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SUÉLEN BEBBER

TOWARDS A KNOWLEDGE-BASED SERVICES FRAMEWORK FROM THE VALUE CO-CREATION IN PUBLIC SERVICES: THE CASE OF THE PUBLIC TRANSPORT SERVICES IN THE SOUTH OF BRAZIL

CAXIAS DO SUL
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Doctoral Dissertation submitted to the Committee designated by the Collegiate of the Doctoral Business Program of the University of Caxias do Sul as part of the requirements for obtaining the Doctoral Degree in Administration.

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CAXIAS DO SUL
2022

To my parents, Claudino and Salete, for providing me the opportunity to seek knowledge. To my husband Fabiano, who has always been by my side. To my little ones, my nephew, nieces, and godchildren: Mauricio, Nícolas, Laura, Ana Clara, and Bella, it is for you that I keep this journey believing in a better society.

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"A little knowledge that acts
is worth infinitely more
than much knowledge that is idle."

Kahlil Gibran (1883-1931)

ABSTRACT

Recent studies have shown that the efficiency measure of public services organizations is no longer sufficient to satisfy citizens and guarantee the society's welfare and should be achieved from the public value, with a focus on citizens. For this reason, a growing demand to consider the citizens as value co-creators within public services systems has reinforced the importance of developing knowledge that can assist in analyzing and designing such service systems. In a knowledge society, the citizen is an essential actor to help develop knowledge-based solutions to social problems, specifically what concerns public services. Therefore, citizens can contribute by mobilizing their personal knowledge and engage in the co-production of public services as value co-creators of the service ecosystem and, consequently, help improve the public value achieved to all citizenry, resulting in knowledge-based public services. This research approached the service-dominant logic and personal knowledge mobilization theories as a starting point. It aimed to propose a conceptual framework of knowledge-based public services for smart cities from mobilizing citizens' personal knowledge in the value co-creation of public services. The empirical object selected for this study was services managed by the municipal government or municipal public services, more specifically, the collective public transport services of Caxias do Sul. The research method used to meet the objectives adopted a qualitative approach with descriptive and exploratory objectives. The single case study method was chosen, and data collection techniques for data triangulation included semi-structured interviews, secondary data, and direct observation. For the interviews, ten interviewees were selected, including representatives of the municipal management and the public transport service concessionaire, followed by representatives of civil organizations and professionals with experience in this service. The second step of the methodological procedures corresponded to the content analysis of secondary data provided by the Municipal Secretariat of Traffic, Transportation, and Mobility (SMTTM) from citizens' statements at "Alô Caxias." Finally, the direct observation happened during the Municipal Forum for Popular Evaluation of the Public Transportation System at the Union of Neighborhood Associations of Caxias do Sul headquarters. From the data collection, data analyses were performed using content analysis with the software ATLAS.ti 22 and Excel 2019. Besides answering the objectives proposed in this thesis, a conceptual framework of knowledge-based public services was presented. Theoretically, the study expanded the discussions surrounding the service-dominant logic theory by approaching the concepts of engagement and co-production. It also identified emerging categories that compose the knowledge-based public services framework that aims to support municipal management to engage citizens in planning, design, and delivery of services, as active agents of this process. Of the emerging categories identified, communication and leadership were the most significant, which can give the municipal management directions to raise citizens' awareness of their role in service co-production.

Keywords: Service-dominant logic; Value co-creation; Co-production; Public value; Citizen engagement; Personal knowledge mobilization; Public services; Smart Cities.

RESUMO

Estudos recentes tem mostrado que a medida de eficiência das organizações de serviços públicos já não é suficiente para satisfazer os cidadãos e garantir o bem estar da sociedade e deve ser alcançado a partir do valor público, com foco nos cidadãos. Por esta razão, a crescente necessidade em considerar os cidadãos como cocriadores de valor nos sistemas de serviços públicos reforçou a importância de desenvolver conhecimentos que possam ajudar na análise e concepção desses sistemas de serviços. Em uma sociedade do conhecimento, o cidadão é um ator essencial para ajudar a desenvolver soluções baseadas no conhecimento para os problemas sociais, especificamente no que diz respeito aos serviços públicos. Por conseguinte, os cidadãos podem contribuir com a mobilização do seu conhecimento pessoal e se engajarem na coprodução de serviços públicos, como cocriadores de valor do ecossistema de serviços e, consequentemente, ajudar a melhorar o valor público alcançado para todos os cidadãos, resultando em serviços públicos baseados no conhecimento. Esta pesquisa abordou as teorias da lógica dominante dos serviços e da mobilização do conhecimento pessoal como ponto de partida. Teve o objetivo de propor um modelo conceitual de serviços públicos baseados no conhecimento para as cidades inteligentes, a partir da mobilização do conhecimento pessoal do cidadão na cocriação de valor nos serviços públicos. O objeto empírico selecionado para esse estudo foi serviços geridos pelo governo municipal ou serviços públicos municipais, mais especificamente, o serviço de transportes coletivos de Caxias do Sul. O método de pesquisa utilizado para cumprir com os objetivos adotou uma abordagem qualitativa com objetivos exploratório e descritivo. O estudo de caso único foi escolhido, e as técnicas de coleta de dados para a triangulação de dados incluíram entrevistas semi-estruturadas, dados secundários e observação direta. Para as entrevistas, dez respondentes foram selecionados, incluindo representantes da gestão municipal e da concessionária do serviço de transporte público, seguido de representantes de organizações civis e profissionais com experiência nesse serviço. O segundo passo dos procedimentos metodológicos corresponderam a análise de conteúdo dos dados secundários disponibilizados pela Secretaria Municipal de Trânsito, Transporte e Mobilidade (SMTTM) a partir das declarações dos cidadãos no "Alô Caxias". Por fim, a observação direta ocorreu durante o Fórum Municipal de Avaliação Popular do Sistema de Transporte Público que ocorreu na União de Associações de Bairros de Caxias do Sul. A partir da coleta de dados, a análise de dados foi realizada com a análise de conteúdo utilizando os softwares ATLAS.ti 22 e Excel 2019. Além de responder os objetivos propostos por esta tese, um framework conceitual de serviços públicos baseados em conhecimento foi apresentado. Teoricamente, o estudo expandiu as discuções acerca da teoria da lógica dominante dos serviços abordando os conceitos de engajamento e coprodução. Categorias emergentes que compoem o framework de serviços baseados em conhecimento também foram identificadas que visam dar suporte à gestão municipal para engajar os cidadãos no planejamento, desenho e entrega dos serviços, como agentes ativos nesse processo. Das categorias emergentes identificadas, a comunicação e a liderança foram as mais significativas, dando direcionamentos à gestão municipal para conscientizar os cidadãos do seu papel na coprodução dos serviços.

Palavras-chave: Lógica dominante dos serviços; Cocriação de valor; Coprodução; Valor público; Engajamento do cidadão; Mobilização do conhecimento pessoal; Serviços públicos; Cidades inteligentes.

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ABBREVIATIONS LIST

CEP	Research ethics committee
FP	Foundational premise
G-D Logic	Good-dominant logic
NPM	New public management
PSDL	Public service-dominant logic
PSO	Public service organization
SDG	Sustainable development goal
S-D Logic	Service-dominant logic
SMTTM	Municipal secretariat of traffic, transportation, and mobility
TCLE	Informed consent form
UAB	Union of neighborhood associations
UNESCO	United Nations educational scientific and cultural organization

SUMMARY

1 INTRODUCTION

Every few decades, a sharp transformation occurs in a society where its worldview, fundamental values, social and political structure, and key institutions rearrange themselves. Shortly after World War II, society moved to a post-capitalist society. As a result, this society presents different social and economic dynamics (DRUCKER, P. F., 1992). As aggregate production shifted from agriculture to manufacturing through the industrial revolution and industry to services after World War II, other factors such as education and information became prominent (CARRILLO, 2014).

By the turn of the millennium, it became clear that non-tangible forms of capital, intellectual capital, or knowledge capital were playing a pivotal role, particularly in high-performing, innovation-driven economies (CARRILLO, 2014). Today, modern society, or the post-capitalist society, is a knowledge society and is increasingly driven by knowledge (DRUCKER, P. F., 1992; STEHR, 2015). While the traditional attributes of labor and property have not disappeared entirely, a new principle, knowledge, has been added (DRUCKER, P. F., 1992; STEHR, 2018). Knowledge is the real and controlling resource and the factor of production in modern society, which has much importance in economic and social life (DRUCKER, P. F., 1992, 2001; YIGITCANLAR, 2011). Economic capital, the source of economic growth and value-adding activities, increasingly relies on knowledge. Social groups, social situations, social interaction, and social roles depend on and are mediated by knowledge (STEHR, 2018).

A knowledge society should integrate all its members and promote new forms of solidarity involving both present and future generations. In this sense, knowledge is a public good available to every individual. Knowledge societies will have to be societies of shared knowledge to remain human and livable (UNESCO, 2005). Knowledge citizens are empowered with the capacity for intellectual or physical action, which offers a higher value-adding for the collective well-being (DAVID; FORAY, 2002; EDVINSSON, 2006). The knowledge society is an organized association of people with similar interests who try to effectively use the vast wealth of knowledge in their specific areas of interest. It reflects the present level of social structure and the need for its future development (AFGAN; CARVALHO, 2010).

Lane (1966) first employed the term "knowledgeable society" to refer to a society with much knowledge, and many people go about knowing properly. However, Drucker (1969) first expressly referred to the "knowledge society," where he discussed the rising importance of knowledge and formal education, with implications for work, life, leisure, and leadership.

Drucker (2001) considered knowledge the key resource for society and the knowledge workers the dominant group in its workforce. UNESCO (2005, p. 5) stated that "knowledge societies are about capabilities to identify, produce, process, transform, disseminate and use the information to build and apply knowledge for human development." However, societies strive to improve their governments, public services, and the quality of life for their citizens (MARCHETTI; OLIVEIRA; FIGUEIRA, 2019; WIIG, 2011).

The emergence of knowledge societies signals a radical transformation in the economy's structure. The most common denominator of the changing economic structure is a shift away from an economy driven by the industrial society's material inputs toward an economy in which the transformations of productive and distributive processes are increasingly determined by knowledge-based inputs (STEHR, 2018). The development of knowledge-based activities is concerned primarily with upgrading human and organizational capacities and creating environments conducive to innovation, learning, creativity, and change. Therefore, knowledge-based development depends on creating conditions for creative and innovative use of resources and gathering various types and levels of knowledge (KNIGHT, 1995). Knight (1995) defined knowledge-based development as transforming knowledge resources into local development that could provide a basis for sustainable development. Also, Carrillo (2014, p. 416) described knowledge-based development as "the collective identification and enhancement of the value set whose dynamic balance furthers the viability and transcendence of a given community."

There is a consensus among researchers and practitioners communities that modern societies' challenges call for knowledge-based development strategies (CARRILLO, 2014; ERGAZAKIS; METAXIOTIS; PSARRAS, 2006; KNIGHT, 1995; YIGITCANLAR, 2011). This argument is supported by the fact that major international development agencies and nations with the highest levels of overall development have adopted knowledge-based development policies. Knowledge-based development policies' challenges are promoting a simple, meaningful, and productive way of life. Besides, they face the challenge of supporting participatory democracy, in which all citizens are involved and share responsibility for making appropriate decisions and choices that will enable societal well-being (CARRILLO, 2015; ERGAZAKIS; METAXIOTIS; PSARRAS, 2006; YIGITCANLAR; HAN; KAMRUZZAMAN, 2019).

As a result, citizens' role in developing knowledge-based development policies should be revised. They possess fundamental knowledge, called personal knowledge, to contribute to societal well-being. Polanyi (1958) discussed personal knowledge by examining how

individuals gain and share knowledge, arguing that it is highly personal but fundamental to build the meaning that underlies human decisions and actions. Knowledge is socially constructed and emerges with the personal experience of reality. It is only possible to acquire knowledge when the individual is in direct contact with situations that provide new experiences (POLANYI, 1966), as it is created through human interactions (TAKEUCHI, 2013). Knowledge denotes the capacity to act in social life; the realization and implementation of knowledge depend upon the social, economic, and intellectual context (BENNETT; BENNETT, 2014; STEHR, 1996).

We assume in this research that citizens' personal knowledge, derived from their experience, could be mobilized to take action in facing society's needs and problems. Therefore, knowledge mobilization creates value by creating, assimilating, leveraging, sharing, and applying knowledge (BENNET; BENNET, 2015; BENNETT; BENNET, 2007). Stehr (2009) complemented that knowledge is the first step toward action and puts people in a position to change reality, where a connection between social action and knowledge exists.

The integrity of knowledge resources and the liveability of places, primarily cities, where the knowledge resources are based, affect development in a knowledge-based society (KNIGHT, 1995). In the city context, smart cities' agenda follow knowledge-based development efforts. Although the initial rationale for the smart city developments was mainly related to environmental concerns, the practice indicates a different path, primarily unidimensional, with technology at the core (YIGITCANLAR, 2016; YIGITCANLAR *et al.*, 2018).

The smart city concept has its contemporary origins in the smart growth movement of the 1990s, referencing sustainable urbanization (MARCHETTI; OLIVEIRA; FIGUEIRA, 2019; YIGITCANLAR *et al.*, 2018). Initially, the term described the use of information and communication technology to improve urban infrastructure. This means incorporating technical interventions, with the use of technology, into the main systems of cities, such as transport, energy, basic sanitation, housing, education, and environment, among other aspects, to facilitate the management of resources and put on the agenda sustainable growth (HO, 2017; HOLLANDS, 2008). However, even though smart city concepts have been widely used, a consensus regarding their meaning has not been accepted among researchers (HOLLANDS, 2008; MARCHETTI; OLIVEIRA; FIGUEIRA, 2019; YIGITCANLAR *et al.*, 2018).

Marchetti, Oliveira, and Figueira (2019, p. 201) have provided a broad definition of smart cities, which is assumed in this research. They stated that:

A smart city is a place where government transparency is a common asset, people are politically driven and keen to participate, where general, cultural, and entertainment infrastructure are offered, daily needs are well assisted by the city's amenities and high technology facilities, besides supporting information, management, and planning processes can be friendly accessed by all citizens, helping to promote urban space integration, providing a sustainable and enjoyable environment, leveling up the city's attractiveness, competitiveness, and welfare.

Knowledge exchange is imperative in cities, where city learning involves creating social capital (knowledge) and not only developing novel practices or cutting-edge technology (CAMPBELL, 2013). Hence, in smart cities, government partners are expected to actively listen to the needs of citizens, as they are service users who are deeply involved in development processes (PASKALEVA; COOPER, 2018). As Schaffers et al. (2011) pointed out, there is a need to consider the particular socio-economic context, the urban development objectives, and the approaches to mobilizing the participation and intelligence of citizens and societal organizations. Besides, Neill and Peoples (2016) suggested that a smart city also aims to reduce operational costs, improve public services, and increase the quality of services offered to citizens.

