization, gamification and communication processes). Finally, (4) all of these implications must be highlighted and revered to understand the platform's role in mediating and flattening the network of providers/goalkeepers and consumers/teams.

Therefore, the sociotechnical network has consolidated and achieved its goal of involving, expanding and bringing together actors with diverse personal and professional interests, but who had in common the passion for the culture of playing amateur football. However, this journey was only possible due to the use of new information and communication technologies to mediate, materialize and straits the existing power relationships in this social, consumption and business group.

### **6.3 Translation Process Synthesis - Pet Kennel Rental and Goalkeeper Rental Platform**

This synthesis presents the identities, objectives, interests and histories of each analyzed element. For Callon (1984), every mobilization is built on a series of attempts, which can determine the solidity of the network of actors. At this point, the stories translated and analyzed in each case presented different problems and mobilizations, but with similar paths in the phases of attraction and involvement. Therefore, the

material association of the artifacts and the immaterial association of the individuals occurred in a unique and interactive way in each analyzed network. These sociotechnical networks were analyzed through an ANT process, which allowed expanding the discussion of how the platforms act in the SE's consumption and service relationships. ANT helps you understand how digital platforms, solutions, service providers and consumers build consumer and service relationships in these two case studies.

Thus, to illustrate this view, these findings demonstrated external and internal contingencies to the digital-physical network. This digital-physical network is formed by human actors (entrepreneurs, providers, supporters and consumers) with non-human actors (platforms, social networks, communication solutions, media and mechanisms). For example, even with several efforts to improve digital solutions (website/app), the pet platform could not connect, induce, mediate and flatten relationships with tutors/consumers, but managed with caregivers/providers. Thus, there were many non-symmetrical relationships external to the platform, because the tutors' confidence was in knowing the caregiver and their offer hosting and care.

In contrast, in the case of goalkeeper platforms, there were different efforts to involve providers and consumers, focusing on business and not on technology. Thus, the entrepreneur first tested the business model with various tools and digital solutions, developing a supra-platform strategy, in which he involved goalkeepers and teams mainly through existing tools such as WhatsApp, Facebook and Google. Thus, the strategy of using resources from different platforms provided trust between goalkeepers and teams through communication, location and gamification resources. Besides, the distribution of personalized uniforms and gloves for goalkeepers has developed a symbolic engagement with the business, reducing the stress of teams having to choose a goalkeeper for the matches, so material solutions (physical and digital) involved teams and goalkeepers, strengthening the relationship with the consumer and the service. In the case of pets, this process was not fully carried out, probably due to obligation or doubt, or by leaving an animal (almost human) with third parties that had few physical and digital elements to guarantee engagement and trust in consumer and service relations. Table 12 summarizes this evidence. After that, the next chapter discusses the evidence analyzed and translated in this study.

**Table 12: Synthesis of the analyzed evidence**

Cases		
Translation Phases	Pet Kennel Rental platform	Goalkeeper Rental platform
Problematization	<p>The entrepreneur's personal need motivated the development of the Toca de Aluguel platform. This platform aimed to approach, facilitate and reward people through the service of accommodation and pet care. In this translation phase, the first inductions, connections and mediations took place through digital solutions, digital media and platform features. The first caregivers and tutors were induced and connected through digital communications, social networks and platform features. The platform started a mediation process, giving meaning to the relationships between pet caregivers and tutors.</p>	<p>The businessman identified a problem related to the retransmission of the goalkeeper in amateur football matches. Identifying the need for amateur players in the community motivated the goalkeeper / founder to develop the activity of goalkeeper for hire. Thus, the first goalkeepers were encouraged by the proposal to play football for a social cause, leaving the extra income in the background. In comparison, the teams were encouraged by the design of the fixed goalkeeper, with quality for the matches. Thus, the first inductions and connections were made by social networks and amateur football communities. The mediation took place at the first moment of problematization of social networks and at the second moment by the broad solutions of the platform (ranking, segmentation and goalkeeper evaluations).</p>
<i>Intéressement</i>	<p>In the attraction phase, digital media and the platform's features sought to convince other actors to establish consumer and service relationships. The platform's digital solutions conveyed meaning to the caregiver's activity, ensuring extra income. This mediation of the platform's functionalities induced and connected new caregivers to the hosting business. In contrast, digital media encouraged links with tutors, highlighting safety, comfort and proximity. Thus, digital media was instrumental in inducing and connecting new tutors for hiring pet accommodation.</p>	<p>In the attraction phase, social networks and traditional media tried to convince other actors to establish consumption and service relationships. Message applications such as WhatsApp connected goalkeeper groups to amateur teams. Social media helped induce through digital advertising, while traditional media communicated innovation to the marketplace. The platform's ranking, segmentation and communication capabilities carried meaning to the goalkeeper activity with extra income. The platform mediated the definition of a quality football match to the contracting teams through the hiring of a goalkeeper for rent. These relationships were flattened through the platform's tools of communication, convocation, interaction and evaluation.</p>
Enrollment	<p>The inscription phase details how the actors got involved in the proposal to facilitate and reward people with pet hosting and care. Many attempts were made to establish induction, connection, mediation and flattening relationships between the caregivers, platform and tutors. Actions with digital communications, content and advertising through digital media mechanisms encouraged links between caregivers and tutors. Reports in traditional media also played a role in this process of involvement between the actors. Through its facilities of service, operation, payment and communication, the platform conveyed the meaning of the activity of caregiver as a meaning of security to shared care for the tutors' pets.</p>	<p>In the inscription phase, the heterogeneous actors around the proposal offer goalkeepers for the amateur football matches. The establishment of relationships took place at various times through different spokespeople. The first spokespeople were the groups of players in the WhatsApp message application, followed by advertisements on social networks and reports in traditional media on television, radio, and newspaper channels. The platform mediated the relationship with the teams transporting meaning to the activity of goalkeepers, emphasizing the attributes of quality in matches. The platform mediated the relationship with the goalkeepers, carrying meanings of recognition through the evaluation, ranking and gamification tools. Relationships were flattened through social networks and digital solutions for communication, geolocation and gamification of the platform.</p>
Mobilization	<p>In the mobilization phase, the entrepreneur/founder and the platform seek to convince the other actors to participate in the unique network set up around the proposal of bringing together, facilitating and rewarding people through the service of hosting and pet care. Several inducements, connections, mediations and closer relationships were set up through a network of heterogeneous actors in a direct, stimulated and constant way. The platform's content, communication and promotion solutions supported the connections, inductions and relationships between caregivers and tutors. The payment, location and insurance functionalities provided agility, practicality, simplicity and security for caregivers and tutors. On the other hand, even having several stages with improvements in resources, interaction design, communication and processes, it did not provide the experience expected by the pets' tutors. Thus, the platform's mediation in giving meaning to the financial and playful benefits was not essential to keep the network active as flattening between the actors.</p>	<p>In the mobilization phase, the goalkeeper/founder and the platform seek to convince the other actors to participate in the unique network set up around the proposal to offer football experiences with goalkeeper rental. The inductions occurred by highlighting social causes, playful benefits and financial benefits. The connections were made through message tools and social networks. The mediation of the platform conveyed meaning to goalkeeper activity, meaning the hiring of a goalkeeper for football teams. The strengthening of relationships was accomplished through digital solutions for communication, geolocation, gamification of the platform that transferred meanings of recognition, quality and belonging to the community of amateur soccer players. Thus, the platform mediated the experience of soccer with the convocation of goalkeeper rental.</p>

**Source:** Created by the author

## 7 DISCUSSION

The analysis of translations provides guidelines for understanding the trajectories of the existing relationships between digital platforms and individuals. Platforms represented by the solutions, functionalities, resources and digital mechanisms, while consumers describe individuals, service providers, entrepreneurs, technical supporters and partners/investors in each case analyzed. Thus, these heterogeneous actors have solidified networks full of inductions, connections, mediating and flattening (LATOUR, 2005; BAJDE, 2013; 2014). Thus, the heterogeneous actors analyzed boosted consumption and service relationships in the sharing economy. These consumption and service relationships did not occur in a single activity, but in collective action with artifacts and individuals (BAJDE, 2014). Therefore, the translated evidence highlights a broad relevance of the platforms' agency for the establishment of consumption and service relationships in the sharing economy.

However, the different analyses of facts, events and processes have also identified relationships mediated by human actors, such as the platforms' entrepreneurs. In this way, the mediation of the relationships occurred collectively between the researched actors. For Perren and Kozinets (2018), consumer relationships also occur through cooperative action between heterogeneous actors. Thus, the cooperative association of consumption and service actors provides access and sharing (BARDHI; ECKHARDT, 2012; ECKHARDT; BARDHI, 2016). This collective of actors is represented by a strait association between consumers, digital platforms and service providers cooperating in carrying out shared consumption activities in the SE. Thus, this strait association between consumers, digital platforms and service providers provides a flattening of consumption and service relationships in the sharing economy.

Therefore, these consumption and service relationships are flattened by heterogeneous elements (BAJDE, 2013; SCHOUTEN; MARTIN, DUFALUT, 2015). As a result, the trajectory of the cases analyzed presents the development of a collective movement, resulting from the associations of the various heterogeneous actors. For Eckhardt and Bardhi (2016), there is a heterogeneous collectivity in consumption from the meeting of facts, processes, practices, relationships, artifacts, consumers and

service providers. So, the translated facts and events present consumption and service relationships resulting from this collectivity. For example, individuals on both platforms motivated, developed and operated actions, communications and techniques, while artifacts induced, connected, mediated and flattened processes, interactions and relationships. Therefore, the analyses of the two cases with consumer, technology and service actors demonstrate motivations, decisions, negotiations and collective alliances to establish consumption and service relationships in SE.

To characterize how these motivations, decisions, negotiations and alliances occurred to establish these consumer and service relationships, we chose to group the analyses in 4 stages to explain them from the analyzed socio-technological processes.

### **7.1 Idealization of Projects in the Establishment of Consumer and Service Relationships**

The case studies highlight entrepreneurs and digital solutions as the driving force behind the projects. These entrepreneurs were motivated to solve consumption and service problems specific to each project. Both motivations were due to personal interests, but with different goals. For example, the entrepreneur / founder of “Toca de Aluguel” intended to develop a business, while the entrepreneur / founder of “Goalkeeper Rental”, a sports activity. Both the motivations and the goals came from the entrepreneurs / founders, but were supported by digital technology solutions. For example, in the goalkeeper's platform design, initial support came through instant messaging tools (WhatsApp) and social networks (Facebook). These solutions produced the first stimuli (inductions) and links (connections) between the goalkeeper / founder and the first contracting teams. In the hosting project and pet care platform, digital media and social networks took over. Therefore, a sociotechnical network project is structured by a set of motives, objectives and various productions (LAW, 1992; LEE et al., 2015).

In this way, a sociotechnical network results from the practices of one or more human and nonhuman actors (LATOUR, 2011, LAMINE, 2017). The success or failure of a project is related to the degree and form of the association of human and nonhuman elements in the network (LATOUR, 2005). Thus, these projects analyzed present similar results in the idealization of consumption and shared service

relationships. Both projects were idealized based on the needs, motivations and objectives of their entrepreneurs/founders. For example, the entrepreneur/founder of Pet Kennel Rental needed service to meet his direct need to host his pets. While the goalkeeper/founder of the goalkeeper platform had an interest in playing football to aid a social cause, performing weekly physical exercises, and finally performing a paid service activity.

The founders' objectives were to promote access, inductions, connections and service relationships for the actors in a familiar and sharing way. These objectives were initially achieved through the recruitment of spokespersons, who spoke on behalf of the entrepreneurs/founders. These spokespersons were paths defined and chosen by the main actor (entrepreneur/founder) to attract and encourage other actors for the sociotechnical network (CALLON, 1984; SHIN, 2016). For example, the cases analyzed presented social networks, online communities, digital media and the platforms' technological facilities as spokespersons. These spokespersons made associations between human and nonhuman elements in this consumption and sharing service networks. These associations formed during the idealization of consumption and service relationships highlight the relevance of the platforms' role and their functionalities.