In the knowledge-based society, services characterize the essence of economic activity where production is a knowledge transformation process (LUSCH; VARGO, 2006; OSBORNE; RADNOR; NASI, 2013). Contributing to this view, effective service management is not concerned only with controlling the unit costs and efficiencies of a production process but also with applying specialized skills and where knowledge is the fundamental resource (LUSCH; VARGO, 2006). Therefore, public services include social work, health care, transportation, education, community development, and regeneration, for example. Public service delivery often presents an inter-organizational and systemic nature, and the customer (citizen) may have the role of the shaper, co-producer, and evaluator of the service experience. Hence, the service-dominant approach can contribute to public service delivery (OSBORNE; RADNOR; NASI, 2013).

The service-dominant logic (or S-D logic) emerged as a logic of value creation and exchange in services, seeking new answers to the goods-dominant logic (G-D logic) based on the exchange of tangible units (VARGO; LUSCH, 2004, 2008a). It also represents a shift from an emphasis on the exchange of operand resources (tangible and inert resources) to a focus on operant resources (dynamic resources that act upon other resources) (VARGO; LUSCH, 2006). However, the key to extracting the benefit from operand resources resides with the knowledge and skills necessary to learn about, find, extract, invent, cultivate, manufacture, and use them (VARGO; LUSCH, 2006). Applying knowledge and skills to benefit another actor is the basis

of economic and social exchange and one of the fundamental foundations of society (AKAKA; VARGO; LUSCH, 2013; CHANDLER; VARGO, 2011). As a result, services emanate from specialized knowledge and abilities that people do for themselves and others that represent the source of value and, thus, the purpose of exchange. Besides, value is co-created rather than created by one actor and subsequently delivered (VARGO; LUSCH, 2006, 2017).

When it comes to public services, from an S-D logic perspective, public policy's fundamental aim should be to coordinate value co-creation activities between relevant actors as part of a broader effort to address public problems (AKAKA; VARGO; LUSCH, 2013; TRISCHLER; CHARLES, 2019). Trischler and Charles (2019) stated that public policy coordinates resources that enable value co-creation activities between multiple actors within the broader service ecosystem. A service ecosystem's view suggests that the complexity of the social context that frames value creation and exchange is influenced by the diversity of resources, the multiplicity of institutions, and the enactment of many practices in a particular context. Therefore, value co-creation is the driving force of service ecosystems, which emerge and evolve through interactions among many actors and their social and economic exchange (WILDEN et al., 2019).

For S-D logic, value co-creation suggests that "there is no value until an offering is used - experience and perception are essential to value determination" (VARGO; LUSCH, 2006, p. 44). Knowledge and skills that actors apply in activities, processes, and interactions drive and direct value co-creation (EDVARDSSON et al., 2013). Therefore, value co-creation is influenced not only by using a particular resource but also by contextual factors, including knowledge, networks of relationships, and social structure (e.g., institutions) (AKAKA; VARGO; LUSCH, 2013; CHANDLER; VARGO, 2011).

In public services, value is based on the user's perception and is created in the interaction between the user and the provider from the exchanges that occur, that is, co-created (ALFORD; HUGHES, 2008; PETRESCU, 2019). Public value emerges as an indicator of public service effectiveness rather than internal efficiency measures (GAINS; STOKER, 2009; OSBORNE et al., 2015). The public value concept emerged with the public managers of the Kennedy School of Government and Harvard Business School to advance the vision of the New Public Management, which has a narrow focus on efficiency. Public value can be achieved through the democratic process and dialogue between citizens, public authorities, and managers regarding the provided service (GAINS; STOKER, 2009). It depends on citizens' contributions and is based on collective needs and desires (ALFORD; HUGHES, 2008; PETRESCU, 2019).

Gains and Stoker (2009) added that it is necessary to consider involving users and citizens in determining how the service will be delivered. In this sense, S-D logic concerns the issue of how to apply people's collective skills, experiences, and knowledge (operant resources), to provide benefit to households, practitioners, policymakers, and others, which can occur through citizen's engagement and co-production of services (VARGO; LUSCH, 2017).

The term co-production was introduced between 1970 and 1980 to compensate for the decrease in public investment and thus boost the resources and capacities of civil society (OSTROM; OSTROM, 1971). Ostrom (1996) defined co-production as the processes by which the inputs used to provide a good or service have the contribution of individuals who are not in the same organization, including citizens or end-users. Osborne, Radnor, and Strokosch (2016) contributed that co-production is the voluntary or involuntary involvement of public service users in any stage of the service's design, management, delivery, or evaluation.

Additionally, co-production is related to the production of value to the user, social value, environmental value, and value to social groups (BOVAIRD; LOEFFLER, 2012). Individuals can co-create the value of their own service and contribute to the collective co-creation of value for other service users (e.g., students at a school or university). Thus, co-production in public services also creates public value while contributing to social objectives, social cohesion, or well-being (OSBORNE; RADNOR; STROKOSCH, 2016). Moreover, co-production is described in the literature as a promising way to understand organizational and institutional efforts to engage service users at different stages of the service process (PARK, 2019).

Engagement, in turn, is the necessary element for value co-creation to occur as actors engage in service-for-service exchange and in related interactions that lead to resource integration. Consequently, no resource integration happens without an actor (citizen) engagement, and no value can be co-created (STORBACKA et al., 2016). As a result, citizens should engage in producing public services through planning, decision-making, implementation, and evaluation (MUÑOZ; BOLIVAS, 2018), since citizen engagement drives the innovation capacity of service providers and other organizations in co-producing services (PASKALEVA; COOPER, 2018).

Given the discussion presented so far, this research approach, based on the service-dominant logic literature, the concepts of value co-creation, co-production, and citizen engagement in public services, which result in public value to citizens. Besides, personal knowledge mobilization is introduced as an essential resource contributing to value co-creation

and co-production. The following sections will discuss the problem and objectives this thesis intended to answer, as well as the justification for this research.

1.1 PROBLEM FRAMING

For the first time in the world, more people live in cities than in rural areas. The United Nations (2018) estimated that by 2050 almost 68% of the world's population would be living in cities, corresponding to nearly 9 billion people sharing the infrastructure, natural resources, and environment available in cities. A fact that will increase the demand for consumer goods, services, and well-being so that people can meet their own and collective expectations (GUTIÉRREZ *et al.*, 2017; MARCHETTI; OLIVEIRA; FIGUEIRA, 2019). In this scenario, smart city development grounded on knowledge-based initiatives can meet such demands.

Dezi et al. (2018) stated that human capital and citizen involvement are among the most problematic aspects of smart city development. Even if technology is a prerequisite for any smart city, it is impossible to define a city as smart when there is no real engagement and cooperation between citizens and other stakeholders, such as public institutions and private organizations. Thus, researchers commonly agree that the main objective of a smart city is to improve the quality of the city and, consequently, the quality of life in the city for people. Moreover, its ultimate goal is to create value for citizens and other stakeholders.

While strategies for smart cities and technology-based services are discussed in the northern hemisphere, Latin America still lacks the necessary infrastructure and services for the population and little citizen participation in local decisions. Cities are not homogeneous, and public services, existing infrastructure, and public spaces are not equally distributed (DA SILVA *et al.*, 2019; MARCHETTI; OLIVEIRA; FIGUEIRA, 2019; UN HABITAT, 2012). Furthermore, some authors suggested that the objective of smart cities is to reduce operational costs, improve public services, and increase the quality of services offered to citizens (NEILL; PEOPLES, 2016).

In their study, Marchetti, Oliveira, and Figueira (2019) proposed a model for evaluating smart cities in Latin America. They noted that, among other factors, the quality of life perceived by citizens in cities is affected by the services provided (primary and sustainable services). Primary services include public transport, water and energy availability, and perceived security. Sustainable services include sustainable energy sources, sustainable disposal, land use, and non-motorized accessibility. The authors also pointed out that

inefficient services can reduce the smartness of a city and the quality of life perceived by citizens.

When it comes to perception, there seems to be a consensus among philosophers, psychologists, sociologists, urban space planners, and developers that reality is not as objective as its definition, mainly because it is influenced by those who perceive it. Perception, however, is unique to each individual and is affected by previous beliefs, emotions, attitudes, and experiences. Thus, the perception of each individual influences the construction of their reality (CASAKIN; HERNÁNDEZ; RUIZ, 2015). When citizens' opinions are known, viable and responsible public services can survive and develop because their legitimacy is secured by their participation in forming political policies and objectives managed by professional practice (ACKROYD, 1995).

Efficiency in delivering public services improves when service and city managers know citizens' preferences and needs. Dynamic service management reduces bureaucratic processes, delivers services more quickly, approaches citizens' demands, and leads to greater satisfaction of service users (BELANCHE; CASALÓ; ORÚS, 2016). However, Gains and Stoker (2009) declared that it is not enough to measure the satisfaction of the services' users, and it is necessary to consider how to engage users and citizens in determining how the service will be delivered.

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, and promoted by the United Nations, provided a shared blueprint for peace and prosperity for people and the planet, now and into the future. The Agenda consists of 17 Sustainable Development Goals (SDGs), an urgent call for action by all countries (developed and developing) in a global partnership. One SDG goal is to end poverty with strategies that improve health and education and guarantee equal access to essential services. Other problems that demand solutions, like clean water and sanitation, health and well-being, quality education, affordable energy, planning, waste management, green and public spaces, and transport, which are the responsibility of local governments and authorities, are urgent concerns listed as targets in the SDGs. In particular, SDG 11 that concerned to "make cities and human settlements inclusive, safe, resilient and sustainable" places as targets: access for all to adequate, safe and affordable housing and essential services and upgrade slums; provide access to safe, affordable, accessible and sustainable transport systems for all; provide universal access to safe, inclusive and accessible, and green public spaces; reduce the adverse per capita environmental impact of cities, including by paying particular attention to air quality and municipal and other waste management (UNITED NATIONS, 2015).

Converging with the 2030 Sustainable Development Goals (UNITED NATIONS, 2015), the New Urban Agenda (UNITED NATIONS, 2017) seeks a better and more sustainable future in which all people have equal rights and access to the benefits and opportunities that cities can offer, and where the urban systems and physical form of the urban spaces are means to achieve it. According to the agenda, cities are expected to provide equal access for all to public goods and quality services in areas such as food security and nutrition, health, education, infrastructure, mobility and transportation, energy, air quality and livelihoods. Besides, one of its principle is to ensure the public participation.

In this respect, the urban needs that are increasingly abundant and diversified with a developed economy, technology, and sociocultural structure reveal the necessity of local administrations responsible for meeting these needs in cities to provide more effective and efficient services (BOSTANCI; ERDEM, 2020). Therefore, the challenge for public services organizations is to develop and manage the organization and its processes in a way that ensures that the service users (customers) perceive that their goals are achieved, that is, their needs are met, and value emerges for them (GRÖNROOS, 2019).

For this reason, a growing demand to consider the users or consumers as value co-creators within public service systems has reinforced the importance of developing knowledge that can assist in analyzing and designing such service systems (TRISCHLER; SCOTT, 2016). A knowledge-based city then encourages and nourishes collective knowledge as capabilities to shape practical and sustainable welfare actions over time (EDVINSSON, 2006).

This research goal was to move forward in searching for elements that collaborate to understand public services that contribute to more humane, smart, knowledge-based, and sustainable cities. The study sought to answer questions such as: What motivates citizens to engage in the co-production of services? How do citizens mobilize their personal knowledge and experience to co-produce services and solve social needs? How do citizens integrate their personal knowledge resources to co-create value? How can public service managers benefit from citizens' role in this process? This study assumes value co-creation is the key to generating public value by engaging citizens to mobilize their personal knowledge and co-produce in public services. Based on the exposed, the research question that guided this research was:

How to build a knowledge-based services framework for smart cities from mobilizing citizens' personal knowledge in the value co-creation of public services?

Based on the service-dominant logic literature, this study intended to analyze how value co-creation happens in public services ecosystems and how public value emerges for citizens

and users. Besides, it was intended to identify co-production practices with citizens and whether citizens are engaged or not in co-production. A vital resource should be mobilized for both value co-creation and co-production: personal knowledge. In this sense, policymakers and public managers must consider, enable, and support public service users as essential knowledge carriers for better city solutions.

1.2 EMPIRICAL OBJECT

The Brazilian Constitution of 1988 is Brazil's fundamental and supreme law, serving as a parameter for all other normative instruments, and situated at the top of the legal system (BRASIL, 1988). According to Decree 10.282 (BRASIL, 2020) that regulates Law 13.979 of February 6, 2020, to define public services and essential activities, public services and essential activities are those indispensable to meet the community's pressing needs, considering those that, if not met, endanger the survival, health, or safety of the population. These services include health assistance, public and private safety activities, telecommunication and internet, energy, funeral services, and postal services, among others.

Some definitions concerning public services must be highlighted, like those mentioned in Law 13.460 (BRASIL, 2017), which provides the participation, protection, and defense of public service users' rights. The Law considers: (i) user: individual or legal entity that benefits or uses, effectively or potentially, public service; (ii) public service: administrative activity or direct or indirect provision of goods or services to the population, exercised by an agency or entity of the public administration; (iii) public administration: an agency or entity part of the public administration of any of the branches of government of the Union, the States, the Federal District, and the Municipalities, the Public Attorney's Office, and the Public Defender's Office; and (iv) public agent: whoever exercises an office, employment, or public function, of a civil or military nature, even if transiently or without remunerations.

The Union, States, and Municipalities are responsible for or share the responsibility of specific public services. Municipal governments are responsible for organizing and providing, directly or under a permission or concession regime, public services of local interest, including collective transportation, which has an essential character (BRASIL, 1988). Urban mobility is one of the priorities on the planning agenda of modern cities. Public administrators must face the challenge of providing solutions for the 3.5 million traffic of new vehicles that, each year, circulate the country's urban roads and the current fleet of 75 million (MINISTÉRIO DAS CIDADES, 2012).

Furthermore, data and estimates from the International Energy Agency (IEA) and Intergovernmental Panel on Climate Change (IPCC) report that the transport sector accounts for a significant share of worldwide energy consumption and greenhouse gas (GHG) emissions (IEA, 2019; IPCC, 2021). Transport emissions primarily involve road, rail, air, and marine transportation, which accounted for over 24% of global CO_2 emissions in 2016. Emissions from the transport sector significantly contribute to climate change, about 14% of annual emissions (including non-CO_2 gases) and around a quarter of CO_2 emissions from burning fossil fuels. Regarding transport modes, 72% of global transport emissions come from road vehicles, accounting for 80% of emissions from 1970 to 2010 (WRI, 2019). In Brazil, the transportation sector accounts for a 48% share of emissions related to energy use (ITDP, 2019).

In the Paris Agreement, Brazil committed to implementing actions to reduce 43% of its emissions by 2030. However, between 1996 and 2016, the transportation sector increased its participation in Brazilian emissions by 8%, reaching 20% of the total emissions in the country. This growth makes the transportation sector increasingly relevant in achieving Brazilian international targets (ITDP, 2019).