For example, in the pet kennel rental, digital communication functionalities stimulated links or connections with caregivers, who registered their profiles with texts, images and videos, customizing their service offerings with the support of the platform. At the same time, the Instant Messaging features of goalkeeper rentals induce amateur football groups or communities to make sense of goalkeeper rental activity. Both platforms, supporting solutions such as WhatsApp groups and Facebook profile pages, started a mediation process to make sense of the events, services and relationships between providers (caregivers or goalkeepers) and consumers (tutors or football teams). Therefore, consumption and service projects and relationships were structured by human and non-human actors cooperatively. For Perren and Kozinets (2018), sharing relationships arise from collective actions in a cooperative way between individuals, processes, structures and digital objects. Therefore, the structuring of projects to establish the first consumption and service sharing relationships occurred based on the needs, motivations, actions and associations of these social and technical actors (BELK, 2010; 2014b; ECKHARDT; BARDHI, 2016).

## **7.2 Development of Projects in the Establishment of Consumer and Service Relationships**

The developments of the projects of the analyzed digital platforms occurred for different reasons, but with similar interests. Both entrepreneurs / founders were interested in developing consumer and service relationships. To promote these consumer and service relationships, they decided to carry out stimulus actions through communication applications and social networks. The entrepreneur / founder of the pet hosting platform decided to promote paid digital media communications. These digital communications were carried out using keywords, images and advertising videos published on Facebook, Instagram and Google search engines. At the same time, the entrepreneur / founder of the goalkeeper platform conducted simple and free communications through the WhatsApp messaging app. These individual actions, with support for digital objects, encouraged other actors to participate in consumption and shared service relationships.

In both cases, digital communications stimulated contacts to conduct interviews with local TV and radio programs. Similarly, the co-founder of the goalkeeper platform became aware of this, by connecting with the goalkeeper/entrepreneur. In the same way, interviews in traditional media channels provided opportunities for knowledge of the startup incubation institution's pet hosting platform. Thus, the first stimuli, links and relationships between the actors resulted from various forms of communication. These communications were stimulated through an application, media, or advertising material. Thus, entrepreneurs' interests were associated with many digital applications and traditional media organizations, from the idealization during the development of projects to establish consumption and service relationships. Thus, socio-technical networks are constituted by the association of interests, activities and heterogeneous actors (LATOUR, 2011).

During the development of the projects, the entrepreneurs/founders needed to carry out various activities. These activities were carried out using digital applications and solutions available on the market. For example, the goalkeeper platform entrepreneur/founder developed a fan page on Facebook and interacted with soccer player groups on WhatsApp. In contrast, the pet hosting platform entrepreneur/founder developed a website, a fan page on Facebook and a group of service providers on

WhatsApp. In this way, socio-technical networks were established associatively with material and non-material elements (LATOUR, 2005; LAMINE, 2017). Besides, the projects received support from co-founders, technical supporters, and information and communication technologies. Thus, interests were aligned in unique and heterogeneous networks (CALLON, 1984; LAW, 1992; LATOUR, 2005).

The actors in these networks have developed solutions for inducing, connecting, mediating and flattening consumer relationships and shared services. First, the entrepreneurs developed and promoted social activities and project techniques. Subsequently, co-founders and technical supporters implemented new developments and improvements to the projects. The sum of these efforts and movements resulted in a broad digital platform. For example, the development of the pet kennel platform included the brand, slogan, a blog with content and tips, YouTube channel with informative and advertising videos; While on the goalkeeper platform the brand, the website, a blog with content, YouTube channel, Instagram profile and a Smartphone application. In the case of the pet hosting platform, recurring advertising campaigns were developed to stimulate connections from service providers. While in the case of goalkeepers, a ranking was developed using a spreadsheet to evaluate, segment and build loyalty between service providers/goalkeepers.

In this way, entrepreneurs, co-founders and technical supporters have developed several technical and communicational solutions to establish consumption and service relationships between providers and consumers. These relationships were induced through content, communications, images and videos. For example, in the YouTube video channel of the pet kennel rental platform, several witnesses of the services provided by providers were developed to encourage tutors to make connections. While on the goalkeeper platform, there were blog posts with technical tips for goalkeepers to provide a higher quality service to the contracting teams. Thus, the activities of consumption and shared service are supported by digital platforms, which convey meaning to the attributes and senses to the actions of providers and consumers (HAMARI; SJÖKLINT; UKKONEN, 2016).

In both cases, the platforms have mediated meanings to the activities. In the case of goalkeepers, the platform carried the definition of a quality football match due to hiring a paid goalkeeper. In contrast, in the hosting platform, the platform gave the meaning of safety, comfort and proximity with the hiring of a pet caregiver. Thus, digital



platforms have developed inductions, connections, mediations between consumers and service providers in SE (DE REUVER; SØRENSEN; BASOLE, 2018). These digital platforms have mediated the establishment of consumer and service communities' relationships through digital solutions, communications and technologies (DE VAUJANY; LECLERCQ-VANDELANNOITTE; HOLT, 2019; ECKHARDT et al., 2019). Therefore, these project developments were composed of entrepreneurs, consumers, service providers, technical supporters, media, communication tools, content and digital technology applications.

### **7.3 Consolidation of Projects in the Establishment of Relationships with Consumer and Service**

The processes carried out by the entrepreneurs/founders and platforms involved negotiations and involvement with various actors. These actors had interests in establishing consumption and service relationships. However, many were the challenges to associate consumers, platforms and service providers. Challenges overcome in the development of many technological solutions and applications. Thus, platforms were built to intermediate business by establishing relationships with service providers and consumers in SE (SUNDARARAJAN, 2016). These efforts have brought together several human and nonhuman actors by structuring a strict association (LATOUR, 2011). However, these associations occurred differently in these two cases analyzed. In the pet hosting platform, the establishment of relationships was plural, because there were many attempts with actions of entrepreneurs, technical supporters, media and digital solutions. In contrast, in the goalkeeper platform, the relationships were unique, because of a few individual and technological attempts to consolidate the ties of consumption and service.

Thus, the links that consolidated the relationship between the pet hosting platform with consumers and providers were not well resolved. Several technical attempts were made with the development of applications made available through the Internet, procedures with processes to improve links, service and payment flow and communications with digital advertisements disseminated through social networks, search engines and instant messaging groups. These attempts to establish relationships failed to consolidate recurring associations, especially with consumers,

as they did not convey meaning to the attributes of comfort, safety and proximity. However, these actions and tools have managed to induce, connect and mediate stable relationships with service providers. These providers received communication stimuli through digital media, links for interaction features and mediations that conveyed meaning to their work activity through the platform's resources.

In the same way, all the responsibilities of marketing management, service, operation, security and interaction were assumed by the entrepreneur/founder through the solutions and functionalities of the platform. Therefore, the consolidation of relationships happened precariously, not collectively associating consumption and service relationships, but only with the group of service providers. In this way, the actors of this consumption and service relationships did not combine their intentions, strengths, experiences and motivations to realize sharing practices (SCARABOTO, 2015).

On the other hand, in the rental goalkeeper case, the link between the platform and the service providers (goalkeepers) and consumers (teams) occurred stably. The platform's external and internal technical solutions developed the inductions, connections, mediations and flattening with goalkeepers and teams. The individual motivations and actions of the entrepreneur/founder contributed to the adhesion of these human and nonhuman allies. For example, the initiative and decision of the entrepreneur/founder to develop the activity and communicate with support from different applications of messages and social networks. These combined actions attracted and associated goalkeepers, media, teams, technical supporters and investors. Thus, the approach established between these actors happened due to the social and cultural practice (the passion of Brazilians for soccer) supported by information and communication technologies.

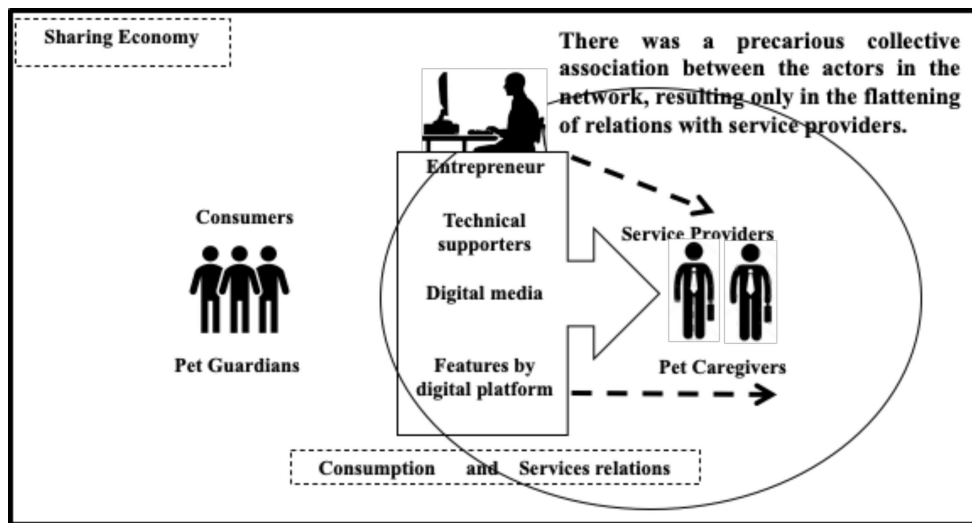
In summary, the establishment of consumption and service relationships comes from the motivations, actions, negotiations, productions and associations of consumers, platforms and service providers (BAJDE, 2014; CANNIFORD; SHANKAR, 2016; ECKHARDT et al., 2019).

## 7.4 Establishing Flattening in Consumer and Service Relationships

The episodes described, translated and analyzed present strait associations between heterogeneous actors, which result in a flattening of consumption and service relationships in the SE. Thus, various heterogeneous actors engage in consumption and service relationships at different times, situations and locations. In this way, consumption and service relationships are flattened through a strait association between consumers, digital platforms and service providers (BAJDE, 2013; SCHOUTEN; MARTIN; DUFAULT, 2015). Besides, *prosumers* (providers and consumers) associated with entrepreneurs, technologies and communication channels develop an association that results in a collective agency in the SE (BELK, 2014; PERREN; KOZINETS, 2018; ECKHARDT et al., 2019).

Therefore, the collective agency establishes inductions, connections, mediating and flattening in the relationships between artifacts and individuals. Thus, digital objects and individuals cooperate to form a sharing consumption (PERREN; KOZINETS, 2018). However, some associations between artifacts and individuals are precarious and do not result in flattening consumption and service relationships. For example, on the pet hosting platform, the actors participating in the consumption and service proposal did not flatten the links and, consequently, a stable collective association. The various actions, decisions and negotiations did not establish alliances in the socio-technical network. Thus, entrepreneur / founder, caregivers, technical supporters and partners committed themselves to the formation of the network, while the tutors of pets, partners and spontaneous media did not. Therefore, one of the reasons for the formation of a precarious association between caregivers, entrepreneurs, platforms and tutors may have been caused by the difference in the objectives of each one in the consumption and service relationships. Figure 56 exemplifies the unstable collective membership of the pet hosting platform.

**Figure 56: Precarious associations in the case of pet kennel rental**



**Source:** Created by the author

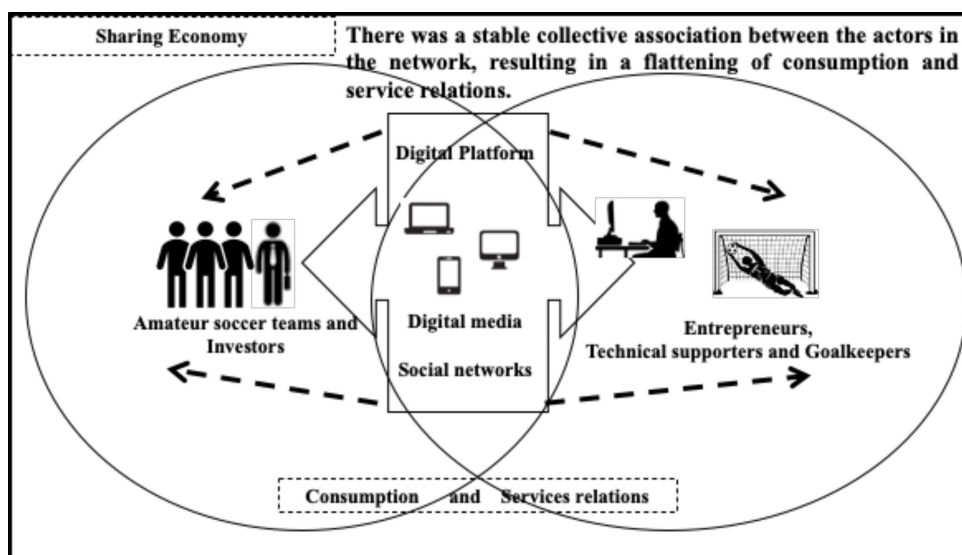
Although several attempts have been made to establish relationships between the actors, these have not stimulated recurrent experiences of consumption and service. While entrepreneurs and caregivers expected pragmatic, professional and economic returns, the pet tutors expected personal, emotional and experiential benefits. Thus, relationships were precarious without much participation and constant transactions with the pet tutors. Thus, social and technical behavioral attributes were not fully engaged to participate in sharing access-consumption (BREIDBACH; BRODIE, 2017; HAMARI, SJÖKLINT, UKKONEN; 2016). Therefore, artifacts can transport, transfer and mediate individual human actions, but these artifacts need to consolidate meanings for the operation, whether consumer action or not (BAJDE, 2014; CANNIFORD; SHANKAR, 2016). In other words, the consolidation of a network is not a single, fixed activity, but a continuous, narrow and collective movement between heterogeneous actors (BAJDE, 2013; BETTANY, 2016; CANNIFORD; SHANKAR, 2016; CALLON, 1984, LATOUR, 2011).

On the other hand, associations between consumers, platform and service providers, in the case of goalkeepers, identified flattening relationships. In this way, the associated actors collectively received and performed inductions, connections, mediating and flattening in the relationships. In this way, several actors participate in decisions, negotiations and alliances, resulting in a stable networked relationship for consumption and service practices. Consequently, the stabilization of the network occurred due to the interweaving of the objectives of humans (goalkeepers, teams,

founder, co-founder, supporters and investors) with the purposes of nonhuman (digital communities of amateur football players, social networks, traditional and digital media, solutions and platform resources). During this process, alignment of social, commercial and organizational interests has emerged, made up of the relationships between human and nonhuman actors. Thus, an association of actors occurs in a single network with similar interests, which combine their relationships (LATOUR, 1987; 2011; LAW; SINGLETON, 2013).

The actors' association, in the case of the rent goalkeepers, provided stimuli and combinations in an integrated manner with a dynamic association full of movements with mediations and flattening (BAJDE, 2013, LATOUR, 2011). Thus, these movements of heterogeneous actors establish inductions, connections, mediations and flattening in relationships. These actors have stimulated access to services and conceived consumer relationships in sports venues in different locations. In this way, access and connections of consumption and service are constituted and designed collectively with heterogeneous actors for different purposes and reasons (BARDHI; ECKHARDT, 2012; ECKHARDT; BARDHI, 2016). This access to services and consumer relations is sometimes promoted by football players (goalkeepers and teams) and sometimes by the solutions, mechanisms and resources of the digital platform. The alignment of interests provided relationships and experiences in a socio-technical network of consumption and service. Figure 57 illustrated this association.

**Figure 57: Collective associations in the case of goalkeeper rental**



**Source:** Created by the author

The dynamics of alignment of interests in the case of goalkeepers demonstrates a mediating and flattening of relationships, which establishes interactive experiences between all actors. These actors seek to carry out consumption and service actions and relationships by sharing motivations, skills and talents. For instance, to perform the amateur football match, the motivations, needs, desires and choices of human actors are combined (teams, goalkeepers, technical supporters and entrepreneurs); technological arrangements (connection devices, interaction applications, communication tools and payment facilities); booster amplifier (digital and traditional media, investors and sponsors). This sociotechnical arrangement develops a mobilization through different agencies, which establish mediating and flattening (BAJDE, 2013; LATOUR, 2005). The intertwining of these mediations and flattening develops interactive and shared experiences between objects and individuals in consumption (BAJDE, 2013; 2014; CANNIFORD; SHANKAR, 2016; SCHOUTEN, MARTIN, DUFAULT, 2015).

In this perspective, a cooperative association is performed by several elements for access, consumption and sharing (BARDHI; ECKHARDT, 2012; BELK, 2017; ECKHARDT et al., 2019). Thus, digital platforms' functionalities mediate and flatten consumers and service providers, but receive orders and actions from other stakeholders (BELK, 2014a; BAJDE, 2014b; HARVEY; SMITH; GOLIGHTLY, 2017) for example, entrepreneurs, technical supporters and investors with interests to monetize their financial and technical efforts through platforms, consumers and service providers. In contrast, service providers seek access, work, recognition and experiences with economic and social benefits (RAVENELLE, 2017). In this way, the diversity of motivations, interests and actions results in a cooperative association of heterogeneous actors for the realization of consumer and service relationships within the SE.

Therefore, technology influences and is influenced by the nature of individuals in society, consumption and experiences (BANDURA, 2002; TUMBAT; BELK, 2010; BAJDE, 2013). Likewise, consumption and experiences are assembled through a structured world and connected by individual, technical and material forces (CANNIFORD; SHANKAR; 2016). Thus, consumption and service relationships are mediated and flattened by platforms, practices, activities and motivations of individuals in the sharing economy. The technological platform in this context of sharing is not only

a component incorporated into a network but also a recipient and generator of influences, mediations and flattening (BANDURA, 2002; BAJDE, 2014; DE RIVERA et al. 2017). Thus, consumption and service relationships in the sharing economy occur due to this close association of technological, consumer and business actors. In short, the chain of processes exposed in these socio-technical networks of consumption and service leads the discussions to validate the assumptions of this thesis.

## **7.5 Resuming the premises and structure of mediation and flattening of relationships in the SE**

The analysis of both cases allowed us to observe a set of cooperative relationships of technological, consumption and business actors in the SE. For Eckhardt and Bardhi (2016), technologies and individuals cannot be seen in isolation in consumption relationships in the sharing economy. Thus, sharing consumption with technologies is supported by the ideas of Kozinets, Patterson and Ashman (2017, p. 6) "[...] the network of collectives involving technologies and individuals affects the desires of consumers, diverting it, directing it and moving it". Thus, this research assumes that the relationships of shared consumption analyzed occurred within this post-human consumption, constituted by digital and individual elements of the actors of consumption and service (KOZINETTS; PATTERSON; ASHMAN, 2017; PERREN; KOZINETTS, 2018). In this way, inductions and connections are developed and coordinated by the SE's multiple heterogeneous actors. Thus, participation in the sharing economy occurs due to relationships motivated by consumption and service actors, which may be coordinated, cooperated and even mediated by technological actors (BREIDBACH; BRODIE, 2017; PERREN; KOZINETTS, 2018; ECKHARDT et al., 2019).

The analysis of the researched cases shows how the induction and connection processes, coordinated by the digital platforms, occurred. Many of these processes were performed automatically through the platforms' mechanisms, while others were performed cooperatively with the support of the providers' and entrepreneurs' actions. Thus, the platform coordination process provides bidirectional and direct connections, balancing motivations and interests for participation in the SE (BELK, 2007; ECKHARDT; BARDHI, 2016). Thus, our consumption needs, desires and behavioral

emotions are induced through sophisticated and intelligent digital applications and objects (BANDURA, 2002; BAJDE, 2014; KOZINETS; PATTERSON; ASHMAN, 2017). Therefore, the participation in the SE occurs through technological tools that coordinate the inductions and connections of consumers and service providers through their notification, communication, interaction and evaluation resources (BASILI; ROSSI, 2020).

However, not all the situations analyzed presented continuous inductions and connections. To be specific, the consumers/tutors of pets in hosting platform expected links for comfort and security purposes, besides pure commercial intermediation. In contrast, the service providers/caregivers made connections with interest to generate their economic benefits with business transactions. Although the links had made participation and adhesions to the market, it did not consolidate stability for future relationships. On the other hand, connections in goalkeepers seem more stable due to the balance of playful motivations with sporting and commercial interests. Moreover, the goalkeeper platform's digital solutions supported the connection processes, by balancing the motives with the objectives of consumption and service actors. Thus, this dynamic with technological mechanisms can influence the more solid engagement of participants in the sharing economy (BREIDBACH; BRODIE, 2017; ECKHARDT et al., 2019).

Similarly, inductions occurred more stably in the case of goalkeepers due to the platform's role in transporting senses for the activity of rent goalkeeper. For example, the goalkeepers heard in the research sought recognition of the activity and membership in a community of amateur professionals. In this sense, the applications of ranking, communication and awarding transported sense for these feelings of recognition and belonging. The inductions are carried out through tools of notification, dissemination and evaluation of the platform for all goalkeepers and teams. This whole process was structured cooperatively, while in the case of hosting the pets, the process was stimulated only by the entrepreneur through paid digital media. Therefore, inductions and connections in the culture of access-consumption arise from the collective needs, motivations, demands and interests increased by technological action (BARDHI; ECKHARDT, 2012; BAJDE, 2014; KOZINETS, PATTERSON; ASHMAN, 2017).



Thus, the nonhuman agency of technological artifacts associated with consumers and service providers' human agency provides access, meaning and consumer experience (BAJDE, 2014; CAMPBELL; MCHUGH, 2016, BELK, 2017). In this way, participants in the sharing economy receive and carry out inter-relationshipal actions based on digital solutions that generate meaning, sense and intermediation (SIGALA, 2019; BASILI; ROSSI, 2020). Also, the design characteristics, associated with communication and evaluation mechanisms of the platforms, carry meanings for the practices of the SE through the inductions and connections. However, the inductions and connections occur due to cooperation between digital platforms' processes with the personal motivations of consumers and providers. Thus, platforms mediate inductions and connections in the sharing economy, supporting individual motivations through their digital mechanisms and solutions. For these reasons, the previous assumption P1 is confirmed.

**P1: Consumers and service providers participate in the sharing economy through inductions and connections mediated by digital platforms.**

The mediation of digital platforms in this study goes beyond the abstract. The analysis witnessed actions of the technological solutions carrying meanings and sense to the consumption and service experiences in the SE. The technological artifacts analyzed helped and produced interactive, experiential and shared relationships. Thus, the objects, solutions and technologies provide new dynamics in access-consumption culture (BARDHI; ECKHARDT, 2012; BELK, 2014b; KOZINETS, PATTERSON; ASHMAN, 2017). In the sharing economy, the dynamics of sharing depends on digital platforms' support with their solutions and resources. These digital solutions and applications mediate connections, communications, interactions, evaluates and consumer engagement with service providers (BREIDBACH; BRODIE, 2017; DE RIVERA et al. 2017; BASILI; ROSSI, 2020). Therefore, digital platforms transport and transfer meanings and sense by adjusting process in consumption and service relationships in the SE (BANDURA, 2002; BELK, 2010, APTE; DAVIS, 2019).

Thus, the mediation developed by digital platforms in the sharing economy occurs through their functions, mechanisms and solutions (SUTHERLAND; JARRAHI, 2018). Therefore, the platforms with technological structure (architecture, design,

functionalities and interfaces) mediate consumption and service relationships in the SE (DE RIVERA et al., 2017). This consumption and service relationships occur in an interactive, collective and shared dynamic (ECKHARDT et al., 2019). In this sense, digital platforms centralize and decentralize relationships between consumers and service providers (SUTHERLAND; JARRAHI, 2018). Therefore, the mediation of platforms occurs in access, connection, exchange, interaction and P2P transactions due to the resources and functionalities of notification, communication, evaluation, payments and operation (HARVEY; SMITH; GOLIGHTLY, 2017; BASILI; ROSSI, 2020).

However, mediation of sharing access-consumption also occurs through a hybrid dynamic of motivations, actions and engages (BELK, 2010; ECKHARDT; BARDHI, 2016). Thus, consumer and service relationships in the SE occur due to the motivations and attitudes of consumers and service providers supported, transported and re-signified by digital platforms (MOHLMANN, 2015; LAURELL; SANDSTROM, 2017). Likewise, Perren and Kozinets (2018) highlight the existence of balance or cooperation between the consumer and the technological actors to carry out consumer relations in the SE. The analyzed cases revealed this cooperation between the motivations, attitudes and actions developed by individuals of consumption, service and technology. These discoveries present a balance between the activities stimulated, carried out, produced and operated by human actors and by non-human actors. Thus, the motivations and relationships analyzed show plural and diverse mediations in this consumption of services supported by technological artifacts (BAJDE, 2014; BELK, 2017).

Thus, this thesis assumes that the focal actor mediating the network of heterogeneous actors in both cases was the digital platforms with their solutions, resources and mechanisms. However, these solutions, resources and tools were driven by the individual motivations, actions and operations of the business, consumption and service actors. Thus, consumption and service relationships occurred due to a combination of human and nonhuman factors (BAJDE, 2013). These social and nonhuman factors developed new relationship practices involving actions, processes, subjects, motivations and attitudes through which various and different consumption and production realities were constituted. Thus, these mediating entities were not fixed in the transformations, translations, distortions and modifications of

meanings and senses (LATOUR, 2011). In this way, a collective movement brought together other entities for consumption and service relationships in the SE. Therefore, the dynamics of consumer - platforms and providers, were distinct, but supported by similar practices, relationships and mediations structured collectively.