The National Policy on Climate Change (PNMC), Law 12.187, provides legal support for elaborating the National Plan for Adaptation on Climate Change (BRASIL, 2009). For the transportation sector, the PNMC envisions using efficient vehicles and fleet modernization, expanding rail and waterway systems, and incentives for collective transportation as a substitute for private transport (BRASIL, 2007).

Considering the socio-environmental advantages of urban public transport (buses) over the individual motorized vehicle, such as the proportional occupation of road space per person (18% versus 82% of cars), energy consumption (4.1 GEP/passengerKm versus 19.3 of cars), and emission of atmospheric pollutants, in which cars generate 7.7 times more pollutants than buses, the pertinence of adopting actions to improve public transport in Brazilian cities is evident (BRASIL, 2007). Public transport can transport people much more efficiently than private vehicles to reduce emissions. In addition to reducing environmental impacts, using these modes is also more efficient for the benefit of urban space (ITDP, 2019; WRI, 2019). As a result, improving public transport services is vital to enhance the planet's sustainability and design a city's urban plan.

Law 12.587 (BRASIL, 2012), known as the Urban Mobility Law, assigns municipalities to plan and execute the urban mobility policy and organize and provide collective public transportation services. Urban planning, already established as a guideline by the City Statute

(BRASIL, 2008), is a fundamental instrument necessary for the sustainable growth of Brazilian cities (MINISTÉRIO DAS CIDADES, 2012).

One of the main objectives of the National Policy for Urban Mobility is to increase the participation of public and non-motorized transportation in the population's commuting matrix. This policy must integrate urban planning, transportation, and traffic and observe social inclusion and environmental sustainability principles. The Urban Mobility Plan is the policy's effective instrument. The Law requires that municipalities with populations over 20 thousand inhabitants prepare and present an urban mobility plan to design the growth of the cities in an orderly manner. Transportation is an essential instrument for directing the urban development of cities. With integrated and sustainable systems, well-planned urban mobility ensures access to cities and provides quality of life and economic development (MINISTÉRIO DAS CIDADES, 2012).

The basis of an urban policy with popular participation recognizes that participation in public policies is a right of citizens. To ensure the social control described in the Law, there must be ombudspersons in the institutions responsible for managing the National System of Urban Mobility and holding public hearings and consultations. The systematic procedures for communication, evaluation of citizen and user satisfaction, and public accountability must also be ensured. It is important to emphasize that the participation of society should not occur only at the end of the process but in all stages of planning public policies, including the initial phases of identification of citizens' needs (BRASIL, 2012; MINISTÉRIO DAS CIDADES, 2012).

Furthermore, the users of the National System of Urban Mobility have the right to i) receive proper service; ii) participate in the planning, inspection, and evaluation of the local urban mobility policy; iii) be informed at passenger boarding and boarding points, free of charge and in an accessible manner, about routes, schedules, service fares and ways of interaction with other modes of transport; and iv) have a safe and accessible environment for the use of the National System of Urban Mobility (BRASIL, 2012).

This thesis focuses on services managed by the municipal government or municipal public services. The Urban Mobility Plan is mandatory for most Brazilian cities and should prioritize collective public transport services to help reduce gas emissions. Therefore, public transport is the service object of the study.

1.3 OBJECTIVES

1.3.1 General Objective

This research aimed to propose a conceptual framework of knowledge-based public services for smart cities from mobilizing citizens' personal knowledge in the value co-creation of public services.

1.3.2 Specific Objectives

In addition to the general objective, the study aimed to:

a) examine the categories of knowledge-based public services;
b) identify the role of citizens in the process of developing and delivering public services;
c) assess public value creation in public services as a consequence of value co-creation;
d) analyze how citizens mobilize their personal knowledge in the co-production of services;
e) identify the actors involved in the public service ecosystem.

1.4 JUSTIFICATION

According to the United Nations and following the 2030 Agenda for Sustainable Development formulated in 2015, there needs to be a future in which cities provide opportunities for all, with access to essential services, energy, housing, and transportation. Rapid urbanization exerts pressure on fresh water supplies, sewage, the living environment, and public health. Therefore, following the 17 Sustainable Development Objectives, the United Nations reported about cities and their essential and public services (UNITED NATIONS, 2019, 2021):

a) 95% of urban expansion in the following decades will occur in the developing world;
b) over 1 billion people live in slums today;
c) the world's cities occupy just 3% of the Earth's land but account for 60-80% of energy consumption and 75% of carbon emissions;
d) 1 out of 5 children between 6 and 17 years are not attending school;

e) 771 million people remain without even essential drinking water services;

f) 2 billion people do not have access to waste collection services;

g) only half of the world's urban population has convenient access to public transport.

For example, in Brazil, when it comes to public transportation, especially bus transportation, 2.703 Brazilian cities are served, while 2.867 are not (NTU, 2022). Considering the world and national scenarios, the value placed on "human capital" suggests that traditional models of development, grounded on the sacrifices deemed necessary for long-term growth, are gradually giving way to models centered on mutual help and the role of public services. Making the most of knowledge leads to imagining a new, collaborative development model based on the guarantee, by the government, of "public property," where growth is no longer viewed as an end in itself but merely as a means to reach the target. The simultaneous growth of the internet, mobile telephony, and digital technologies with the Third Industrial Revolution, which, at first in the developed countries, has seen much of the working population migrate to the service sector and revolutionized the role of knowledge in our societies. Today, knowledge is recognized as the object of substantial economic, political, and cultural stakes, justifiably qualifying the currently emerging societies (UNESCO, 2005).

The knowledge society is a structured human organization based on contemporary developed knowledge representing the new quality of life support systems. It implies the need to fully understand the distribution of knowledge, access to information, and the capability to transfer information into knowledge. For this reason, new configurations of production, transmission, and application of knowledge should involve a more significant number of players, or actors, typically in an increasingly internationalized network-driven context (AFGAN; CARVALHO, 2010).

Over recent decades, governments have tried to determine how much money should be spent on public services, what components of a public service program are most valuable, and whether service delivery can be measurable, allowing the development of a performance plan. With the growing recognition that market relations are socially constructed in the acquisition process and not just a product of market conditions, the need for a more proactive role of public sector organizations in managing the market has become clear (GUTIÉRREZ RODRÍGUEZ *et al.*, 2009). Moreover, when the service provider understands how citizens perceive services, they can identify ways to manage these evaluations and influence them in the desired direction. In this sense, the relationship between the service concept, the service offered to citizens, and citizen benefits must be clarified (GRÖNROOS, 2007).

Society has undergone significant changes since the new public administration in 1980, and it has become more fragmented, and the processes of public service delivery have consequently diversified. Public service organizations (PSOs) efficiency, effectiveness, and sustainability no longer depend solely on providers. PSOs are part of a complex public service delivery system that requires the success of relationships within the system, including legislators, other PSOs, service users, and citizens, among others involved (OSBORNE *et al.*, 2015). Therefore, the PSOs must simultaneously manage how their service influences the individual users and the entire society. In turn, users have more than one role in this context, using the service and paying the taxes that finance it (MINTZBERG, 1996).

According to Trischler and Charles (2019), a different marketing perspective is required to help policymakers address public problems more effectively. Related concepts and methods must go beyond the exchange focus and consider the complexity of policy analysis (i.e., problem framing) and design (i.e., efforts to address specific problems affecting citizens). In practice, users are rarely involved in public service design initiatives (TRISCHLER; DIETRICH; RUNDLE-THIELE, 2019). For this reason, understanding the users' value creation process is fundamental to public policy analysis and design, as it allows for determining the most suitable configuration of resources for individuals and the collective citizenry to integrate and operate. The main concern should not be how public policies lead to improvements in service delivery but how appropriate management could address a specific public problem (TRISCHLER; CHARLES, 2019).

Through citizen participation, the collaborative decision-making process arises, where public and private resources mix, overshadowing the division of the administration as a service provider and the citizen as the recipient and consumer of the public service system. There is also no focus on profit for the participants, which emphasizes the importance of motivating citizens to engage in the provision of public services (GAWŁOWSKI, 2018).

In order to change urban management for the benefit of the citizen, cities customize and improve the efficiency of their local services, provide citizens with urban information and facilitate citizens' interaction with urban infrastructure. Such development actions aim to meet citizens' current needs and demands, seeking interaction between citizens, local services, and urban infrastructure (KING; COTTERILL, 2007; BELANCHE; CASALÓ; ORÚS, 2016).

However, the new public management seems limited in response to the challenges imposed by traditional public services to knowledge-driven services with the digital economy. The digital economy is transforming the nature of the relationships between PSOs, legislators, and service users and questions the scope of "public value" as an indicator of public service

effectiveness rather than internal efficiency measures. Public value is the acceptance and support of citizens to public administration, as services add value to their lives as citizens and, in general, society. Thus, the focus of the public service is on internal efficiency and on adding value to citizens and service users (GAINS; STOKER, 2009; OSBORNE *et al.*, 2015).

Voorberg et al. (2015) complemented the influencing factors in the co-creation process, both for the organization and the citizen. On the organization's side, there is the compatibility of public organizations with citizen participation, the open attitude of institutions towards citizen participation, the organizational culture of risk aversion (which considers the citizen as not being a reliable partner), and the presence of incentives for co-creation (how co-creation can bring financial benefits or increase consumer interest). On the citizen's side, personal characteristics can influence their willingness to participate (loyalty, civic duty, desire to improve the government) and individual traits (education level, family composition, skills).

Vargo and Lusch (2017) emphasized that service provision, value co-creation, and value realization occur in networks. The network has a purpose, not in the sense of collective intent but rather in individual survival/well-being, as a partial function of collective well-being. The authors considered the study of purpose or purposeful behavior, which has a long history in philosophical thought concerning teleology concepts and, more contemporarily, teleonomy. The later focuses more on complexity, emergence, and self-organizing systems, crucial characteristics of service ecosystems. Vargo and Lusch (2017) used this literature to understand how individuals' well-being is contingent on and contributes to a dynamic network in which the actors' resources are continually updated. It also points to the need for a subtle but significant shift in orientation among actors, away from the primacy of conflict and toward the primacy of cooperation and coordination.

Vargo and Lusch (2017) stated that understanding how this purposeful, cooperative activity leads to value co-creation will be a significant underlying theme for the next ten years of research. For that, S-D logic needs more mid-range theory development and evidence-based research. Mid-range theories that could support value co-creation are, for example, co-production and engagement, considered in this research. Furthermore, Trischler and Charles (2019) argued that S-D logic and its implications for practice are widely researched within the private sector literature; however, its extension to the public sector, particularly public policy, is lacking.

S-D logic and related concepts still seem insufficiently understood across disciplines, leading to misconceptions and potentially inappropriate applications to practice. Therefore, the

authors proposed that scholars further explore applying a service ecosystem lens to the public sector (TRISCHLER; CHARLES, 2019).

Public value creation relies on what the citizenry determines is valuable (MOORE, M. H., 1995), considering that actors do not passively accept government actions (SKÅLÉN; EDVARDSSON, 2016). The collective determination of value points toward the importance of coordinating actor-generated institutions and institutional arrangements for value co-creation purposes, central to S-D logic. Trischler and Charles (2019) suggested that future research evaluates how the systems lens, updated in the S-D logic, could provide a suitable framework for addressing the challenges and complexity of managing legitimacy and capacities for achieving public value outcomes. The authors complemented that this investigation should explore the building blocks of increasingly complex and interrelated resource-integration and service-exchange activities in the public sector (TRISCHLER; CHARLES, 2019).

Aiming to visualize how the literature approaches the main theories in this research, the keywords "service-dominant logic" and "knowledge mobilization" were searched in the Scopus database on May 31st, 2022. Together, the terms resulted in no documents. The "service-dominant logic" term resulted in 1,543 documents. The first article was published in 2001, but the number of publications only increased after 2011. Stephen Vargo is the author with more publications, corresponding to 65 documents. The keywords presented by the authors of the total documents were then exported to VOSviewer free software to overview the frequency of words and their connection. The interactions resulted in 12 clusters, as observed in Figure 1. The clusters are related to terms like value, value co-creation, co-production, and customer engagement.

Figure 1 - Clusters of keywords search for "service-dominant logic"
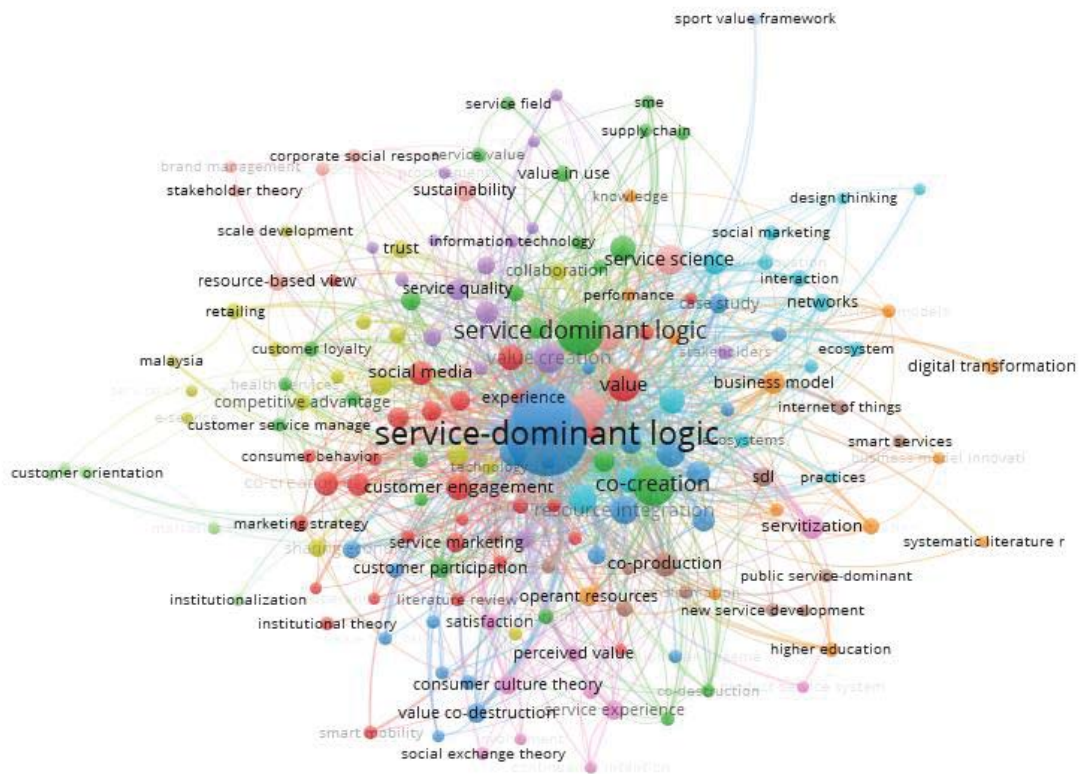
The word knowledge appeared in one cluster and relates to the terms value, innovation, and business models, as observed in Figure 2.