These sharing relationships translated into the two cases presented collective movements represented by spokespersons, individuals and artifacts. Thus, involvements and relationships grouped a body of allies, human and nonhuman, generating a similar behavior of interest to all involved in the practices and assembly of consumption (BAJDE, 2014; CANNIFORD; SHANKAR, 2016). In this way, mediation was made up of several actors (objects, individuals, techniques, contents) developed in the relationships collectively. For Latour (2005), mediation is constituted and represented by an entity or group of objects that circulate format and regroup practices, processes and social relationships in networks. Therefore, consumption and service relationships in the SE occur due to mediations assembled and supported by the various human and nonhuman elements in a single network in movement.

However, in both cases, platforms, solutions and resources have played a crucial role in generating process, access, sharing and business intermediation. The platforms analyzed were entities that stimulated and developed inductions, connections and engagements between consumers and service providers. The resources, facilities, mechanisms and digital solutions reduced feelings of uncertainty and risk, provided interactions and involvement, coordinated transactions adding value to shared businesses (ABRAMOVA et al., 2015; CAMILLERI; NEUHOFER, 2017; BREIDBACH; BRODIE; 2017; LAURELL; SANDSTRÖM, 2017). Nonetheless, these connections, communication, evaluation, reputation, categorization and transaction resources required actions from consumers, service providers, entrepreneurs, technical supporters and investors. In addition, the service consumption network was structured, assembled and mediated by collective and heterogeneous actions, forming technical-human mediation for the generation of consumption and service relationships (CANNIFORD; SHANKAR, 2016).

Consequently, this thesis accepts that digital platforms, communication solutions and social network mechanisms associated with consumers and service providers' motivations and attitudes mediate the consumption and service relationships in the SE. In this way, the structure of systems, mechanisms, contents, resources and

technological facilities support and transport motivations, feelings and attitudes for the realization of consumption and service relationships within the SE (BANDURA, 2002; DEL MAR ALONSO-ALMEIDA; PERRAMON; BAGUR-FEMENÍAS, 2020). However, the creation of meaning depends on the direct or indirect involvement of consumption and service actors in the sharing economy (BELK, 2014b; BREIDBACH; BRODIE, 2017). For this reason, the previous assumption - Digital platforms with their solutions, resources, tools, design and mechanisms, mediated in consumer and service relationships in the sharing economy, is not complete and is rewritten.

**P2: The consumption and service relationships in the ES are mediated by the combination of interests, actions, and mechanisms of the actors of consumption, business and technology.**

On the other hand, the flattening of relationships is formed from a combination of interests, actions and mechanisms from consumers, service providers and platforms. Thus, the dynamics analyzed show a close association between platforms, solutions, features, relationships, founders and consumers, technical supporters, investing partners, media and service providers. This close association results from a set of things emerging between the practices and relationships of consumers, suppliers and all the various technological materialities that happen in the relationships of consumption and service in this study (BAJDE, 2014; SCHOUTEN, MARTIN, DUFAULT, 2015). In addition, the motivations and demands of consumers and entrepreneurs, associated with the labor and productive forces of service providers, stimulate consumption and service relationships within the SE. These consumer and service relationships are supported by information and digital communication technologies, which continuously exercise processes of induction, connection, mediation and leveling between the actors of consumption and service (SCHOUTEN, MARTIN, DUFAULT, 2015).

In the same way, the spread of information and communication technologies makes it easier for consumers and service providers to meet their needs, desires and demands (KOZINETTS, PATTERSON; ASHMAN, 2017). In particular, with the increasing prevalence of the Internet and mobile access devices, people can receive and share useful information, content and services with little effort (BELK, 2010;

2014b). Such as this sharing is collective with free and paid exchanges and interactions, the interaction and bond between producers and consumers become more robust, and the boundary between each becomes less distinct (BANDURA, 2002; ECKHARDT et al., 2019). To illustrate, a consumer and a provider in both platforms analyzed have their motivations, their capacities, their power and personality to choose and produce one service or another, and certainly they did so at different times. Thus, the relationships of consumption and service actors are motivated and assembled in an interactive, shared, and spontaneous way, providing cooperation between consumers and service providers (BARDHI; ECKHARDT, 2016; PERREN; KOZINET, 2018).

Similarly, there is a variation in consumer needs and demands and in producers' efforts to meet these needs to a limited extent. To overcome this gap, consumers, provided with information, knowledge and skills, are becoming *prosumers* (ECKHARDT et al., 2019). For example, the entrepreneur in the pet hosting case also had the role of consumer, as he was the tutor of two cats. His motivation to develop the "Toca de Aluguel" platform arose from the need to connect his demand with caregivers who also were tutors of pets in a simple, agile, practical and close way. In the recent past, other successful consumers and entrepreneurs developed the Facemash platform, which aimed to compare photos of different students to choose the most attractive for future date relationships. In this way, Facebook starts with the personal needs and demands of Mark Zuckerberg and three friends. A similar situation occurred in the case of goalkeepers, where a consumer demand (goalkeeper relay in teams) connected service providers (goalkeepers) to perform a sporting activity.

However, platforms with solutions also choose the consumer and service provider, expanding the social world, by combining access, communications, senses, relationships and experiences (e.g., Airbnb and Uber). Thus, consumption and service relationships are adjusted to the continuous changes of the various businesses in the SE (CONSTANTIOU; MARTON; TUUNAINEN, 2017; APTE; DAVIS, 2019). The development of digital platforms and technologies are the driving force of this change (ECKHARDT et al., 2019). Market and consumption changes result from new demands, combined with further information and communication technologies, which stimulate consumers to participate in production and consumption activities

(RAVENELE, 2017; ECKHARDT et al., 2019). Therefore, digital platforms' materiality, combined with the motivations, actions and practices of entrepreneurs, consumers and service providers, produce a set of relationships in constant movement. This movement occurs collectively in a sociotechnical network full of human and nonhuman actors (LATOUR, 2011, LAW, 1992; LAMINE, 2017).

This material and non-material movement do not occur separately, but in a combination form. Thus, digital platforms, solutions, resources, mechanisms and functionalities expand and improve meanings, representations and experiences for consumers and providers (HAMARI; SJÖKLINT; UKKONEN, 2016; HARVEY; SMITH; GOLIGHTLY, 2017). Likewise, the resources, mechanisms, data and algorithms of digital platforms transport, influence and approximate production and consumption activities for individuals in sharing practices (ECKHARDT; BARDHI, 2016; ZUO et al., 2019, ECKHARDT et al., 2019). Thus, the platforms' dynamic resources facilitate connections, communications, interactions, transactions, segmentation and evaluations, which mediate and flatten relationships between consumers and service providers. Therefore, this study's consumption and service relationships were dynamically tensioned, straited and flattened between consumption, service and technological actors (BAJDE, 2013; SCHOUTEN; MARTIN; DUFAULT, 2015).

For these reasons, the findings analyzed in this study presuppose a vibrant and flattened assembly of consumption and service relationships. Relationships occurred through the different solutions, resources, functionalities, facilities and mechanisms of the platforms for hosting pets and goalkeepers for rent. Thus, digital solutions were associated with the motivations and interests of entrepreneurs, technical supporters, media, partners/investors, consumers and service providers. This association forms a network of actors with distinct identities, but with similar mobilizations and flattening, developed in social, organizational, productive or consumption practices (BAJDE, 2013; 2014). The association of actors is the result of an aggregated and multifaceted social world with vibrant records of social and material resources under construction and constant movement (LATOUR, 2005). Similarly, the network of actors analyzed is the product of translations in which one or more individuals have problematized an identity, action, practice or relationship to attract, involve and mobilize other resources in the projects. Thus, the consumer-platform-provider links analyzed constituted a whole, but with distinct senses, sensations, meanings and relationships.

The analysis of the two cases helped to understand networks under construction and production with different, but associated service activities, for similar reasons and relationships. Thus, all participants formed a close and collective association (consumer-platform-provider), which it is a unique actor-network (LATOUR, 1987). For example, the dynamics of flattening relationships in the pet hosting platform's case occurred at various times, from development to operationalization. In the development process, there were attempts of this flattening between the functionalities and solutions of the platform with the pet caregiver (providers) and tutors (consumers). Processes that occurred precariously make the network unstable, by not associating all the actors of consumption and service with the platform of hosting and caring for pets. However, stable flattening occurred in the relationship with pet caregivers, due to the technical and operational effort of the entrepreneur/developer with the help of technical supporters in the development of digital marketing actions and procedural support actions through the platform's features, resources and mechanisms.

On the other hand, the process of flattening relationships between goalkeepers, teams and others occurred in a stable, continuous and collective way since the project's conception. Thus, flattening of relationships occurred through access, communication, experience and use of the service. The motivations of the entrepreneur/goalkeeper, combined with the needs of consumers and service providers, provided experiences supported and collaborated by digital technologies and communications. For example, the goalkeeper platform's internal and external solutions, such as fan page, website, blog, social network profiles and video channels provided simple, easily accessible experiences that generated credibility and trust between goalkeepers (service providers) and football teams (consumers). Thus, consumption and service relationships were flattened not only by individual interests but also by the direct action of the mechanisms of notification, evaluation, scoring, segmentation and location of the digital platform. These digital mechanisms are coordinated by algorithms that use artificial intelligence to process data - notifications, communications, gamification and geolocation.

Hence, the analyzed consumption and service relationships have become integrated, mixed and mediated by platforms, applications and digital solutions (BREIDBACH; BRODIE, 2017; DE RIVERA et al., 2017). In this way, digital platforms develop a close consumption, which occurs through experiences designed and

produced in an integrated, continuous and collective dynamics (ECKHARDT; BARDHI, 2016; SCARABOTO, 2015). However, for Bajde (2013), there is no finished and durable consumption without iterative relationships between people, objects, facts and meanings that build subjects, objects, devices, spaces, processes, patterns and specific times. Therefore, the flattening of consumption and service relationships in this study occurs through a collective agency, represented by multifaceted actors, who share motivations, actions and relationships. For this, the previous assumption - Digital platforms with their solutions, resources, tools, design and mechanisms flatten consumption and services relationships in the sharing economy is not complete and is rewritten to.

**P3: The consumption and service relationships are flattened by combination of interests, actions and mechanisms of the actors of consumption, business and technology.**

As a result, the flattening of consumption and service relationships does not occur in the analytical interior of a context, but is constructed in social, cultural and technical practice in a movement (BAJDE, 2013; SCHOUTEN; MARTIN; DUFAULT, 2015; LATOUR, 2011). In this sense, any theory of adaptation and understanding of social change in the digital age must consider the dynamic interaction of technological developments and a variety of psychosocial, technical and material determinants (BANDURA, 2002; CANNIFORD; SHANKAR, 2016; BETTANY, 2016). In other words, the flattening of relationships is the fruit of the intertwining of techniques, practices, actions of digital objects with the needs and desires of consumers, service providers, entrepreneurs, between many other participants in the sharing economy. Thus, consumption and service relationships are flattened by the motivations, inductions, connections and mediations of technological and individual actors (BAJDE, 2013; 2014; CAMPBELL; MCHUGH, 2016; CANNIFORD; SHANKAR, 2016; PERREN; KOZINETTS, 2018).