Figure 2 – Knowledge correlation
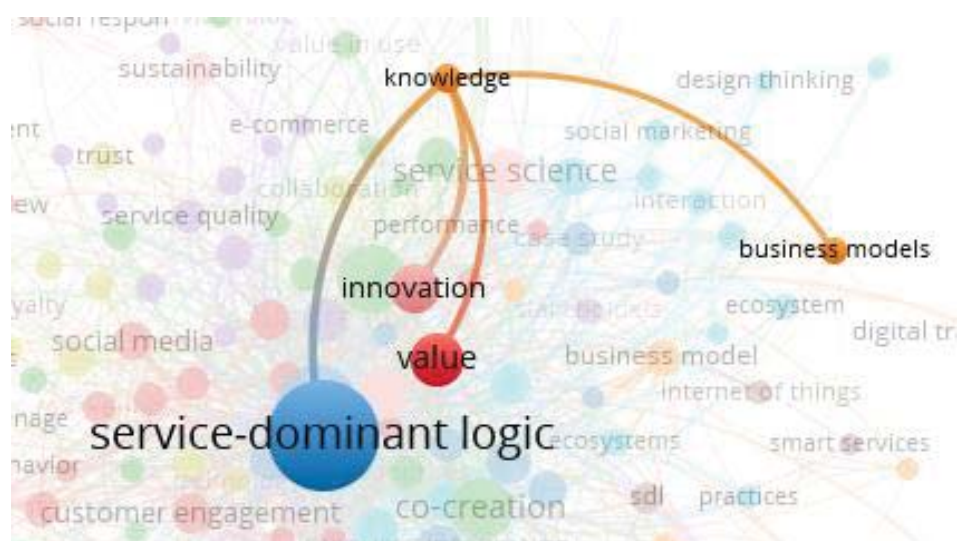
Public service appeared in the expressions of public service-dominant logic, related to co-creation and co-production, presented in Figure 3.

Figure 3 – Public service correlation

The search for "knowledge mobilization" resulted in 674 documents. The first study was published in 1989 and increased after 2010. The author with more publications is Christer Carlsson, with 12 publications. The interactions resulted in 8 clusters, as observed in Figure 4. The words correlated in the clusters concern knowledge-related terms, education, collaboration, and innovation, among others.

Figure 4 - Clusters of keywords search for "knowledge mobilization"
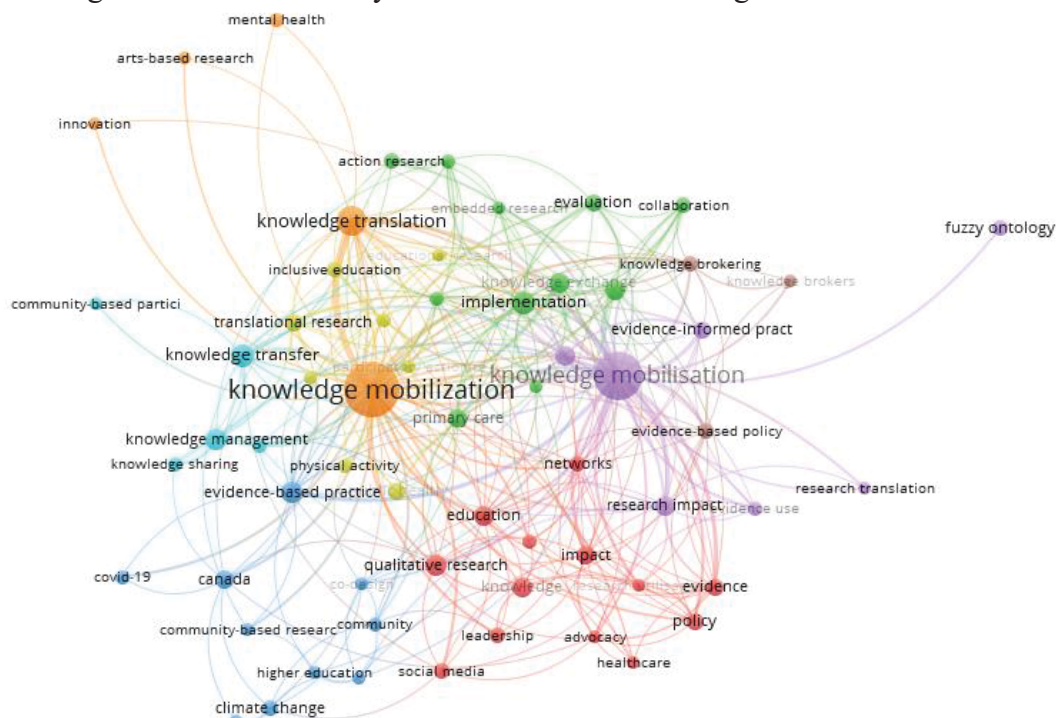
The word co-production appeared in one cluster related to knowledge mobilization and connected to the words evaluation, collaboration, knowledge exchange, and co-design, among others presented in Figure 5.

Figure 5 – Co-production correlation
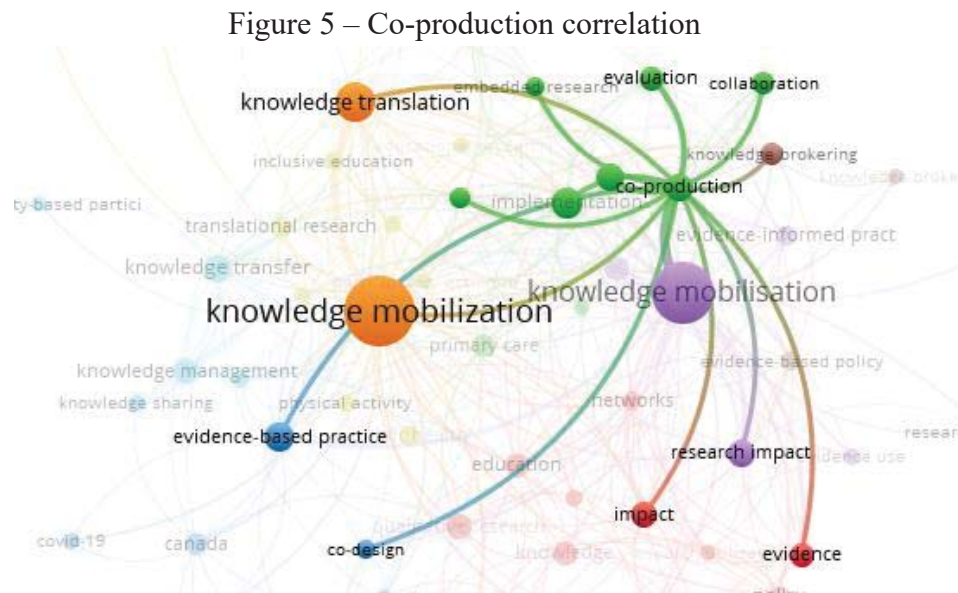
Source: Scopus (2022).

The results showed that the terms and relations proposed in this thesis were not previously studied by analyzing the clusters and the correlation of words in both terms searched, service-dominant logic, and knowledge mobilization.

1.5 STUDY CONTEXT

The study was developed in a medium-sized city in southern Brazil called Caxias do Sul. The significant specificities in this case, which make it worth investigating, are linked to its unique cultural and economic characteristics. During the first Italian immigration wave in 1875, hundreds of thousands of immigrants arrived in Brazil. The host city of colonization was Caxias do Sul, where land plots were distributed; the city rapidly became the commercial center of the colonies. The immigrants were prepared to deal with nature distinctively, guaranteeing fast and consistent colonial development. The economic development of the Caxias do Sul microregion went through four distinct phases: agricultural production, commerce, factory and industrial production, industry, and services (NESELLO; FACHINELLI, 2020).

The city has an estimated population in 2021 of 523.716 inhabitants, a demographic density of 264,89 inhabitants/km², and a territorial area is 1.652,308 km². The urbanization index in 2010 was 96,3%. Its GDP is almost 49 thousand reais (Brazilian currency). Caxias do Sul is the second most populated city in the State, behind the capital city Porto Alegre, and the largest urban center of the Serra Gaúcha Metropolitan Region (IBGE, 2021; SECRETARIA DE PLANEJAMENTO GOVERNANÇA E GESTÃO, 2020). Also, it is home to the second-largest industrial hub of the metal-mechanic sector in Brazil and the largest bus builder in Latin America.

The city accounts for an index of 1.6 inhabitants per car, which is alarming to sustainable mobility. This number could result from the good economic situation of a significant part of the population and their habits of prioritizing the car instead of public transport or bicycles, for example (GZH, 2018). It should be noted that the city does not count with trains or subways, and the only public mode is the bus.

The Municipal Secretariat of Traffic, Transportation, and Mobility (Secretaria Municipal de Trânsito, Transportes e Mobilidade - SMTTM) is responsible for the management of municipal policies for traffic, transportation, and mobility in Caxias do Sul. It is responsible for the planning, organization, articulation, coordination, and execution of projects that seek to improve vehicle traffic in the city, of concessions and permissions for public transportation; the management of the signaling system and electronic devices; regulation, control, and inspection of the rotating parking lot, and the development of traffic education programs (CAXIAS DO SUL, 2020).

The Viação Santa Tereza, known as Visate, started its activities on February 10, 1986. Through bidding, the private company is the concessionaire that carries out the urban public transportation in Caxias do Sul. In 2021, Visate won the right to operate public transport in the city for 15 years. With 35 years of operation as a public transport service concessionaire, some qualifications in service occurred, like facial biometrics technologies, electronic ticketing, and management in 100% of the fleet. Visate is also one of the first companies in the country to adapt to accessibility laws (VISATE, 2021).

Caxias do Sul is developing the Planmob Caxias, the instrument for effectiveness and compliance with the National Policy of Urban Mobility. The services will be performed by the consulting company URBTEC™, hired through a bidding process under the coordination of the SMTTM (CAXIAS DO SUL, 2022).

2 THEORETICAL BACKGROUND

In order to provide the best understanding of this research, the theoretical foundations for its development are presented, including the service-dominant logic, related concepts, co-production and engagement, different value concepts, and personal knowledge mobilization.

2.1 THE SERVICE-DOMINANT LOGIC

The service-dominant logic (or S-D logic) emerged as a logic of value creation and exchange in services, seeking new answers to the goods-dominant logic (G-D logic), which is based on the exchange of tangible units (VARGO; LUSCH, 2004, 2008a). It also represents a shift from an emphasis on the exchange of operand resources (tangible and inert resources) to an emphasis on operant resources (dynamic resources that act upon other resources) (VARGO; LUSCH, 2006). Therefore, the focus of the exchange is no longer the trade and movement of tangible offerings; by positing that service, the application of knowledge and skills to benefit another actor, is the fundamental basis of economic and social exchange (AKAKA; VARGO; LUSCH, 2013; CHANDLER; VARGO, 2011).

Initially, its focus was relatively micro-level (i.e., firm-customer) and managerial, as evident in the language (e.g., co-production, competition, customer-oriented) of several of the original foundational premises (FPs) (VARGO; LUSCH, 2016). S-D logic core ideas were twofold. First, marketing and all economic activity are best understood in service-for-service exchange rather than goods-for-goods or goods-for-money. In other words, it is the activities emanating from specialized knowledge and abilities that people do for themselves and others (i.e., service, applied abilities) and the activities they want to be done for them, not the goods, which are only occasionally used in the transmission of this service, that represent the source of value and thus the purpose of exchange. Second, value is co-created rather than created by one actor and subsequently delivered (VARGO; LUSCH, 2006, 2017).

S-D logic proceeded to a broader perspective on value co-creation, distinguishing between "co-production" and the "co-creation of value," concepts discussed later in this thesis. Furthermore, it moved from a dyadic orientation toward a network orientation (LUSCH; VARGO, 2006) and, lately, an ecosystems orientation (VARGO; LUSCH, 2016). In line with this orientation, Vargo (2007) suggested that S-D logic might serve as a foundation for a "theory of the market" and a more-encompassing theory of economics and society (VARGO;

LUSCH, 2008a), and even a more broadly theory of value co-creation (VARGO; LUSCH, 2017).

Vargo and Lusch (2004) originally proposed eight FPs that were later reevaluated, and language was adapted (VARGO; LUSCH, 2008a), resulting in ten premises. The adaptations concerned, for example, the distinction between "service" (a process) and "services" (units of output). So, service is the "basis" rather than the "unit" of exchange. Further, the FPs were again modified and resulted in eleven premises, as shown in Table 1 (VARGO; LUSCH, 2016).

Table 1 - Foundational premise development

Foundational Premise	Vargo and Lusch (2004)	Vargo and Lusch (2008)	Vargo and Lusch (2016)
FP1	The application of specialized skills and knowledge is the fundamental unit of exchange.	Service is the fundamental basis of exchange	No Change
FP2	Indirect exchange masks the fundamental unit of exchange.	Indirect exchange masks the fundamental basis of exchange.	No Change
FP3	Goods are distribution mechanisms for service provision.	No Change	No Change
FP4	Knowledge is the fundamental source of competitive advantage.	Operant resources are the fundamental source of competitive advantage.	Operant resources are the fundamental source of strategic benefit.
FP5	All economies are service economies.	No Change	No Change
FP6	The customer is always the co-producer.	The customer is always a co-creator of value.	Value is co-created by multiple actors, always including the beneficiary.
FP7	The enterprise can only make value propositions.	The enterprise cannot deliver value, but only offer value propositions.	Actors cannot deliver value but can participate in the creation and offering of value propositions.
FP8	Service-centered view is customer oriented and relational.	A service-centered view is inherently customer oriented and relational.	A service-centered view is inherently beneficiary oriented and relational.
FP9		All social and economic actors are resource integrators.	No change
FP10		Value is always uniquely and phenomenologically determined by the beneficiary.	No change
FP11			Value co-creation is coordinated through actor-generated institutions and institutional arrangements.

Source: Adapted from Vargo and Lusch (2016, p. 8).

Vargo and Lusch (2017) defined service as the application of resources (both operand and operant) for the benefit of the other. Service identification is the common denominator of economic (and non-economic) exchange at the heart of S-D logic. Operant resources, such as knowledge and skills, act on other resources to create a benefit, while operand resources, such as natural resources, are more static. Resources themselves hold no inherent value but only potential value integrated by and across actors to co-create value (LAAMANEN; SKÅLÉN, 2015). Thus, value co-creation becomes an iterative process driven by integrating operant (e.g., knowledge, skills) and operand (e.g., goods, money) resources. Operant resources emphasize the importance of knowledge and the interaction and relationships of actors (VARGO; AKAKA, 2012). In this sense, S-D logic shifts the focus from production output to activities and processes (resource integration, service exchange, and value creation and determination) and thus reinforces S-D logic's shift in the primacy of resources from operand to operant (VARGO; LUSCH, 2016).

The initial dyadic perspective of S-D logic revealed a bigger picture. Other actors, such as competitors, suppliers, family, and peers, were all involved in the service-for-service exchange. All these actors also had in common the resource-integration activities, especially operant resources used in service provision, both the source and the combined outcome of service-for-service exchange. Thus, instead of proclaiming B2B or B2C relations, a more neutral relation is called A2A (actor to actor) (VARGO; LUSCH, 2017). Bagozzi (1974, p.78) used the term actor when writing about marketing as an organized behavioral system of exchange and defined the exchange system as a "set of social actors, their relationships to each other, and the endogenous and exogenous variables affecting the behavior of the social actors in those relationships." Actors include individual customers, businesses, households, firms, and other organizations, and they use their knowledge and skills to integrate resources and co-create value. Therefore, service is the fundamental basis of exchange, and actors function as resource integrators in co-creating value (LUSCH; VARGO, 2014; VARGO; AKAKA, 2012; VARGO; LUSCH, 2008a, 2016).

The way actors use each other resources depends on their embedded contexts. For this reason, actors are partially defined by their contexts while they partially define their contexts. In other words, actors and their contexts are mutually constitutive or partially defined by one another. Each actor brings a unique quality to the context that affects other actors and the context as a whole. Because each actor in the context always integrates and exchanges resources with other actors and serves other actors, there is a continuous change in the context (CHANDLER; VARGO, 2011).

According to Vargo and Lusch (2016), A2A orientation also involves other things. First, it confirms that value creation occurs in networks, implying that the resources used in service provision come from other actors (see FP9). Second, it implies a dynamic component to these networks since each integration or application of resources (i.e., service) somehow changes the nature of the network. This suggests that a network understanding alone is inadequate and that a more dynamic systems orientation is necessary. Third, along with the dynamic system's orientation, it indicates the existence of mechanisms to facilitate all resource integration and service exchange through the coordination of actors. Thus, acknowledgment and understanding of the existence and role of institutions, those routinized, coordinating mechanisms of various types, and institutional arrangements, assemblages of interdependent institutions, become essential to understanding value co-creation. Regarding service ecosystems, networks capture the dyadic interactions that do not take place in isolation, which can be seen at different levels of aggregation (macro, meso, micro) and reflect the resource integration process under the circumstances in which it takes place (VARGO; LUSCH, 2016, 2017).

Furthermore, it has been becoming more evident that the narrative of value co-creation is developing into resource-integrating, reciprocal-service providing actors co-creating value through holistic, meaning-laden experiences in nested and overlapping service ecosystems, governed and evaluated through their institutional arrangements (VARGO; LUSCH, 2016). This is the emerging narrative of S-D logic, which can be seen in Figure 6.

Figure 6 - The narrative and process of S-D Logic

Source: Vargo and Lusch (2016, p. 7).

2.1.1 Service ecosystems and institutions

Moore (1993) adapted the term ecosystem from biology to the business context to reflect the interdependence and co-evolution specific to this domain. Business ecosystems are co-evolutionary business systems that include actors, technologies, and institutions. According to the S-D logic, value is co-created within service ecosystems, defined as a "relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange" (VARGO; LUSCH, 2016, p. 161).

A service ecosystem is a structure of loosely coupled, value-proposing social and economic actors interacting through institutions, technology, and language to co-produce service offerings, engage in mutual service provision, and co-create value (VARGO; LUSCH, 2011). In other words, a service ecosystem is a complex configuration of actors and resources coordinated by assemblages of institutions. On the other hand, institutions can be formal codified laws, informal social norms, conventions, conceptual and symbolic meanings, or any other routinized rubric that shortens cognition, communication, and judgment. Institutions make social life predictable and meaningful and, along with the process and role of institutionalization, are the keys to understanding the structure and functioning of service ecosystems, such as value co-creation (AKAKA; VARGO; LUSCH, 2013; VARGO; LUSCH, 2016, 2017). A service ecosystem view offers a more networked, interconnected, and recursive notion of value creation. All stakeholders are interconnected through shared institutions and the provision of service. Value creation occurs throughout the network at each exchange encounter rather than at the end of the value chain (AKAKA; VARGO; LUSCH, 2013).

All managerial and policy decisions involve creating, choosing, and integrating resources. When managers and policymakers understand the shared values, beliefs, and norms (i.e., institutions) of the constellation of resource-integrating actors, it allows decisions and policies to be better informed. Rather than focusing only on dyadic exchange and a narrow view of resources, the larger system of actors and resources (including institutional arrangements) is considered and understood. Therefore, understanding the complexity of context, which institutions and institutional arrangements heavily inform, is a practical way for all markets and service ecosystems to be viewed (AKAKA; VARGO; LUSCH, 2013; VARGO; LUSCH, 2016).

From the perspective of S-D logic, institutions take on an expanded role. S-D logic is dynamic, concerned with value co-creation (FP6) and determination (FP10) through resource integration (FP9), service-for-service exchange (FP1), and coordinated through actor-generated institutions and institutional arrangements (FP11). Along the S-D logic evolutionary path, there has been increased recognition of the need for a more precise delineation of the foundational premises and language adjustment (VARGO; LUSCH, 2016). Therefore, the five mentioned FPs configure the S-D logic axioms, as presented in Table 2.

Table 2 - The axioms of S-D logic

	Axiom
Axiom 1/FP1	Service is the fundamental basis of exchange
Axiom 2/FP6	Value is co-created by multiple actors, always including the beneficiary
Axiom 3/FP9	All social and economic actors are resource integrators
Axiom 4/FP10	Value is always uniquely and phenomenologically determined by the beneficiary
Axiom 5/FP11	Value co-creation is coordinated through actor-generated institutions and institutional arrangements

Source: Adapted from Vargo and Lusch (2017, p 47).

Summing up, the coordination for value co-creation implies mechanisms for facilitating resource integration and service-for-service exchange, which is the role of institutions and institutional arrangements. Institutions are the humanly devised rules, norms, and beliefs that enable and constrain action and make social life at least somewhat predictable and meaningful. Institutional arrangements refer to higher-order assemblages of interrelated institutions. Thus, S-D logic has identified the service ecosystem, partially conceptualized in terms of institutions, as the unit of analysis for value co-creation. Therefore, S-D logic affords the completion of a relatively coherent narrative of value co-creation through resource integration and service exchange, coordinated by shared institutional arrangements that define nested and overlapping service ecosystems. S-D logic promotes an extended contextual perspective, which includes social and cultural contexts within which value is created, implying that value represents a "change in the viability (well-being) of a referent system" (VARGO; AKAKA; VAUGHAN, 2017; VARGO; LUSCH, 2016, 2017).

2.1.2 Mid-range theory development to S-D logic

In their work entitled "Service-dominant logic 2025", Vargo and Lusch (2017) stated that the conceptual exploration of service ecosystems and institutions has just begun. Thus, the

authors point to a meta-theoretical level in S-D logic, necessitating mid-range theory development. Mid-range theory development of ecosystems and institutions is intended to support a metatheory of the market. Therefore, clarifying the intertwined conceptual issues of abstraction and aggregation is helpful.

Some paradoxical confusion concerning S-D logic can be seen among researchers, for example, describing it as managerially focused (WILKIE; MOORE, 2003) or purely macro-level focused and thus not applicable to micro-level (managerial) phenomena (GRÖNROOS; VOIMA, 2013). Vargo and Lusch (2017) stated that there is confusion in two meanings of levels: aggregation (e.g., societal, market, or dyadic exchange) and abstraction (e.g., meta-theoretical, mid-range, or micro-foundational). S-D logic primarily focuses on meta-level theory development but is equally macro-, meso-, and micro-focused concerning aggregation. It is essential to alternately zoom in and out to understand phenomena at any level (aggregation) of interest. To fully understand the activity at one level, it should be viewed from another (CHANDLER; VARGO, 2011).

Theoretical levels concern levels of abstraction, where theory at one level can inform theory at another (e.g., mid-range to macro or vice versa). One can also construct metatheory without directly addressing lower-level theory, but it should address all aggregation levels. Given that the meta-theoretical narrative of S-D logic has become more fully articulated, lower-level (of abstraction) theory will increasingly become the focus. While continuing attention is being paid to metatheory, at all levels of aggregation, much of the development efforts associated with S-D logic are more mid-range and micro-level theoretical, thus lending itself to direct testing, verification, and application (VARGO; LUSCH, 2017). Table 3 illustrates the levels of aggregation and abstraction.

Table 3 - Levels of aggregation and abstraction

Levels		Aggregation		
		Macro-level (e.g., societal, community – national, global, local)	**Meso-level** (e.g., industry/market, cartel)	**Micro-level** (e.g., transactions, sharing)
Abstraction/ theory	**Meta-theoretical** (e.g., S-D logic, co-creation of value)	Primary focus to date		
	Midrange-theoretical (e.g., engagement, co-production)	Increasing attention, looking forward		
	Micro-theoretical (e.g., the law of exchange, decision making)			

Source: Adapted from Vargo and Lusch (2017, p. 50).

At the core of S-D logic mid-range theory development is how to apply our collective skills, experiences, and knowledge (operant resources) to benefit households, practitioners, policymakers, and others (e.g., engagement, co-production). If there is no benefit, there is no value in use, and the bridge from metatheory to the application has failed. However, Vargo and Lusch (2017) believe it is time to actively boost the bridge between metatheory and mid-range theory, encouraging more evidence-based research informed by this mid-range theory to better bridge theory and practice. Other researchers also support this thought (BRODIE; SAREN; PELS, 2011; STORBACKA *et al.*, 2016). Therefore, this research proposes to bridge mid-range theories by approaching the concepts of engagement and co-production and metatheory, which involves value co-creation. Engagement and co-production concepts will be discussed later, as they are conceptualized within the public services context.

Furthermore, Trischler and Charles (2019) argued that S-D logic and its implications for practice are widely researched within the private sector literature. However, its extension to the public sector, particularly public policy, is lacking. Nonetheless, public policy literature attempted to apply S-D logic to public services, known as the "public service-dominant logic" (PSDL) (OSBORNE; RADNOR; NASI, 2013; OSBORNE *et al.*, 2015). The following section brings on this discussion.

2.2 THE PUBLIC SERVICE-DOMINANT LOGIC

Since its introduction in 2004, S-D logic has been applied, elaborated, and extended by scholars within numerous disciplines, for example, in education (JARVIS *et al.*, 2014), health (JOINER; LUSCH, 2016), and tourism (SHAW; BAILEY; WILLIAMS, 2011). In the field of public administration, Osborne, Radnor and Nasi (2013) argued that S-D logic is more relevant to public management than the previous manufacturing focus and built a research agenda for a "public service-dominant" approach, also known as "public service-dominant logic" (PSDL) (OSBORNE; RADNOR; STROKOSCH, 2016; TRISCHLER; CHARLES, 2019; VARGO; LUSCH, 2017). It evolved as a response to the limitations of the new public management (NPM). A significant critique is that, despite NPM's recognition of the growth of the managerialization of public services, its implications were primarily drawn from the experience of the manufacturing sector (OSBORNE, 2010). This manufacturing logic is problematic because it defined the value (private and public) as something embedded in output units and delivered to consumers or end-users (OSBORNE; RADNOR; NASI, 2013; WESTRUP, 2018). The S-D logic stresses that value creation deficiencies are caused by service system faults

(EDVARDSSON *et al.*, 2013; WESTRUP, 2018). In this sense, many public policy failures result from a failure to consider the complexity of social problems and the assumption that citizens passively accept government actions (TRISCHLER; CHARLES, 2019).

This way, PSDL advanced on public policy and management, avoiding focusing on administrative processes or intra-organizational management to maximize efficiency without considering whether societal needs and problems are addressed effectively (OSBORNE; RADNOR; NASI, 2013). Osborne, Radnor and Nasi (2013, p. 143) proposed that "by adopting a public service-dominant approach to public services delivery, both the citizen and user are situated as essential stakeholders of the public policy and public service delivery processes and their engagement in these processes adds value to both" (OSBORNE; RADNOR; NASI, 2013; TRISCHLER; SCOTT, 2016).

Although the foundational premises of S-D logic have not been explicitly integrated into PSDL, Osborne, Radnor, and Nasi (2013) recognized that production is a process of knowledge transformation rather than tangibility, thus implicitly referring to the importance of operant resources. According to the authors, "both the citizen and user are situated as essential stakeholders of the public policy and public service delivery processes, and their engagement in these processes adds value to both" (OSBORNE; RADNOR; NASI, 2013, p. 143).

However, the integration of S-D logic has led to some misconceived ideas (TRISCHLER; CHARLES, 2019). PSDL explicitly focuses on what makes public services different from tangible goods and whether co-production is unavoidable or optional in organizational production. Therefore, PSDL defines services as intangible products produced and consumed simultaneously, delivering public value to the end-user (OSBORNE; RADNOR; NASI, 2013). This definition contradicts S-D logic in its foundational premise that value is not delivered but rather is created in use and is uniquely determined according to the context (VARGO; LUSCH, 2008a).

Concerning co-production, Osborne, Radnor, and Nasi (2013, p. 146) proposed that "by taking a public service-dominant approach, co-production becomes an inalienable component of public services delivery that places the experiences and knowledge of the service user at the heart of effective public service design and delivery." Additionally, the authors argued that co-production could not be regarded as something added into or external to service delivery, for example, by inviting end-users into planning and production processes. Instead, co-production is unavoidable because public service production directly affects consumption, making the end-user a co-producer. This contradicts developments in S-D logic, in which co-production is

defined as optional, whereas value is always co-created (LUSCH; VARGO, 2006; VARGO; LUSCH, 2016).

PSDL focuses on resource allocation as a unidirectional process (through tangible goods) or dyadic (through co-production of intangible services). This dyadic focus does not recognize that value is co-created between multiple actors, which appears fundamental to understanding human behavior and society's decision-making (SKÅLÉN; EDVARDSSON, 2016) and capturing the dynamism of markets in interplay with the government (VARGO; LUSCH, 2017). The dyadic exchange focus in public policy fails to account for possible macro-level effects and end-users influence as value co-creators, leading to the adoption of a citizen-centered philosophy without considering the impacts on society and markets (TRISCHLER; CHARLES, 2019). Table 4 summarizes the key tenets of PSDL and S-D logic regarding their main concepts, perspectives, and implications.

Table 4 - Key tenets of PSDL and S-D logic

(continue)

| Concept | PSDL | | S-D Logic | |
	Perspective	Implication	Perspective	Implication
Approach to service	Goods and services are specific product categories.	Resource allocation is a unidirectional (through tangible goods) or dyadic (through co-production of intangible services) process.	Service is a perspective on value creation.	Tangible (goods) and intangible (services) are not alternative forms of products; rather, goods and services serve as resources (i.e., operand and operant) supporting the users' value creation process.
Value creation	An organization produces and delivers services.	Value creation relies on the effective production and delivery of goods and services.	Value is co-created and determined according to the context.	Value cannot be predefined or delivered but is co-created in a specific context when actors integrate and apply resources from multiple sources.
Co-production	Co-production is unavoidable because of the inseparability characteristic of services.	The interaction (i.e., dyadic exchange) between the organization and the end user is the key focus during the production and delivery of services.	Co-production is optional, yet the end user is always a co-creator of value.	Actors (e.g., consumers, end users, citizens) often co-create value independently from the underlying service-providing organization by integrating resources from other sources.