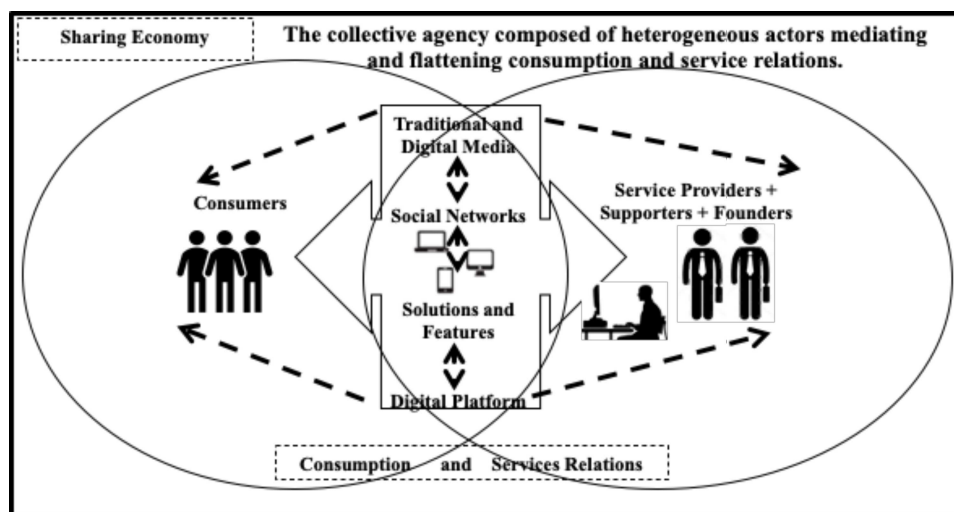
The set of actors in the sharing economy flatten consumption and service relationships. These actors develop a collective agency with shared functions, actions and objectives to develop consumption and service practices in the SE. In this way, the web of heterogeneous actors develops sharing practices, composed of



motivations, processes, communications, actions and activities for access, consumption and production. To illustrate, human actors (tutors, caregivers, teams, goalkeepers, entrepreneurs) take advantage of the facilities of connection, communication, interaction of technologies to carry out their activities and businesses, while non-human actors (technologies, solutions, media and social networks) ) appropriate the interests and actions of human actors to generate inductions, connections, engagements, mediation and leveling of relationships.

Every process takes place in a cooperative manner developed through a collective action composed of consumption, business and technology actors. Therefore, platforms researched and analyzed served as support to illustrate how the relationshipal phenomena of heterogeneous actors occur in the SE. Figure 58 shows these through the proposed framework.

**Figure 58: The collective agency develops mediating and flattening of relationships in the sharing economy**



**Source:** Created by the author

In essence, digital platforms automate consumption and service relationships between human actors (consumers and providers), mediating and coordinating attention, emotions and actions cooperatively and collectively (ECKHARDT; BARDHI, 2016; FESTILA; MULLER, 2017; PERREN; KOZINETTS, 2018). On the other hand, this process depends on the support of digital media, which helps in the occurrence of engagement through communication mechanisms with digital content and advertising. Besides, heterogeneous actors tighten consumption and service relationships by bringing these actors closer together, even if they are sometimes in different fixed

locations. Thus, the establishment of this flattening of consumption and service relationships in the SE can also reduce transaction, communication and use costs and uncertainties (ABRAMOVA et al., 2015; BARBE; HUSSLER, 2019).

In summary, this thesis identifies a collective agency in the SE, composed of consumption, technology and service actors. This collective agency motivates, induces, connects, mediates and flattens the SE's consumption and service relationships. Thus, the assembly of shared consumption, started from the mediation of the functionalities, resources, and mechanisms of the digital platforms, aggregated with the individual motivations and interests of human actors. These findings highlight, for the most part, the occurrence of a free association (CALLON, 1984), in which the actors participate in the production of consumption and service engagedly. However, in hosting the pet platform, this engagement between the actors was precarious and did not generate a flattening of the relationships of consumption and service. Specifically, the central argument of the thesis reveals flattened consumption and service relationships due to a collective process of engagement between human motivations and nonhuman actions.

Besides, ANT helps to describe better, translate and analyze how consumer roles, digital platforms and service providers assemble and flattening for the development of this collective agency. At the same time, ANT cannot explain how intermediation occurs without considering an interrelationship between human and non-human actors involved in a network (LATOUR, 2011; SHIN, 2016). In this way, the collective agency also receives one increment of other elements such as founders, technical support, digital media and social networks, forming a sociotechnical behavior in consumer and service relationships with functions, roles and forces in this network process. Therefore, these findings present intermediaries who are symmetrical representatives who "speak and act on behalf of others" to share processes, talents and processes. In this way, this collective organ reproduces, transforms and levels consumption and service relationships in a unitary process with service providers, digital platforms and consumers, developing and building sharing economy in a socio-technical context full of solutions, mechanisms, actions and physical and digital materialities.

Lastly, the next chapter presents the conclusions, implications and contributions to this thesis.

## 8 CONCLUSIONS AND IMPLICATIONS

The approach proposed by this study was to analyze how digital platforms were mediating and flattening the relationships between consumers and service providers in the sharing economy. Thus, the aim is to improve consumer and service relationships in the SE supported by digital platforms (HAMARI; SJÖKLINT; UKKONEN, 2016; BREIDBACH; BRODIE, 2017; ECKHARDT et al., 2019; BASILI; ROSSI, 2020). Thus, one challenge of this study was to discuss how consumption and sharing relationships are assembled, mediated and flattened between consumers-platforms-providers considering Actor-Network Theory (BAJDE, 2013; LATOUR, 2005).

In this way, the theoretical, methodological lens of ANT (CALLON, 1984; LATOUR, 2011), followed by the concept of flattening consumption (BAJDE, 2013; SCHOUTEN; MARTIN, DUFAULT, 2015), broadened the discussions on consumption and service relationships in the sharing economy (BELK, 2007; ACQUIER; DAUDIGEOS; PINKSE, 2017; ECKHARDT et al., 2019). In a space dominated by management theories, looking at and designing associations, mediations and flattening relationships between technologies, society and organizations have proved to be a complex analysis. Thus, the research confirmed the existence of a complex association, represented by consumer-technological-providing objectives in the assembly of consumption and shared services.

Therefore, this study addressed the calls and gaps of researchers dedicated to the development of research on the role of digital platforms in the relationships of consumption and service (BELK, 2014b; BAJDE, 2014; ECKHARDT; BARDHI, 2016; BREIDBACH; BRODIE, 2017; FESTILA; MULLER, 2017; KOZINETS, PATTERSON; ASHMAN, 2017; PERREN; KOZINETS, 2018; ECKHARDT et al., 2019; BASILI; ROSSI, 2020). Thus, the research highlights how consumption and service relationships in the sharing economy are motivated, assembled, mediated and flattened through the association of groups of heterogeneous actors translating interests, activities and processes. In this way, different actors take part in the associations through ways of thinking and acting that keep the network stable, unique and in motion (LATOUR, 1987; 2011). Thus, the application of the actor-network theory has helped to understand how associations occur with the characteristics of

consumers, providers, entrepreneurs, technical supporters and investor partners with the aspects of platforms, solutions, resources and digital mechanisms.

Also, communication actors, social networks, digital advertising materials, traditional media players, represented by television, radio and newspaper channels. Regarding methodological procedures, the actors were followed, described, detailed, translated and analyzed from the ANT perspective (CALLON, 1984; LATOUR, 2005; 2011). Therefore, applying ANT was one alternative to explain how inductions, connections, mediations and flattening of the relationships between heterogeneous actors occur in a network in the sharing economy.

In this way, these findings present the benefit of using ANT as a theory and method. ANT, as an approach, allowed a better understanding of how the association of human and nonhuman actors occurs in consumption and service relationships. This method inserted a perspective of analysis on the SE through two empirical cases. The review used in this study is valuable, as it emphasizes the motivations and interests of the actors (consumers, platforms, suppliers, solutions, entrepreneurs, supporters, investors and partners) and their power to influence a problematization, an attraction, an engagement and a mobilization (CALLON, 1984).

Therefore, these case studies sought to identify, describe, design, translate and interpret the interests, powers, tensions and practices that influenced the relationships between the actors of consumption, service, technology and business. The paths analyzed showed a flattening of the bonds provided by digital platforms and their broad solutions. Thus, digital solutions were absorbed and complemented by the network of human actors (entrepreneurs, consumers, providers, technical supporters, partners/investors and business partners). The contexts in the two cases researched received detailed descriptions, following translations and associations, wherever they could lead, perform and reveal with the help of actor-network theory and consumer culture (BAJDE, 2013; LATOUR, 2011).

Besides, the screening, descriptions, translations and analyses involved a careful and costly operation in understanding the "manufacture" and "configuration" of artifacts, symbols, subjects, content, communications, facts and relationships. Tracking these collective groups of actors with their cultures and agencies meant following and monitoring the complex relationships in their contexts of space, time, action, production and practices (BAJDE, 2013; 2014; BETTANY, 2016; BELK, 2017;

CANNIFORD; SHANKAR; 2016, LATOUR, 2015; 2011). In other words, many traits involved by cultures, meanings, symbols and agencies in a collective movement, which attribute an understanding that the sharing economy is beyond a sociocultural, cognitive action of individuals.

The association of the agencies, described, translated and analyzed, demonstrated a set of motivations, situations, activities and relationships sometimes set up and coordinated by humans and sometimes by nonhumans. Thus, for Kjellberg (2008) and Canniford and Shankar (2016), ANT attributes human actors a secondary role in the practices and relationships of consumption and service, revealing as protagonists the heterogeneous actors in a network. This heterogeneous network was revealed and translated in the cases of the "Toca de Aluguel" and "Goleiro de Aluguel" platform, through processes with distinct problematizations, *intéressements*, enrollments and mobilizations. In this way, several strategies helped collect images, videos, advertisements, postings on social networks, written in the field diary and individual semi-structured interviews. Thus, the process of translation and analysis, in the light of ANT, presented projects being idealized, structured, developed, operationalized and established in a socio-technical network with the participating elements' social and technical actions.

Regarding theoretical contributions, the first lesson learned is empirical-methodological, the use of an ANT lens for marketing management and consumption studies. The adoption of ANT practices to accompany the actors, through the snowball technique and in-person, non-in-person and Internet observations, helped to understand the SE phenomenon. ANT's methodological procedures corroborated the mapping of the two researched networks, allowing revealing and better understanding how inductions, connections, mediations and flattening of the relationships between the actors that compose them occur. By following and translating these different relationships, distributed in contacts, inductions and negotiations, the flattening of the ties between this consumer-platform-provider triad became visible. The adoption of these techniques, together with the translation techniques of CALLON (1984), contributed to understand how mediation and leveling in consumption and service relationships occur in the sharing economy. ANT's comprehensive method provided a wealth of details, descriptions and analyzes of how SE enrollments and relationships occur.

Another lesson and theoretical contribution in this thesis concerns the use of ANT as a theory and as an analytical lens applied in a longitudinal study to illustrate consumption and service relationships in the sharing economy. This approach may inspire future applications of this lens in applied research on organizations, consumption and technology. The theoretical lens aimed to go beyond problematization and mobilization, by highlighting the assemblages and associations of consumption and service relationships in the SE. The research findings, supported by the ANT lens, help to build a new look at how to analyze the processes of motivation, development, technology design, implementation and operationalization of organizations, consumption and services in the SE. These interactions and relationships between human and technological, associated with consumer cultures, offer and introduce lenses on how these motivations, inductions, connections, mediating and flattening relationships occur at micro levels within a heterogeneous network (BAJDE 2013; 2014; SCHOUTEN; MARTIN, DUFAULT, 2015).

Although the theoretical lens of ANT is introduced at the micro-level, this lens has also been extended to assist in the formulation of the framework proposed in the thesis. The study extended and translated how the network was motivated, assembled, stabilized and disassembled by the system of consumption and service actors. The in-depth study, carried out through methodological processes, found that ANT is a promising theoretical vehicle for research related to the collection made up of consumers, digital platforms, service providers, entrepreneurs, investors, media, developers, consultants and marketers. ANT offers marketing researchers and consumers the next steps to understand the motivations, connections, mediation and flattening of the relationships between these groups, individuals and technology, in a way that helps and simplifies the complexity of trajectories, practices and network initiatives, consumers and services within the SE.

Furthermore, the results of this study show the benefit of ANT incorporating contextual analysis of the sharing economy in which they perform diverse and multifaceted consumption and service relationships. The contextual analysis used in this study is valuable, because it emphasizes the interests of the actors and their powers to influence an enrollment. For example, the willingness of actors to participate in associations and the translation of inductions, connections, mediations and flattening and their propensity to relate in a collective and shared way. While the Actor-

Network approach shows how cases and trajectories develop and actors are enrolled in the actor-network, the contextual approach emphasizes flattened relationships between social, technological, economic and market groups. Therefore, the theory added to the SE context served as a backdrop for the development of the theoretical framework and the assumptions of this thesis.