(conclusion)

Service design	Service design concerns the operationalization of co-production.	Service design focuses on the organization's production and delivery system by additionally considering the end user's role during co-production.	Service design involves understanding the users' value creation process.	Service design starts with exploring the users' value creation process as the basis for providing the supporting configuration of resources for users to integrate and operate on.
Service systems	Public service delivery can involve multiple organizations.	A service delivery systems lens that allows for the coordination of public service delivery across organizations is required.	Ecosystems explain the multilevel nature and role of institutions and institutional arrangements in value co-creation.	Value co-creation can include any configuration of system entities that link their resources for mutual benefit, including users, consumers, or citizens. These activities influence and are influenced by institutional arrangements.

Source: Adapted from Trischler and Charles (2019, p. 22).

In conclusion, Trischler and Charles (2019) analyzed that the relevance of marketing for public policy has been questioned because its focus on dyadic exchanges does not consider the dynamism and complexity of public problems. On the other hand, public service-dominant logic does not address this limitation because its focus remains on delivering services to the end-user. Public sector research needs to recognize that value is co-created within constellations involving many actors. This perspective implies a service ecosystems lens supported by the notion that value is not always simply coproduced between an organization and its users but is co-created by multiple actors, often in complex ways. The authors proposed integrating recent developments in service-dominant logic and related research, applying a service ecosystem lens to public policy (TRISCHLER; CHARLES, 2019; VARGO; LUSCH, 2016, 2017).

This study builds on the above discussion by assuming that value is co-created in service ecosystems. The focus is on the end-users, the citizens, and their service encounters with the other actors in the ecosystem (e.g., other citizens, service provider employees). Each encounter is an opportunity to integrate resources, particularly the citizens' personal knowledge, and co-create value. This thesis assumes that citizens' personal knowledge has the demand-side view of public problems and social needs and could engage in co-producing the solutions.

2.3 PRIVATE *VERSUS* PUBLIC SERVICES

Researchers have argued that the S-D logic framework in service management theory could improve services in the public sector (OSBORNE *et al.*, 2015; SKÅLÉN; EDVARDSSON, 2016; WESTRUP, 2018). However, when proposing a marketing approach to public services, it is essential to delineate the particularities surrounding private and public services, as S-D logic is initially proposed to the private sector. The public sector is under political control and regulated by political policies and processes (ACKROYD, 1995). As a result, the public sector is responsible for providing individual service users and managing collective value (WESTRUP, 2018).

The public sector is usually seen as distinct from the private sector because it operates in a political rather than economic marketplace (TRISCHLER; CHARLES, 2019). Public value creation relies on a politically mediated expression of collectively determined preferences; what the citizenry determines is valuable (MOORE, M. H., 1995). For Osborne (2018), there are differences in the nature and context of public services compared to private services or simply services in general. The author emphasizes four points. First, for private sector service companies, consumer retention and the repetition of business relationships are the essences of these companies' profitability. For public services and public service organizations (PSOs), the existence of repetitive business relationships may indicate service failure rather than success (e.g., repeated visits to the doctor for the same reason, students repeating the year after learning failure), thus modifying the dynamics of value creation. Second, the reality of coerced or reluctant customers in public services (e.g., prison or child protection services) demands reconsidering value creation.

The author points to another factor differentiating private from public companies: the former usually know who their customers are. On the other hand, public ones may have multiple end-users or stakeholders with different definitions of successful end service. Public service users may receive services from more than one public service, for example, older people who receive assistance from health and care agencies. In this case, value creation is not a dyad but depends on the user's relationship with a network of PSOs and possibly their family and friends. Finally, public service users fulfill the dual role of service users and citizens who may have a broader and more social interest in the results of the services. The delivery of the public service process is about value rather than performance, focused on the actions of citizens and service users rather than on public service providers (OSBORNE, 2018).

The private service sector functions within the market's competitive boundaries, while the public sector engages in much more complex tasks, is involved in activities with much greater symbolic significance, and operates in the public interest. For example, while private companies aim to create financial returns for shareholders, public services have missions to improve public welfare (ABERBACH; CHRISTENSEN, 2005; PARKER; WALLER; XU, 2013; SHITTU, 2020). Hence, the public sector is more concerned with equity and the effective treatment of social issues. Moreover, public services are invariably provided in sectors where private companies do not operate (PARKER; WALLER; XU, 2013), including, for example, defense, healthcare, and education (SHITTU, 2020).

A critical factor in public services, different from private ones, is the value provided for citizens. The relationship between the service provider and the recipient is very direct in private services. If customers find the service value is not commensurate to the amount spent, they stop patronage. However, such accountability in public service sometimes is not possible, as citizens pay for the services provided by the government mainly in taxation or council rates formats. Besides, there is no competition for specific services, and citizens have no other option to switch (SHITTU, 2020).

The challenge for public service organizations is developing and managing the organization and its processes to ensure that the service users perceive that their goals are achieved and that value emerges for them (GRÖNROOS, 2019). Such goals may be achieved if the relevant user processes are adequately helped. In this sense, "the objective of public service management is to provide resources, processes, and competencies in such a way that they help the service users' relevant processes, and due to this help, they enable the service users to achieve their goals in a manner that is valuable to them" (GRÖNROOS, 2019, p. 780).

The difference between customers and citizens should also be emphasized. Citizens are supposed to be equal in a democratic society, while customers, on the other hand, are not equal, and the level of service they get is a function of what they pay. Citizens are meant to see themselves as part of a community that transcends their individual interests, looking for the common good (ABERBACH; CHRISTENSEN, 2005).

The public service represents the machinery of government through which public policies are formulated and implemented. Public service converts government policies and programs into tangible goods and services for the consumption of the citizenry. It represents the building bridge for government to respond to citizens' needs (GOMES; MOURA, 2018; SHITTU, 2020). In other words, public service is responsible for formulating and executing policies and programs to deliver essential welfare services that enhance citizens' quality of life

(SHITTU, 2020). However, many public policies fail to consider social problems' complexity and assume that citizens passively accept government actions (MARCHETTI; OLIVEIRA; FIGUEIRA, 2019; SKÅLÉN; EDVARDSSON, 2016; TRISCHLER; CHARLES, 2019).

Bovaird (2007) emphasized the need to reconceptualize public service provision as a process of social construction in which actors in self-organizing systems negotiate rules, norms, and institutional frameworks rather than taking the rules of the game as given. Trischler and Charles (2019) also stated that policy analysis should start by understanding the specific circumstances surrounding the citizen's value creation process as the basis for designing public policies. According to the authors, this understanding enables policymakers to ensure appropriate resources for relevant actors to integrate and operate on. From this perspective, public policy is conceptualized as a service-for-service, coordinating resources that enable value co-creation activities between multiple actors within the broader service ecosystem as part of a broader effort to address public problems (AKAKA; VARGO; LUSCH, 2013; TRISCHLER; CHARLES, 2019).

A key element of public policy is the coordination of the collective, multi-actor, and systemic phenomenon of value co-creation activities, which, in turn, are influenced by institutions and institutional arrangements. A service ecosystem's view suggests that the complexity of the social context that frames value creation and exchange is influenced by the diversity of resources, the multiplicity of institutions, and the enactment of many practices in a particular context. The major implication of a service ecosystem approach is a deeper understanding of the underlying mechanisms that drive multiple levels (micro, meso, and macro) of interaction (resource integration) and shape the social contexts through which value is created (and co-created). This macro-level abstraction provides the basis for defining (micro-level) implications for public policymakers (AKAKA; VARGO; LUSCH, 2013; TRISCHLER; CHARLES, 2019).

On a macro level, the value constellation identifies relevant actors having a (potential) effect on the problem-solution combination. This micro/macro systemic analysis should be performed so that policies do not fail to support actors in effectively addressing the underlying problem, and resources integrated by the government and other public sector organizations do not, as a result, be wasted. Therefore, policymakers must go beyond consideration of the delivery system and understand the entire value constellation, including how individual users and the collective citizenry co-create value in their specific use contexts. In this view, policy analysis cannot just be a user-centered process but instead represents a multilevel approach that

considers the context and the multiple actors involved in value co-creation (TRISCHLER; CHARLES, 2019).

In order to clarify the understanding of value, as different terms were presented (value co-creation, value-in-use, value-in-exchange, value-in-context, public value), these terms are approached next.

2.4 CONCEPTUALIZING VALUE

Value is defined by different authors in the public and private sectors and may have some variations in the concept or be complementary. Value is seen as a process in which the user benefits somehow (GRÖNROOS, 2008). The nature of value has been discussed and debated since Aristotle. Part of its vagueness stems from the divergent meanings incorporated into the fundamentals of economics and the study of market exchange (VARGO; MAGLIO; AKAKA, 2008). Bagozzi (1974, p. 78) defined the exchange system "as a set of social actors, their relationships to each other, and the endogenous and exogenous variables affecting the behavior of the social actors in those relationships." Specifically, two general meanings of value, "value-in-exchange" and "value-in-use," reflect different ways of thinking about value and value creation (VARGO; MAGLIO; AKAKA, 2008).

The traditional view of the goods-dominant logic (G-D logic) is based on the value-in-exchange meaning of value (VARGO; LUSCH, 2004; VARGO; MORGAN, 2005). In this view, value is created by the firm and distributed in the market, usually through exchanging goods and money. From this perspective, producers and consumers play distinct roles, and value creation is often thought of as a series of activities performed by the firm (VARGO; MAGLIO; AKAKA, 2008).

The G-D logic concepts are rooted in economic philosophy and science, developed mainly from the work of Adam Smith (1776 apud VARGO; MORGAN, 2005). Initially, Adam Smith established the real value regarding the work needed to achieve a benefit. Given his limited purpose and difficulty measuring the actual value, he narrowed his focus to nominal or exchange value. Related to Say's notion of utility (1821 apud VARGO; MORGAN, 2005), which was associated with this concept of nominal value, and to the desire of economic philosophers to convert economics into a legitimate science in line with the Newtonian tradition, products, with incorporated utility and represented by their price, became the basis for the Marginal Utility Theory and neoclassical economics. Thus, the model centered on tangible goods (exchange-value) became the dominant paradigm for all the business-related

disciplines, including management, marketing, and operations (VARGO; AKAKA, 2009; VARGO; MAGLIO; AKAKA, 2008).

On the other hand, the alternative S-D logic view of exchange fundamentally challenges the foundation of economics, though, in a real sense, it recaptures Smith's original notions of applied, specialized knowledge and skills (service) and value-in-use (real value) as primary (VARGO; LUSCH, 2008a; VARGO; MAGLIO; AKAKA, 2008). Therefore, the value-in-use concept considers that value can only be created and determined by the user in the "consumption" process and through use (LUSCH; VARGO, 2006). In this view, value in exchange is only a nominal representation of value; the real value or value-in-use is derived and determined through the integration and application of resources (AKAKA; VARGO; LUSCH, 2013).

Value-in-use is at the center of a complex value creation process, where the service-centered view of exchange suggests that knowledge is ubiquitous in the market and is generated by all participants. From a service systems perspective, the producer and consumer distinction disappear, and all participants contribute to creating value for themselves and others (VARGO; MAGLIO; AKAKA, 2008). However, according to the S-D logic, value-in-use does not fully reflect its thought, and thus the term value-in-context may be more suitable. Value-in-context suggests that besides always being co-created, value is contingent on integrating other resources and is contextually specific (VARGO *et al.*, 2010). In particular, S-D logic's concept of value in context draws attention to how the co-creation of value is framed by varying levels (micro, meso, and macro) of interaction (AKAKA; VARGO; LUSCH, 2013).

In conclusion, S-D logic focuses on value-in-use and value-in-context and suggests that service systems simultaneously access, adapt, and integrate resources to create value for themselves and others and that knowledge is the core source of all exchange. Although S-D logic focuses on the value derived and determined through use or context, the value determined by exchange remains an important component in value co-creation. Co-creation of value inherently requires the participation of more than one service system, and it is through integration and application of resources made available through the exchange that value is created. Therefore, the process of co-creating value is driven by value-in-use but mediated and monitored by value-in exchange (VARGO; MAGLIO; AKAKA, 2008). Consequently, value is co-created and assessed in use by customers (or users) in their social contexts (LUSCH; VARGO, 2014).

The phenomenological, co-created, multidimensional, and emergent characteristics of value converge on the idea that value is a system-level construct. This, in turn, supports a

service-ecosystem conceptualization of value as a change in the viability of a system (VARGO; MAGLIO; AKAKA, 2008). The outcome of value creation should be considered from a systems view to account for the variance in perspective and changes in the system over time and space. This service-ecosystem perspective helps to move the discussion beyond the bifurcation between value-in-use and value-in-exchange and provides a systemic approach to value creation and the thinking of how multiple perspectives and actors contribute to value creation (VARGO; AKAKA; VAUGHAN, 2017).

A service ecosystem lens applied to public policy recognizes that value is co-created through the integration of resources provided by multiple actors and is coordinated through actor-generated institutions and institutional arrangements. In this view, value creation is neither singular nor dyadic but rather a multi-actor phenomenon involving dynamic and complex value constellations consisting of citizens, volunteers, non-governmental partners, and others (TRISCHLER; CHARLES, 2019). A service-ecosystem perspective provides a novel approach for thinking about value so that researchers might investigate value through a more dynamic and multifaceted lens. This systemic approach to value extends firm-centric and customer-centric views on value by considering the contributions of multiple actors in value creation and determination. It transcends prior views on value-in-exchange and value-in-use by suggesting that exchange is required for value creation, but because the value is phenomenological, multidimensional, and emergent, the determination of value differs throughout an ecosystem (VARGO; AKAKA; VAUGHAN, 2017).

2.4.1 Value co-creation

S-D logic does not distinguish between goods and services. Instead, both serve as types of resources (operand and operant) that support actors, such as consumers, citizens, volunteers, and nongovernmental organizations (NGOs), in creating value. This approach shifts the focus from the transaction of value being delivered by the organization to the end-user toward that of value being created through the application of resources, which are integrated from various sources, implying that multiple actors engage in value co-creation (TRISCHLER; CHARLES, 2019; VARGO; LUSCH, 2016).

The S-D logic notion of value co-creation suggests that "there is no value until an offering is used - experience and perception are essential to value determination" (VARGO; LUSCH, 2006, p. 44). Besides, offerings must be integrated with other stakeholders' (actors) resources to create value (VARGO; MAGLIO; AKAKA, 2008). Knowledge and skills that

actors apply in activities, processes, and interactions drive and direct value co-creation (EDVARDSSON *et al.*, 2013). Therefore, value co-creation is influenced not only by using a particular resource but also by contextual factors, including knowledge, networks of relationships, and social structure (e.g., institutions) (AKAKA; VARGO; LUSCH, 2013; CHANDLER; VARGO, 2011).

Xie, Bagozzi, and Troye (2008) explored the concept of "prosumption," which highlights the theory of co-creation based on the productive nature of consumption. For the authors, prosumption is a process that integrates physical activities, mental effort, and socio-psychological experiences, which involves the application of consumer or user operand and operant resources. This meaning of prosumption appears closely in line with S-D logic's understanding of the co-creation of value, as people provide input of money, time, effort, and skills to participate in this process.

Conceptualizations of co-creation vary from specific dyadic encounters (GRÖNROOS, 2011) to broad social and cultural processes (VARGO; LUSCH, 2011) and include direct or indirect interaction between two or more individuals or organizations that potentially lead to a positive outcome for one or more parties. Value co-creation is the driving force of service ecosystems, which emerge and evolve through interactions among many actors and their social and economic exchange (WILDEN *et al.*, 2019).

Finally, when it comes to public services, the active involvement of end-users is essential in light of their role as co-creators rather than passive actors. Co-creation assumes end-users can act independently, make free choices, and contest current structures. Various actors can alter the institutional framework within which they are nested, putting pressure on markets and governments to change their practices. Therefore, the active involvement of these users in the development of potential new solutions can additionally enable them to step out of everyday life and reflect on their current, which, in its turn, can increase users' awareness of their role in society and lead to the understanding of new possibilities (knowledge of how to change the status quo) (TRISCHLER; CHARLES, 2019; VARGO; WIELAND; AKAKA, 2015). Therefore, knowledge as a resource enables citizens to be better positioned to engage in value co-creation (FREMPONG *et al.*, 2020).

It is important to emphasize that co-production and co-creation are sometimes interchangeably used in the literature. Voorberg et al. (2015), when conducting a literature review with the terms co-creation and co-production, identified that for both terms, citizens are considered valuable partners in the delivery of public services. However, what differentiates the themes is that the literature on co-creation emphasizes value co-creation, which is assumed

in this research (VARGO; LUSCH, 2004; GEBAUER; JOHNSON; ENQUIST, 2010; VOORBERG et al., 2015).

2.4.2 Public value

The public value concept began with the public managers of the Kennedy School of Government and Harvard Business School to advance the vision of the New Public Management, which has a narrow focus on efficiency. Public value can be achieved through the democratic process and dialogue between citizens, public authorities, and managers regarding the service delivered (GAINS; STOKER, 2009). The internal efficiency of the organization is necessary but not sufficient to maintain the sustainability of public service organizations and should be achieved from the public value focused on the citizen (OSBORNE et al., 2015). Hence, public value is a legitimate concept in studying why and how people contribute to the public good (CHANDRA; MAN LEE; TJIPTONO, 2021).

A foundational premise of the S-D logic states that "value is always uniquely and phenomenologically determined by the beneficiary" (VARGO; LUSCH, 2008a). This statement is true because the referent beneficiary at the center plays a key integrative and evaluative role in all instances of value creation (TRISCHLER; CHARLES, 2019). Public value involves what the citizenry determines as valuable and what the stakeholders involved in implementation see as valuable. It is essential to realize the multi-actor nature of value co-creation activities, also pointed out by the S-D logic service ecosystems lens (LUSCH; VARGO, 2014; TRISCHLER; DIETRICH; RUNDLE-THIELE, 2019; VARGO; LUSCH, 2016).

Value, therefore, is based on the user's perception and is created in the interaction between the user and the provider from the exchanges that occur, that is, co-created. In public services, the public value depends on citizens' contributions and is received privately by individuals and publicly by the community, based on collective needs and desires (ALFORD; HUGHES, 2008; PETRESCU, 2019). Also, public value involves deliveries and outcomes that impact and have meaning for those who receive them (ALFORD; YATES, 2014).

According to Gains and Stoker (2009), the concept of public value is related to the purpose of public services, where citizens support public administration and services because they realize they add value to their lives as citizens and society as a whole. In this sense, public management should not only measure the satisfaction of service users but involve them in the process of delivering those services (GAINS; STOKER, 2009; OSBORNE et al., 2015).

Additionally, Loeffler and Bovaird (2019) added that public value is the balance between achieving priority public outcomes and priority public governance principles.

From the belief supported until 1980, when public services were seen as activities involving professionals searching for results for the "public interest," it was understood that public services should deliver outcomes corresponding to what the services' users and citizens perceive as valuable. Therefore, "public services for the public" is a definition that has evolved to "public services by the public" (BOVAIRD; LOEFFLER, 2012).

In this sense, in public services, the public value depends on citizens' input, and it is received privately by individuals and publicly by the community. Therefore, the public value cannot be analyzed only at the individual level. While private value is individual and can be evaluated individually, public value has an individual and a collective part, which have implications on multiple levels that benefit from a service ecosystem angle (PETRESCU, 2019). Trischler and Charles's (2019) view of public value is that it is consumed by the collective citizenry, mediated through the political process, and facilitated through institutions that enable the market and the broader society to function.

A point to be considered in a public service ecosystem is that nobody knows better which public services are most important for their welfare than service users themselves, their families, friends, and the communities they live in (BOVAIRD; LOEFFLER, 2012, 2013). Consequently, citizens' personal knowledge derives from their experience and is a necessary resource. Mobilizing this knowledge could be the key to act facing society's needs and problems (BENNET; BENNET, 2015; BENNETT; BENNET, 2007).

2.5 KNOWLEDGE AS CITIZENS' OPERANT RESOURCE

Carrillo (2014) stated that there had been a significant advance in understanding social transformations attributed to the increasing weight of services on the economy, information and communication technologies, and the volatility of roles and institutions. However, little attention has been paid to knowledge as the substrate of human experience. Orlikowski (2006) conceptualized knowledge as a dynamic and ongoing social accomplishment. It is not static or given, but a capability produced and reproduced in recurrent social practices (ORLIKOWSKI, 2006). Once knowledge enters the social value dynamics, new functional realities emerge, transforming the space of possibilities (CARRILLO, 2014).

Knowledge is considered the capacity (potential or actual) to take effective action in varied and uncertain situations. It is a human ability that consists of understanding, insights,

meaning, intuition, creativity, judgment, and the ability to anticipate the outcome of our actions (BENNETT; BENNETT, 2014). Knowledge implies the capacity for action in social life, where the realization and implementation of knowledge depend upon the social, economic, and intellectual context (STEHR, 1996); it is part of the institutional structure we call society (VARGO; LUSCH, 2016).

The solution to social needs requires identifying and locating the best knowledge and efficiently and effectively applying it. This process of knowledge mobilization combines knowledge gained from research, the specialty knowledge of change agents and organizational or community development specialists, and the knowledge acquired from the lived experience of community leaders and citizens (BENNETT; BENNET, 2007).

The focus of this research is citizens' personal knowledge, which includes knowledge gained from formal and informal instruction, memories, stories we have been told or have told, personal contacts and relationships, books we have read or written, notes, documents, photographs of us or by us, intuitions, and what we have learned from others. All that provides the structure for the improvizations we call coping, problem-solving, and action. It focuses on how individuals apply knowledge processes to support their daily activities (GRUMET, 1987; JEROME, 2006; SUTTON, 2009).

Individuals' knowledge-building competencies depend highly on their environment (COHEN; LEVINTHAL, 1990). The way actors use each other resources depends on their embedded contexts. For this reason, actors are partially defined by their contexts while they partially define their contexts. Each actor brings a unique quality to the context that affects other actors and the context as a whole (CHANDLER; VARGO, 2011). Therefore, knowledge is context-sensitive and situation-dependent because both time and space condition their meanings and correlate their values (BENNET; BENNET, 2007; FACHINELLI; D'ARRIGO; BREUNIG, 2018).

In a resource configuration, the application of specialized competencies, that is, operant resources (specifically, knowledge), supports the actors' integration and operation (VARGO; LUSCH, 2008b). Also, the ecosystem actors are defined based on the resources applied for the benefit and considering resource-integration activities, while the network's purpose includes collective well-being and individual survival (VARGO; LUSCH, 2016, 2017). The service ecosystems view emphasizes integrating skills to develop new knowledge (i.e., learning) to apply resources (professionals, knowledge, technology) more effectively, efficiently, and sustainably. In this view, the perspective and knowledge of people, such as employees, customers, and other stakeholders, drive value creation in both global and local markets

(AKAKA; VARGO; LUSCH, 2013). Nevertheless, the end-users are the most crucial resource integrators, as they will finally determine the value using the service (WESTRUP, 2018).

Resource integration and service provision become possible only when individuals in a service ecosystem are connected and engaged. To apply their competencies and integrate resources, individuals need access to relevant resources, which they often acquire from social relationships in their broader social structure. However, merely having access to a partner's resources may be insufficient for resource integration, as intentions to mobilize resources are vital. The intention to mobilize is an individual motivation to participate in resource exchange activities (LAUD *et al.*, 2015). Therefore, one key resource integration practice is internalization, transitioning from explicit to tacit knowledge in knowledge creation processes (BENNET; BENNET, 2007; LAUD *et al.*, 2015; NONAKA; TAKEUCHI, 1995).

Internalization occurs through socialization (COLEMAN, 1987). People create knowledge in their interactions with each other and the environment and obtain new knowledge through their individual, active, and subjective shaping and integration of experience (POLANYI, 1966; TAKEUCHI, 2013), accumulated in everyday life experiences (FREMPONG *et al.*, 2020). Hence, to articulate the value in a cultural context, individuals must internalize the cultural frames that guide resource exchanges (LAUD *et al.*, 2015). For this reason, it is essential to understand how citizens' operant resources of knowledge influence value co-creation activities (FREMPONG *et al.*, 2020).

More specifically, this study is interested in understanding how citizens mobilize their personal knowledge to co-create value in public services ecosystems. The foundation of knowledge mobilization lies in transforming knowledge into action that creates value, and it moves a specific area of knowledge to a particular recipient (community) to create value. Value is considered worth in terms of usefulness or importance to the recipient, with the knowledge being mobilized according to the community's needs (BENNETT; BENNET, 2007).

Integrating S-D logic and personal knowledge mobilization research provides a deeper understanding of citizens' engagement in service co-production activities. When discussing the innovation process, researchers argued that customers possess unique knowledge about their preferences, and their involvement increases success in product-customer need fit, profit, or market share. Customers are recognized as active partners who can participate in firms' value creation processes and are empowered to develop solutions to their needs (MAHR; LIEVENS; BLAZEVIC, 2014). Capturing their unique knowledge about the usage and latent needs is key to service success, as customers are experts in their experiences (MAHR; LIEVENS; BLAZEVIC, 2014; TRISCHLER *et al.*, 2018).

2.6 LEVERAGING CO-PRODUCTION THROUGH CITIZEN ENGAGEMENT

Different terms are coupled with engagement in the literature, like customer engagement, actor engagement, and citizen engagement. For this research, the theoretical construction of the three terms is relevant to explain its relation to the S-D logic literature, although the term citizen engagement is adopted, as the intention is to understand engagement at the citizen or public service user level.

Brodie et al. (2011) used customer engagement to define a psychological state under interactive, co-creative customer experiences with a focal agent or object in service relationships. Engagement occurs under a specific set of context-dependent conditions generating differing levels. It is a dynamic, iterative process within service relationships that co-create value. It is a multidimensional concept subject to a context - a stakeholder-specific expression of relevant cognitive, emotional, and behavioral dimensions (BRODIE *et al.*, 2011; ISLAM *et al.*, 2019).

Hollebeek, Srivastava, and Chen (2019, p. 167) defined customer engagement as a consumer's "investment of cognitive, emotional, behavioral, and social operant, and operand resources in their brand interactions." This conceptualization incorporates key S-D logic elements (resource integration). Therefore, customers may, for example, use their smart device (operand resource) coupled with their cognitive (reading) skills (operant resource) to look up train departure times, thereby investing in their brand interaction or service interaction. Given its interactive nature, customer engagement has particular relevance in the service context, as it is characterized by high customer/brand interactivity (KUMAR *et al.*, 2019).

Based on these characteristics, customer engagement has been commonly viewed through an S-D logic lens, which provides a conceptual foundation for the development of the customer engagement concept, and reflects customers' interactive, co-creative experiences with other stakeholders in specific service relationships (BRODIE *et al.*, 2011; HOLLEBEEK; SRIVASTAVA; CHEN, 2019). Specifically, this theoretical lens highlights the role of interactive customer experience and co-created value as the underlying conceptual foundations of customer engagement. Unlike traditional relational concepts, including participation and involvement, engagement is based on focal interactive customer experiences with specific engagement objects (e.g., a brand, a city) (BRODIE *et al.*, 2011).

For value co-creation, actors engage in service-for-service exchange and related interactions leading to resource integration. Consequently, no resource integration happens without actor engagement, and no value can be co-created. Actor engagement is conceptualized

as both the disposition of actors to engage and the activity of engaging in an interactive process of resource integration within the institutional context of a service ecosystem. Engagement is not only the result of actor-specific characteristics. The conceptual and physical context also determines why, when, and how actors engage. Besides, it depends on both the actor's history and experience. Hence, the context in which actor engagement occurs is central to understanding how actors engage in resource integration activities (STORBACKA *et al.*, 2016).

Citizen engagement, on the other hand, is a critical attribute to effective planning and policy-making. Successful citizen engagement improves this process because the community influences the municipal government plan. The definition of citizen engagement includes in-person attendance or involvement at events such as community consultations, public hearings, pop-up city hall sessions, and other participatory practices, for example, online hearings and webinars. Citizen engagement can also include virtual attendance or involvement through social media or formal engagement tools such as online or paper surveys (ISO, 2017).

Government-citizen relations encourage citizens to spend time and effort on public issues, using and valuing citizens' input as a resource. Information, consultation, and active participation provide the government with a better basis for policy-making and ensure more effective implementation, as citizens become well informed about the policies and have participated in their development (OECD, 2001). Empowering citizens through engagement in the design and delivery of services through citizens' juries, community ownership of assets, and the ability to hold service providers motivate improved service quality and citizen satisfaction (GUTIÉRREZ RODRÍGUEZ *et al.*, 2009).

Citizen engagement is the potential for local authorities to adapt to new technologies and social and economic transitions quickly and, in this way, optimize scarce public resources in the search for better community solutions (BOLÍVAR, 2018). Municipal management benefits from citizens' engagement who are more informed about public services and more committed to their management (DÍAZ-DÍAZ; MUÑOZ; PÉREZ-GONZÁLEZ, 2017). Thus, citizens should participate in producing public services through planning, decision-making, implementation, and evaluation (MUÑOZ; BOLIVAS, 2018), since citizen engagement drives the innovation capacity of service providers and other organizations in co-producing services (PASKALEVA; COOPER, 2018).