The third contribution empirically applied the concept of flattening in consumption associated with technological objects defined by Bajde (2013). Thus, the study sought to adapt the concept in both studies to deepen the understanding of the SE's consumption and service relationships. In this way, the two case studies' findings identified individuals of consumption, service, business and technology, combining motivations, interests, actions and mediations to flatten the relationships of consumption and service in the SE. The case analyses presented several movements represented by the consumption and service actors, but mainly by the technological actors through their digital solutions. These digital solutions establish close relationships between consumers and service providers with support from other actors, such as entrepreneurs, technical supporters and communication channels. Thus, the study advances the concept highlighting that flattening occurs because of a collective movement of consumption actors. Therefore, the empirical application of Bajde's proposal (2013) helped reveal a collective agency within the SE composed of consumers, technology, service and business actors.

This thesis advances the discussion of Bajde (2013) and Schouten, Martin and Dufault, (2015) on how flattened associations occur between technological objects and individuals in consumption assembling. The research evidence highlights that flattening associations are stimulated by human actors (consumers, service providers and entrepreneurs), but coordinated by nonhuman actors represented in this thesis by digital platforms. Thus, digital platforms and broad solutions bring together unknown people to establish relationships of consumption and service playing the role of mediating needs, desires and feelings. These arguments are also supported by Kozinets, Patterson, and Ashman (2017, p. 54).

In a world with nearly 7 billion cell phones, over 3 billion Internet users, and over 1 billion daily active Facebook users, access to platforms and networks of desire is nearly ubiquitous. Perhaps we no longer need orgiastic festal gatherings in distant locations; the gigantic bonfire of our desires is online, all the time. If our findings hold to be true, and these networks channel desire

into certain interests, deterritorialize desire from bodies to technology networks, and amplify the expressive extremes that transgress normative boundaries, we should expect to see them playing an increasing role in the destabilization of our cultures, traditions and other social systems.

Therefore, all the processes analyzed empirically demonstrate the occurrences of this world structured by motivations, needs, desires and human interests associated with technologies and digital communications. Thus, the collective agency composed of providers, technology and consumers is a reality today in the sharing of services due to the global pandemic of Covid19 (MARTINS, 2020). For example, brands focused on real-time commerce and service experiences, such as dynamic websites, have higher engagement rates due to the action and relationship with consumers and suppliers (SWEEZEY, 2020). Another example is schools around the world, where teachers with knowledge have become part of the platforms and students, masters of these teachers because of their knowledge and experiences with online platforms. Likewise, buyers have become sellers of products and services with message support, social networks and service platforms connecting restaurants, pharmacies and supermarkets with independent distributors (SWEEZEY, 2020).

Likewise, our current situation is a meaningful and lasting change for personal and consumer relationships. These changes have led the whole world to a new baseline of motivations, expectations and attitudes (SWEEZEY, 2020). Thus, new habits are being formed and structured, but, more importantly, new expectations have been established with the support of digital technologies. Marketing management and specifically, consumer behavior studies need to analyze how the relationships and experiences between consumers, technologies and providers occur (MARTINS, 2020; SWEEZEY, 2020). Thus, the collective agency identifies in this thesis the development of a presumption, complemented by digital technologies, for sharing content, information, music and access to essential services, access to entertainment, medical care and psychological care focused on sharing collective experiences. The proposed and reformulated theoretical assumptions and framework advance the discussion of this human-machine duality in consumer relationships (CANNIFORD; SHANKAR, 2016). In this way, this study also contributes and expands the discussions on the role of digital platforms in the SE. The results present digital platforms with the central role in these relationships, transporting meanings and carrying symbols through their communication mechanisms, content and interaction. Thus, platforms centralize



bureaucratic processes, decentralize relationships and develop engagement between the other actors of consumption and service. However, the analyses and discussions have illustrated developments in a collective and non-fixed movement, because of the multiple actions, processes and relationships between individuals and technologies in the SE. Thus, the collective and non-fixed agency, resulting from mediated and flattened relationships between the complex subjects of shared consumption of services, is formed.

Collective agency is stabilized by the many ideas, actions, processes and activities practiced by human and nonhuman actors. Thus, individuals' relationships are mediated and flattened by technological forces, but receive motivations, inductions, connections and meanings from human individuals. In this way, digital platforms in the sharing economy help and promote mediations of individual sensations of belonging, recognition, pleasure and trust. However, these technologies, solutions and digital mechanisms alone cannot stabilize and flatten the SE's consumption and service relationships. Thus, the theoretical deepening to understand how consumption and service relationships are mediated and flattened by digital platforms in the SE has shown an alternative path constructed in the social, cultural and technical practice. Therefore, a framework is proposed, followed by theoretical assumptions, to illustrate how relationships are mediated and flattened in the SE in the consumer-platform-provider triad, which identifies a collective agency named in this thesis as **protechsumer**.

Concerning practical implications, the findings provide strategic and tactical guidelines for business development and operation within the SE. The analysis performed in this study reveals that the inductions, connections, mediations and flattening between consumers and providers result from visible and invisible relationships involving needs, senses, symbols and desires. For Kozinets, Patterson, and Ashman (2017), the needs and desires of consumption of services involve understanding and allocating resources in processes, practices and technologies combined with collective actions. Collective actions are the association between human and nonhuman actors revealed in this study. Besides, the collective action, provided by technological artifacts, combined with individual cultures and movements (consumers, providers, entrepreneurs, supporters, between others), resulting in a continuous process, aimed at making consumer relationships more direct and easily

accessible to people and for the market (ECKHARDT; BARDHI, 2016; ECKHARDT et al., 2019).

However, it is challenging to make abstract concepts visible in marketing and consumption management practices, because of differences in perceptions deeply rooted in social and individual opinions. Thus, consumption and service relationships in the sharing economy receive ultimate meaning and attention to market and public interest transactions. Therefore, this study captured how these relationships occurred and how technology with its devices, solutions, systems, design, mechanisms and algorithms establish relationships, interactions and engagement between consumers and providers. Digital platforms and their solutions develop and sustain strategies of cooperation between consumers and providers through processes of participation, segmentation and gamification. These participations, segmentation and gamification processes are tactically coordinated through the sharing of connection, communication, notification, interaction, evaluation and prominent resources.

The sharing of interests, actions and relationships occur through a mediated and flattened process that coordinates the relationships between the actors generating involvement, communications, cooperation, and sharing in the market access (PERREN; KOZINETTS, 2018). This cooperation, provided by platform solutions in practice, is a collective process shared by all actors in the establishment of consumption and service relationships in the SE. This engagement is provided by the relationshipal consumer-platform-provider triad, which goes beyond the pure technological intermediation. Thus, this collective movement promotes and disseminates a new digital culture, whose main objective is the valorization of the assembly of services, through the development of solutions, learning and collective resources that can support the strategy of this type of business in the sharing economy.

Therefore, when combining characteristics, motivations and actions of consumers, providers, entrepreneurs, developers, investors and supporters with the resources, mechanisms and solutions of digital platforms, we have technosocial cooperation. In this way, technosocial cooperation is promoted and coordinated through motivations, solutions, data and algorithms. Thus, there may be a cooperative relationship with shared and private benefits between the actors in the sharing practices, triggering tensions, collaborations and flattening relationships (PERREN; KOZINETTS, 2018; ECKHARDT et al., 2019). Therefore, digital platforms can

transform, mediate and influence interaction, communication, relationship and involvement between the SE participants. These processes occur through the text, image, video and communication functionalities of the platforms and digital solutions. Digital platforms, consumers, providers, supporters and investors centralize and decentralize actions and interactions through motivations, communications, resolutions, exchanges, tools and algorithms (PARKER; VAN ALSTYNE; CHOUDARY, 2016).

Likewise, the solutions carry meanings, symbols and sensations between the actors of consumption and production through connections, virtual and face-to-face interactions of message, content or communication. These involve approaching technological solutions and engaging consumers, suppliers, entrepreneurs, developers, supporters and investors in relationships that all walk together and close sharing, cooperating and competing. Thus, social, economic, market and technological structures need to be developed, assembled and made available through content, communications and digital functionalities. Business managers in the SE need to invest in intelligent systems for gamification, segmentation, evaluation and communication, developing and promoting relationships through a culture of cooperation and competition. These managers need to engage consumers and providers through their needs, motivations and experiences in sharing access-consumption.

Some limitations are inherent to the study presented in the thesis. In this sense, identifying, tracking and translating the consumption and service relationships supported by the analyzed platforms proved to be a considerable challenge. The researcher's long-term involvement (52 months) may also affect the choice, description, translation and interpretation of results. The researcher's participation in one of the cases researched may have caused some inference in the contents described, translated and analyzed. Another relevant aspect was the poor access to the behaviors and actions of consumers/tutors of pets in the case of the pet hosting and care platform. However, in the case of goalkeepers, there were many facts, paths and materials analyzed, which could have been deepened from participating observations as performed in the case of pets. Moreover, a collective study, composed of several researchers' views, may broaden the discussions presented in this thesis.

These limitations should be addressed in future studies in contexts that can improve how to minimize the deficiencies performed in this research.

Likewise, the study partially adopted ANT as a research method. The theoretical-methodological descriptive and narrative approach of ANT (BETTANY, 2016; SHIN, 2016) could have been further explored, e. g. the use of the translation methodological procedure (CALLON, 1984) solely, instead of others such as *enactment* (LAW, 2004) or controversies performed in distinct realities and consumption (MOL, 2002; CANNIFORD; SHANKAR, 2016). However, although ANT is a narrative for the development of storytelling in case studies (CALLON, 1984), this method made it possible to understand and analyze the assembly, association, flattening and stabilization of relationships in the networks of structured actors in the two cases studied.

Future studies may extend these findings beyond the Brazilian cases, deepening in other contexts, businesses and cultures. An alternative is to analyze the occurrences of the establishment of these mediating and flattening relationships by a collective agency in social, where companies have distinct characteristics or market contexts where high competition occurs. A third alternative may be to analyze how this mediating and flattening of consumption and service relationships occur in the SE by crossing similar cases into distinct realities. Another may be implementing the techniques and analyses from the beginning of the development of a platform to its operationalization, taking part in the practical process longitudinally. Although there are distinct ways to implement them, it is necessary to add to the study analyses of platforms that involve sharing goods rather than services to understand the occurrence or not of the same situations, evidence, findings and applications.

Thus, this study leaves open questions that can be asked in future research, such as: What are the antecedent and consequent processes that help the actors to get involved in the sharing economy? How does the orchestration of cooperation between consumers, digital platforms and suppliers occur in the practice of sharing durable goods? How is the collective agency called *protechsumer* (consumers, digital platforms and service providers) transforming and adjusting consumer experiences in the sharing economy? These issues concern the broad social arrangement associated with ICTs, which participate and execute digital transformations in society, in the economy and consumption (BANDURA, 2002; CHEKWA; DANIEL, 2014; BAJDE;

NØJGAARD; SOMMER, 2019). Thus, ANT's methodological procedures can support the expansion and dissemination of these dual issues (man and technology) in consumer culture (BAJDE, 2014; CANNIFORD; SHANKAR; 2016; BELK, 2017; PERREN; KOZINETS, 2018; DA SILVEIRA; HOPPEN, 2019).

Therefore, interpretative case studies can reveal how collective agencies are formed between digital platform services and goods such as Uber, Airbnb, Zipcar, Ebay, or others with their consumers and service providers. This type of method is best suited for case analysis involving information systems (IS), information and communication technologies (ICTs), and consumer cultures in their production, use and consumption contexts. ANT can support and extend these future proposals. ANT has a variety of tools and data collection methods that can develop interpretative case studies in marketing and consumption field involving technological objects. Thus, suggestions are to use observations, in-depth interviews, focus groups, netnography and document analysis as support procedures for discoveries.

Hence, these findings highlight several questions that remain unsolved, developing controversial in this context of the SE. For example, how do motivations, collaborations and engagements with digital platforms for services and exchange of goods happen in different situations and contexts? How does consumer culture, which researches materiality, dichotomies between man and technological objects and post-human relations, deepen the discussions about behavior in SS practices and relationships? Canniford and Shankar (2016) defend a broader debate about the contradictions in the dualism that exists between consumer and technology in the culture of consumption. While Perren and Kozinets (2018) further expand how collaborations in consumption occur between technological and human entities. These questions are also necessary to study how technocapitalism works, which shapes and amplifies the needs and desires of consumers and suppliers of products and services at SE (KOZINETS; PATTERSON; ASHMAN, 2017).

Thus, advancing the discussions on post-human consumption brings benefits and damages to our social, economic and daily consumption lives. Future investigations that can analyze how presumptions become **protechsumptions**, in which technologies take part in this collective agency, acting in the standard agreement or resignifying our social, economic, political and market structures. For this reason, Belk (2014, p. 488) recognizes the possibilities of an "extended aggregate self", whose

"self-transcending possibilities are amplified in the digital world" once by the individual attitude, once by the information and communication technologies aggregated to this sharing economy context.

Thus, these findings are necessary to broaden the analysis of how the cooperation of the collective agency encourages relationships with consumers, services and products within the SE. For example, to analyze changes in the attitude of consumers and service providers regarding the effectiveness of functions, resources, mechanisms of digital platforms for carrying out consumption and working activities. Therefore, seeking to discover how the collective agency - protechsumer - promotes the mediation of individual feelings of belonging, recognition, pleasure and trust in the SE. Finally, this can be achieved, by replicating the structure of this study at different times, cultures, contexts, markets and business models of the sharing economy.

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## APPENDIX I - CASE STUDY PROTOCOL

The case study protocol was structured following the suggestions of Latour (2005) and Callon (1984) and with the aim to **translate and analyze** the following elements and contexts in light of Actor-Network Theory. The approach adopted in this research was the qualitative one, in which participant observation, non-participant observation, semi-structured interviews, and social network research were employed as data collection techniques. This methodological path was in accordance with the theoretical and methodological principles of Actor-Network Theory. By adopting ANT as a theoretical lens and methodological guide, it was used as a basis to follow actors (LATOUR, 2005) through the network in motion that transforms and transports meanings and actions. This thesis focused on translating the actions of the heterogeneous network of actors (human and nonhuman) enabling them to tell their own stories, thus exposing their movements, actions, transformations, and stabilization. Besides this, to work out this process the research tried to answer the following research questions:

1 – Research question: **How do digital platforms mediate and flatten the relationships between consumers and service providers in the sharing economy?**

1.1 – Auxiliar question:

**AQ1** - In what way are digital platforms mediating and flattening services and consumption relationships in the sharing economy?

2 – To answer these questions this research tried to achieve the following objectives.

2.1- **Main goal:** Analyze how digital platforms mediate and flatten relationships between consumers and service providers in the sharing economy.

2.2- **Specific aims:**

- Draw how to happen relationships between consumers and providers (humans) when mediated and flattened by digital platforms (nonhumans) in the sharing economy;
- Describe how resources, mechanisms, and tools of digital platforms mediate and flatten relationships between consumers and providers in the sharing economy;
- Analyze how the service relationships of service providers are mediate and flattened by digital platforms in sharing economy;

- Analyze how the consumption relationships of consumers are mediate and flattened by digital platforms in the sharing economy.

### 3 – Search Elements

The selection criteria for choosing the elements of this research took into account the expansion of knowledge about the role of digital platforms in the sharing economy. The chosen path takes into account analyzes through an instrumental case study (STAKE, 2005).

Following the recommendations of Stake (2005) without a specific interest in the cases but recognizing that these can be useful to achieve the objectives determined for this thesis research. Thus, the cases were chosen to understand how digital platforms mediate and flatten consumption and service relationships in the sharing economy.

- a) Case study Toca de Aluguel – Pet Kennel Rentalplatform;
- b) Case study Goleiro de Aluguel – Goalkeeper Rental platform.

### 4 – Data Collection Procedures

- a) Participant observation for 8 months as part of the Pet hosting platform (Pet Kennel Rental) management team, following and holding meetings, developing actions in social networks and the application;
- b) Non-participant observation for 6 months through following and analysis of the website, social networks, and platform app. – Goalkeeper Rental;
- c) Interviews with 43 actors in total from both platforms (23 interviews by Pet Kennel Rentalplatform and 20 interviews by Goalkeeper Rentalplatform) for primary data collection through open interviews with consumers, providers, entrepreneurs, and technical supporters;
- d) Documentary collection through secondary data from external sources available in newspapers, social media, and specialized websites and commercially available reports

Questions, observations and documentary analyses were based on the following elements:

**Table 13: Data collections elements**

Element label	Definition	References	Data collection
Motivations and interests	Consumers, services providers, and entrepreneurs (human actors) attitudes and motivational characteristics in participating in the SE.	BELK (2014a); SCHOR, (2016); HAMARI; SJÖKLINT; UKKONEN (2016).	Interviews, Social networks and Observations.
Access service or solution.	Access services, solutions, and products through peer-to-peer interactions, eliminating intermediaries in sharing practices.	ECKHARDT; BARDHI (2012); BOTSMAN; ROGERS (2011).	Interviews, Observations, and Documentary analyses.
Platform characteristics	Resources, tools, design, algorithms, and mechanisms of the platforms to connect, engage, mediate, and orchestrate the relationships between consumers and services providers.	BREIDBACH ; BRODIE, (2017) ; DE REUVER ; SØRENSEN ; BASOLE (2018) ; SUTHERLAND ; JARRAHI (2018).	Interviews, Observations, and Documentary analyses.
Connections	Links between consumers and service providers through the dynamic processes provided by the interfaces, functionalities, and mechanisms of the platform. These connections happen due to the communication, interaction and relationship resources of digital platforms in SE.	CANNIFORD; SHANKAR (2016); BREIDBACH; BRODIE, (2017); DE RIVEIRA et al. (2017); SUTHERLAND; JARRAHI (2018).	Observations, Social networks, and Documentary analyses.
Inductions	Stimuli performed form directly and indirectly to connect consumers and service providers. The stimuli happen through resources, tools, and mechanisms of communication, content, and relationship of platform.	BELK (2014b); CANNIFORD; BAJDE (2016); SCHOR (2016); DE REUVER ; SØRENSEN ; BASOLE (2018) BASILI ; ROSSI (2020).	Observations, Social networks, and Documentary analyses.
Platform mediation	Influential action of the digital platform in transporting meanings and senses to establish relationships between consumers and service providers. Digital platforms mediate the relationships between consumption and service through their resources, functionalities, mechanisms, and design.	BREIDBACH ; BRODIE, (2017) ; DE RIVEIRA et al. (2017); LAMINE (2017); SUTHERLAND; JARRAHI (2018) ; BASILI ; ROSSI (2020).	Interviews, Observations, Social networks, and Documentary analyses.
Consumption and Service relationships	Existing results of the relationships between consumer, platform, and service providers after stimuli, links, mediations, and flattening. Consumption and service relationships are developed through individual, technological and organizational in SE.	BELK (2014a; 2014b); ECKHARDT; BARDHI (2016) OSTROM (2015); APTE; DAVIS (2019); ECKHARDT at al. (2019).	Interviews, Observations, Social networks, and Documentary analyses.

**Source:** Created by the author

## 5 – Data Analysis Procedures

Based on this data collection procedure, this study used Callon's proposal (1984).

**Table 14: Translation methodological approach**

Methodological approach	Definition	Procedures	References
Translation	Involves the alignment and materialization of interests in the network of actors, that is, the methods by which an engages others lists (enrolling) certain interests and intentions that can lead to some mediation or flattening of a phenomenon.	For this, the material collected from the two cases analyzed will be organized in chronological order and by case - digital platforms, consumers and service providers - in order to allow the reconstruction of the chronology of events and situations, as well as the intersection of information between the cases and actions of each platform and its visible and invisible resources, systems, and tools on the connections, inductions, mediation, and flatten relationships with consumers and service providers in SE.	BAJDE (2013); CALLON (1984); LEE et al., (2015); SHIN (2016).

**Source:** Created by the author

Thus, the data and assumptions were analyzed as follows:

- a) Transcribing the interviews with consumers, service providers, technical supporters, and entrepreneurs and separated according to the trajectory in each case in a total of 201 pages (114 pages Pet Kennel Rental case and 87 pages Goalkeeper Rental case);
- b) Transcribing participant and non-participant observations that were and noted in notebooks and recorded in audios, totaling 370 hours of observation (280 hours of observation at Pet Kennel Rental Case case and 90 hours at Goalkeeper Rental case). Besides that, 131 pages noted in 4 field diaries (89 pages at Pet Kennel Rental case and 42 pages at Goalkeeper Rental case);
- c) Cataloging and saving images, videos and photos that we're following on the social networks of entrepreneurs, supporters, and these two platforms totaling 42 pages with 70 figures (35 Pet Kennel Rental case and 35 in Goalkeeper Rental case);
- d) Data collected were all organized and openly coded, by platform, by type of actor, trajectory, and actions that set up and stabilized the network;
- e) A general reading of the finds was performed, and the convergence points were identified in the cases;
- f) The events and trajectory of the two case studies were chronologically transcribed;
- g) The translation process recommended by Callon (1984) was performed to understand the dynamics between the actors identified in the trajectory of each case;
- h) The obligatory passage point, each case study was defined to identify and deepen the convergences and divergences of each path followed.
- i) Following this, the trajectory with the idea, design, development, implementation and approximation of the platforms with consumers and service providers was reconstructed from January 2015 to September 2019, through the translation process and its four phases (problematization, intéressement, enrollment, and mobilization).

**Table 15: Translation process phases**

Four phases on the translation process	Definition	References
Problematization	"How to become indispensable". This situation occurs when one or more visible or invisible actors define through their identities, actions, engagements, and relationships the nature of the problem and establish the roles of the others involved in the network to adapt or reformulate the proposed objective. In this study, described how and in what way digital platforms are mediate and flattening consumers and service providers relationships in SE.	CALLON (1984); LATOUR (1987); LEE et al., (2015); SHIN (2016).
Intéressement	Consists of the actions of the principal actor that convinces the other entities or actors to agree to the interests defined for them in the network. Thus, paths and incentives are established that try to impose, stabilize, mediate, mount, or flatten the relationships between the actors according to the main actor's proposal in the problematization analyzed. Besides that, intéressement process often involves negotiations between actors. This research seeks to analyze how digital platforms through their resources, data, functionalities, algorithms, design, and mechanisms connect, mediate and induce consumers and service providers to engage, relate and participate in sharing economy.	CALLON (1984); LATOUR (1987); SARKER et al., (2006); LEE et al., (2015); SHIN (2016).
Enrollment	The moment in which the actors' visible and invisible roles and actions are described and defined, which can be coordinated through a determined alignment of interests in human and nonhuman in the network. Establishes the role of human actors (consumers and service providers) and the visible and invisible resources and functionalities in the process of relationship mediated and flattened by the main actor (digital platforms) in this analyzed context of SE.	CALLON (1984); LATOUR (1987); SARKER et al., (2006) LEE et al., (2015); SHIN (2016).
Mobilization	The stage at which the masses of actions, processes, and relationships are represented by some actors or intermediaries, who are spokesmen of the others involved in the various collectivities assembled in a network. In order to achieve this objective or representation, there is a process of negotiation, exchange and sale of ideas, mobilization of interests, which are developed, enrolled, and mediated throughout the movement of the network or in the network itself. In this research, the burn question is to answer How do digital platforms (nonhuman) mediate and flattening the relationships between consumers and service providers (human) in the sharing economy? Thus, analyze how the main actor (digital platforms) mediate and flatten relationships between consumers and service providers.	BAJDE (2013); CALLON (1984); LATOUR (1987); SARKER et al., (2006) LEE et al., (2015); SHIN (2016). SUTERLAND; JARRAHI (2018).

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Thus, to support this process is necessary to reveal the obligatory passage point. OPP refers to an event that must happen in order for all of the actors to satisfy the interests that have been attributed to them by the focal actor. In this case, the focal actor defines the OPP which the other actors must pass through and that permit that this focal actor becomes indispensable (CALLON, 1984). The OPP thereby becomes a necessary element for understanding how the digital platforms mediate and flatten relationships between consumers and services providers. In this logic of thought, Callon (2008, p. 308) emphasizes that this relationship "is a simple as well as the fundamental notion" that "although much worked, in the end, little was explored".

## **APPENDIX II – RESEARCH SCRIPT**

Semi-structured open questions roadmap: Exploratory interviews

Name:

Genre:

Age:

Occupation:

City:

State:

### **1 – Consumers**

- a) What are your main motivations, interests, and reasons for using the sharing XXX service?
- b) How did you use these sharing XXX services?
- c) What functional resources of the XXX platform apps and websites would you highlight in their use?
- d) Which details of the colors, images, and design of applications and websites are most appealing to you?
- e) Is the color XXX relevant for application choice? Why?
- f) What relevance do you consider for images and videos with recommendations from people who have sharing platform XX services?
- g) Do you use the XXX or XXX application messaging tools to communicate with other users, providers and even rate the services provided by the third parties involved in the business offer?
- h) What benefits and perceptions do you have about your experience and use of sharing XXX services?
- i) Do you use the evaluation and reputation tools offered by the applications?
- j) Do you use the promotional and discount codes provided by the apps?
- k) What were the relevant experiences and benefits of using this service?