The term co-production was introduced between 1970 and 1980 to compensate for the decrease in public investment and boost the resources and capacities of civil society (OSTROM, V.; OSTROM, 1971). Ostrom (1996) defined co-production as the processes by which the inputs used to provide a good or service have the contribution of individuals who are not in the

same organization. Specifically, those individuals are employees of an organization and (groups of) individual citizens that require a direct and active contribution from these citizens to the organization's work (BRANDSEN; HONINGH, 2016). Citizens are not passive customers, and the government is not an independent producer (OSTROM, E., 1996).

The co-production of public services involves interaction between the public sector and the citizens, making the best use of each other's assets, resources, and contributions to achieve better outcomes or improved efficiency (BOVAIRD; LOEFFLER, 2012, 2013). Co-production relies on the idea that people represent unexploited resources that can be mobilized to trigger innovation in public services. Thus, users are not just recipients of the services but are a resource that is part of the public service (BOYLE; HARRIS, 2009), where their knowledge and experience may be applied to meet social needs (TRISCHLER; CHARLES, 2019). By integrating resources during the service experience, a pleasant and memorable customer experience can be co-created. In this sense, a natural way to include the customers' knowledge in the service experience would involve the customers in co-production (EDVARDSSON *et al.*, 2013).

The co-production umbrella involves a variety of service activities: co-commissioning (e.g., public participation in policy-making, participatory budgeting), co-design (e.g., user consultative councils), co-delivery (e.g., expert patients), and co-assessment (e.g., online satisfaction ratings for family doctors) (BOVAIRD *et al.*, 2015; BOVAIRD; LOEFFLER, 2013; LOEFFLER; BOVAIRD, 2016). Citizens can make different contributions when co-producing. They can contribute with their knowledge, as they know things many professionals do not know; with resources, like time, energy, and skills; compliance, making a service more effective by the extent to which they go along with its requirements; ideas and creativity, developing innovative approaches to services and outcomes; and legitimacy, by their own example, they can influence others to contribute to public services (LOEFFLER; BOVAIRD, 2016).

The motivation for engaging in co-production derives from some incentives (ALFORD, 2002; LOEFFLER; BOVAIRD, 2016). People seek material rewards like money, goods, or services; solidary incentives from the association with others; and expressive incentives from the feeling of satisfaction when contributing to a worthwhile cause (ALFORD, 2002; VAN EIJK; STEEN, 2014). Other factors like extrinsic rewards such as enjoyment of showing excellence in activities, satisfying the need for self-expression and uniqueness, using personal capabilities not typically exercised in daily life, or the chance to negotiate a new identity from one's everyday experience can motivate co-production (LOEFFLER;

BOVAIRD, 2016). In addition, citizens' trust in the government to deliver services and provide opportunities to engage can help explain citizens' willingness for co-production (JASPERS; STEEN, 2021; VAN EIJK; STEEN, 2014).

Accordingly, Vargo and Lusch (2008a, p. 8) posited that "the involvement in co-production is optional and can vary from none at all to extensive co-production activities." It is subject to a host of factors (e.g., knowledge and desire of the beneficiary and existing knowledge of customer preferences on the provider's part), whereas value is always co-created (VARGO; LUSCH, 2016). Trischler and Charles (2019) argued that co-production is an optional process vital in the public sector because direct interaction between the service provider and the citizenry is often limited. Therefore, without this understanding, policymakers might build the wrong expectations of user involvement in the service processes.

The core principles of co-production, defined by Bovaird and Loeffler (2013), are that citizens know things many professionals do not know (customers as innovators). Citizens can make a service more effective by how they go along with its requirements and scrutinize it (customers as critical success factors). They have time, information, and financial resources that they are willing to invest in improving their quality of life and helping others (customers as resources). Moreover, citizens have diverse capabilities and talents to share with professionals and other citizens (customers as asset-holders). Also, they can engage in collaborative rather than paternalistic relationships with staff, other service users, and other public members (customers as community developers).

According to Bovaird and Loeffler (2013), co-production emphasizes the contribution made by the service beneficiary in the service delivery process. For example, in schools, outcomes not only depend on the quality of teaching delivered by school teachers but also on the attitudes and behavior of students. If students are unwilling to listen or not prepared to carry out the follow-up work at home, the amount they learn will be very limited. In this sense, Table 5 presents the potential benefits of the increased user and community co-production of public services for the different actors.

Table 5 - Potential benefits from increased user and community

co-production of public services

Actors	Benefits
For users	Improved outcomes and quality of life; Higher quality, more realistic and sustainable public services as a result of bringing in the expertise of users and their networks.
For citizens	Increasing social capital and social cohesion; Offering reassurance about availability and quality of services for the future.
For frontline staff	More responsibility and job satisfaction from working with satisfied service users.
For top managers	Limiting demands on the services; Making services more efficient.
For politicians	More votes through more satisfied service users; Less need for public funding and therefore lower taxes.

Source: Adapted from Bovaird and Loeffler (2013, p. 3-4).

For Bovaird (2007), the traditional conceptions of professional service planning and delivery in the public domain are outdated and need to be revised to account for co-production potential by users and communities. Public service needs a new ethos in which professionals' central role is to support, encourage, and coordinate the co-production capabilities of service users and the communities they live. Sharing expertise is one of the co-production approaches' main objectives and rationale (JARKE, 2021).

Additionally, co-production is related to the production of value to the user, social value, environmental value, and value to social groups, which is valuable where there is a need for behavioral changes to prevent future problems (BOVAIRD; LOEFFLER, 2012). Besides co-creating the value of their own service, individuals can contribute to the collective co-creation of value for other service users, such as in a school or university, where there is an interaction between users (OSBORNE; RADNOR; STROKOSCH, 2016). Thus, co-production in public services also contributes to creating public value while contributing to social objectives, cohesion, or well-being (OSBORNE; RADNOR; STROKOSCH, 2016).

Loeffler and Bovaird (2019) proposed a model where co-production with service users and the community and behavioral changes by citizens are related to public value. In this sense, the co-production literature points out its potential to impact and create public value. Co-production is a promising way to understand organizational and institutional efforts to engage service users at different stages of the service process (PARK, 2019).

Therefore, co-production through citizen engagement can contribute to the mid-range theory development that supports value co-creation and, consequently, can deliver public value to individual citizens and the whole citizenry. Based on the research objective and the

arguments presented, a knowledge-based public services conceptual framework grounded on the theoretical background is proposed, as illustrated in Figure 7.

Figure 7 - Proposed theoretical framework
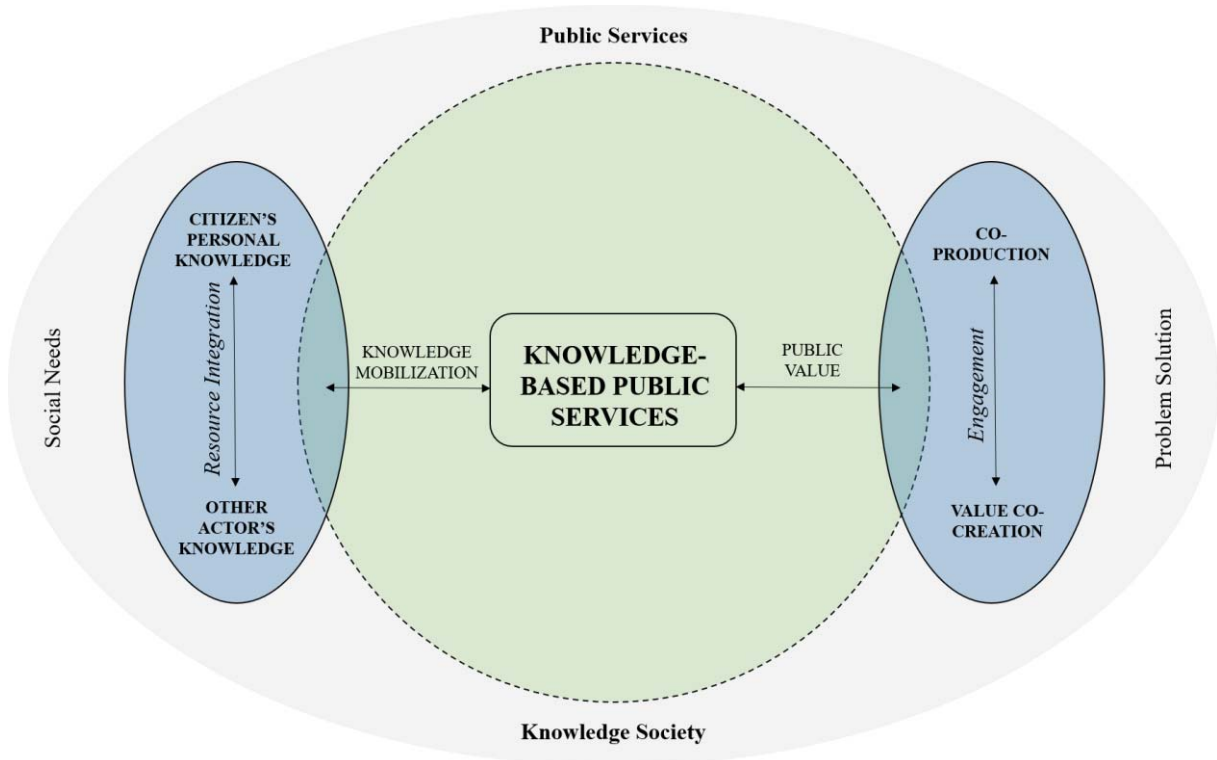
Source: Elaborated by the author (2022).

Public policy reform is a prominent matter, especially in developing countries. Citizens can help public management by being active actors in addressing social needs. Thus, the proposed conceptual framework focuses on the service user, the citizen. As end-users, citizens know in practice their main concerns, problems, and difficulties regarding public services. Each citizen possesses unique knowledge derived from their everyday experience. Furthermore, new knowledge is created when citizens combine their knowledge with other actors through their social interactions in their contexts. This is known as personal knowledge and is particularly important because it provides the structure for action and problem-solving.

Citizens integrate knowledge with other citizens, service provider employees, and other actors involved in the service ecosystem. Once internalized, this new knowledge must be mobilized to action that ultimately develops solutions to social needs. However, for mobilization to happen, citizens must engage in resource integration, particularly personal knowledge integration.

Engagement is also necessary for co-production as citizens must be willing to get involved and contribute. Co-production requires that citizens contribute with their personal knowledge, time, skills, and ideas and be an example to other citizens. By engaging in co-production, citizens apply their personal knowledge to different activities, requiring more or less involvement. The combination of citizen engagement, resource integration through personal knowledge mobilization, and service co-production activities co-create the value experienced when finally using the service. When these conditions are combined, citizens can experience greater public value and receive both personal benefits enjoyed individually and social benefits enjoyed more broadly and communally, ultimately resulting in knowledge-based public services.

3 METHOD

This research aimed to propose a conceptual framework of knowledge-based public services for smart cities from mobilizing citizens' personal knowledge in the value co-creation of public services. This thesis focused on services managed by the municipal government or municipal public services; the collective public transport services were selected as the empirical object. The study was developed in the city of Caxias do Sul, where Visate, a private company, is the concessionaire that carries out the urban public transportation in the city. Furthermore, the Municipal Secretariat of Traffic, Transportation, and Mobility manages municipal policies for traffic, transportation, and mobility in Caxias do Sul. The research design and methodological procedures adopted to meet the objectives are presented next.

3.1 RESEARCH DESIGN

Before introducing the methodological procedures adopted in this thesis, some reflections are made about the adopted research paradigms, ontology, and epistemology. A research paradigm relates to certain beliefs and assumptions about reality, how things are (ontology), and how we believe human knowledge is constructed (epistemology). The paradigm resulting from these beliefs and assumptions should guide the research method to be adopted, that is, the overall research strategy or design that will define the data collection and analysis techniques employed by the researcher (SACCOL, 2009).

In this thesis, the subject-object interaction ontology was considered, understanding that social reality is the product of the negotiation and sharing of meanings among people, created on a collective level. Epistemology is linked to ontological assumptions, meaning how knowledge is generated. This thesis is based on constructivist epistemology since it understands that there is no ready-made reality but that meanings come into existence to the extent of interaction and collective sharing (SACCOL, 2009).

From the ontology and epistemology defined, it is also necessary to understand the research paradigm. This study adopted the post-positivist paradigm. The research principles of the post-positivist paradigm emphasize meaning and the creation of new knowledge and can support committed social movements, that is, movements that aspire to change the world and contribute towards social justice (RYAN, 2006).

The case study was chosen as a strategy for the research method adopted. The data collection techniques employed were semi-structured interviews, secondary data analysis, and

direct observation. Content analysis was performed with the aid of ATLAS.ti 22 data processing software (DENZIN; LINCOLN, 2018; SACCOL, 2009). The choices of the research design are presented in Table 6.

Table 6 – Research design

Ontology	Epistemology	Research paradigm	Method	Data collection and analysis techniques
Understanding how things are	Understanding how knowledge is generated	The philosophical instance that informs research methodology	Strategy, action plan, or research design	Techniques and procedures for collecting and analyzing data
Subject-object	Constructivist	Post-positivism	Case study	Semi-structured interviews; secondary data from citizens; content analysis.

Source: Adapted by the author based on Saccol (2009).

As for the approach, this thesis is qualitative and described as a descriptive and exploratory study. Exploratory research aims to seek greater familiarity with the problem. This type of research involves a bibliographic survey, interviews with people familiar with the theme, and an analysis of examples or cases that stimulate understanding of the problem exposed. The exploratory phase of this study involved the bibliographic survey in composing the theoretical background and the semi-structured interviews conducted. Descriptive research aims to describe facts and phenomena of reality, which, in this study, contemplated the results of the study using conceptual images representing the statements and codifications of the investigated phenomena (DENZIN; LINCOLN, 2018; YIN, 2016).

3.2 RESEARCH STRATEGY

The case study is a research strategy focusing on understanding the dynamics within single settings (EISENHARDT, 1989). This thesis employed the case study as a research strategy, the most employed method for exploratory studies, especially when phenomenon and context do not present well-defined boundaries. This strategy is also used to understand a particular social reality from the respondents' point of view (YIN, 2013).

According to Yin (2013), there are ways to choose any particular method or one method over another. One such way is to analyze the research question of the investigation, understanding that the case study method is suitable for answering the "how" and "why"

questions. Because these questions require explanatory and argumentative answers, they deal with facts that occur over time rather than isolated facts.

Among the variations, case studies can be single or multiple. There are also four basic case study designs, all focusing on analyzing contextual issues concerning the studied case. In these studies, whether single or multiple, there are different variants, and they can have single or multiple units of analysis. Thus, there are holistic single-case designs, embedded single-case designs, holistic multiple-case designs, and embedded multiple-case designs (YIN, 2013). The type of case study used in this thesis was the embedded single-case study. The case is single because it is represented by the same context, the public transport service in Caxias do