### **2 – Service Providers**

- a) What are your main motivations and interests in being a sharing XXX service provider?
- b) How did you hear about these sharing XXX services?

- c) What drew attention to joining this type of community of sharing XXX service providers?
- d) What functional resources of applications and websites would you highlight in their use?
- e) Which details of the colors, images, and design of apps and websites draw your attention to your business?
- f) Is the color XXX relevant for application choice? Why?
- g) What relevance do you consider for images and videos with recommendations from people who have sharing platform XX services?
- h) Do you use the XXX or XXX application messaging tools to communicate with other users, providers and even rate the services provided by the third parties involved in the business offer?
- i) How importance Are you attribute to interaction and evaluation?
- j) What are the benefits and insights you have about the experience of offering your products and services through the platform?
- k) Do you use the evaluation and reputation tools offered by applications?
- l) Do you send platform discounts and promotional codes available to customers?
- m) What are the direct benefits of joining this community of sharing XXX service providers?

### **3 – Technical Supporters and Entrepreneurs**

- a) What motivations and interests would you highlight that make customers and providers use their services available on apps and websites?
- b) Why do you think people participate in this type of sharing XXX service?
- c) How do the recruitment process and or connection with consumers and service providers take place?
- d) What are the processes used to connect and engage with consumers and service providers?
- e) What functional resources and tools of these applications and websites would you highlight?
- f) How do the color, image and design particularities of applications and websites impact the offer and recruitment of new customers and partner providers?
- n) What is the role of messaging and interaction tools in connecting, relationship, and retention of clients and providers?



- o) What are the impacts of the benefits of use, reputation and experience on relationships with customers and providers?
- p) Do promotional discount codes and promotional messages impact customer and service provider connection and retention?
- q) What are the relevant practices and experiences in using this service?
- r) What else could you highlight in your services that impact the connection, relationship, and retention with your customers and providers?
- s) What are the benefits of using the services through the platform?

## APPENDIX III - CODEBOOK

Codebook developed to analyze the exploratory interviews, observations, and documentary data for the two study cases.

**Table 16:** Codebook

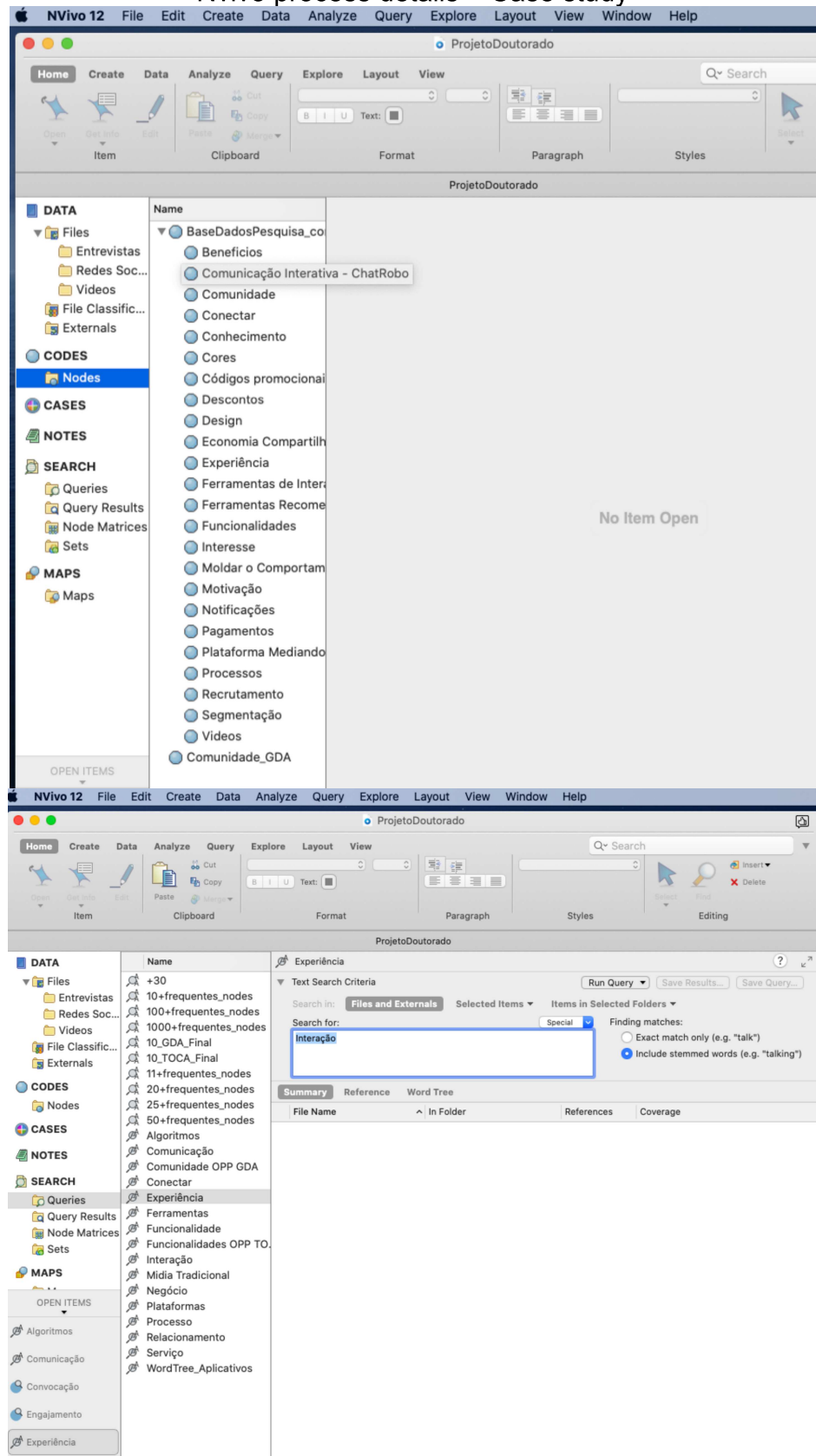
Code	Definition Code	Subcode	Subcode Definition
What is sharing economy?	How participants see, know and understand about sharing economy.	Pillars SE.	Economic, social and technological pillars that are part of the sharing economy system (BELK, 2014b; SCHOR, 2016).
What are your interests in participating in sharing economy?	Motivations and interests in participating in businesses based on sharing economy.	Access solutions.	Have access to goods and services without having ownership (ECKHARDT; BARDHI, 2012).
		Exchange goods and services.	Exchanged goods and services with others, sharing practices without buying it, these services or goods are renting or paying for use. (BOTSMAN; ROGERS, 2011).
		Request services.	Requested service to rent or use.
		Offer services.	Offered service to rent or use.
Who are the actors of the sharing economy?	Human and nonhuman actants that perform or mediate some form of action or make a difference in the heterogeneous network and in combined motion or assemblage in SE context. (CALLON, 1984; LATOUR, 2000; 2005; 2012)	Consumers.	Are individuals that access, uses, exchanges and relationships with these service providers through digital platforms in the sharing economy context (ECKHARDT; BARDHI, 2012; BELK, 2014b; SCHOR, 2016).
		Digital Platforms.	These digital platforms are websites, mobile sites, applications, and social media that have the role of providing links, connections, inductions, and intermediation with consumers, service providers, and businesses in sharing economy context (BREIDBACH; BRODIE, 2017; DE VAUJANY et al., 2019; SUNDARARAJAN, 2016; SUTHERLAND; JARRAHI, 2018; DE REUVER; SØRENSEN; BASOLE, 2018).
		Providers.	They are independent workers that optimizing underused assets to promote access and sharing instead of ownership (ECKHARDT; BARDHI, 2012; SCHOR, 2016; SIGALA, 2019; RAVENELLE, 2017).
		Supporters.	Supporters are those actors who participate or have participated in the service digital platform as mentors, consultants, partners or specialists to support the areas of marketing, management or technology.
		Entrepreneurs.	Entrepreneurs are those who have devoted their time, knowledge and investment to developing sharing economy businesses or services based on digital platforms.
		Business or Services in SE.	These businesses are services like Uber, Airbnb, DogHero, Spotify, YouTube between others that virtualized assets and relationships between consumers and providers through digital platforms (SUNDARARAJAN, 2016; CONSTANTIOU et al., 2017).
		Market.	The market is the physical or virtual space of a region or country where digital platforms mediate the offer and request of services to consumers and providers (SUNDARARAJAN 2016; RAVENELLE, 2017).
What actions emerge from the actants?	Actions and practices that emerge from actants in SE.	Enlistment.	It is the moment in which the actors determined the alignment and recruitment of interests in the network (CALLON, 1984; LATOUR, 2005).
		Exchange.	Actions to exchanged, rent, and donate time, service, and assets in sharing economy (BELK, 2014b).
		Mediation.	Action to transport meanings and influences for actors participating in a

What actions are promoted by Digital Platforms?	Actions of digital platforms to induce, connect, mediate and flatten the interactions, exchanges and relationships between consumers and service providers.		network. (LAMINE, 2017; LATOUR, 2005).
		Relationships.	Process in which the actors determined and participated in an enlistment, interaction, mediation, and exchange. (ECKHARDT; BARDHI, 2016).
		Connections.	Links or relationships made from the dynamic processes provided by the interfaces and functionalities of the platforms, as well as the design, communication and interaction resources to connect consumer and service providers (CANNIFORD; SHANKAR, 2016; BREIDBACH; BRODIE, 2017; SUNDARARAJAN, 2016; SUTHERLAND; JARRAHI, 2018).
		Mediation of Relationships.	Influence or action generated by the digital platforms of sharing through its resources, functionalities, interfaces, design, and algorithms to create senses, connections, interaction, segmentation, and relationships to exchange or rent services (BREIDBACH; BRODIE, 2017; DE RIVEIRA et al., 2017; LAMINE, 2017; SUTHERLAND; JARRAHI, 2018).
		Inductions.	Stimuli performed form directly and indirectly to connect consumers and service providers. The stimuli happen through resources, tools, and mechanisms of communication, content, and relationship of digital platforms. (BELK, 2014a,2014b; CANNIFORD; BAJDE, 2016; SCHOR, 2016; DE REUVER; SØRENSEN; BASOLE, 2018).
How do Digital Platforms Mediate Relationships in SE?	Flattened associations between consumers, platforms, and service providers in consumption and service relationships. This flattening behavior between consumers, platforms, and service providers is developed through the collective cooperation existing in the sociotechnical relationship composed of individuals, services, and digital platforms in the SE.	Consumption and Service Relationships.	Actions existing results of the relationships between consumer, platform, and service providers after stimuli, links, mediations, and flattening. Consumption and service relationships are developed through individual, technological and organizational processes in the SE. These processes can be controlled, coordinated, or reformulated through digital solutions, human or organizational actions. (ECKHARDT; BARDHI, 2012; BELK, 2014b; BARDHI; ECKHARDT, 2016; SIGALA, 2019; RAVENELLE, 2017).
		Inducing Enlistments.	Direct and indirect stimuli to promote connections, actions and recruitments.
		Influencing connections.	Direct and indirect influence to promote links or relationships between actants in the network.
		Flattening Relationships.	Visible and invisible associations between actants in the network that receive identification, intermediation, and orchestration through segmentation, interaction, and communication process (LATOUR, 2005; BAJDE, 2013, 2014).
How do digital platforms flatten relationships between consumers and providers? (BAJDE, 2013; 2014).	From a segmentation, gamification process orchestrating the interactions and communications with their resources, tools, design, and systems.	Segmentation Processes.	Classification process to categorize, evaluates, approximate, and generate a closer relationship between customers and providers.
		Orchestrating Interactions.	Interactions are orchestrated through reputation, valuation, gamification and communication tools.
		Orchestrating Communications.	Communications are orchestrated through automatic notifications targeted with promotions, information and content. The automatic mechanism flattens relationships with consumers and suppliers to cooperate and participate in SE.

**Source:** Created by the author

APPENDIX IV – NVIVO PROCESS DETAILS

Nvivo process details – Case study



ProjetoDoutorado			
DATA		Name	Engajamento
		Summary	Reference
		File Name	In Folder
		BaseDadosPesquisa_co...	Files\Entrevistas
			References
			Coverage
			15
			0.02%

Word Frequency in the Pet Rental Kennel platform case.



Word Frequency in the Goalkeeper Rental platform case.

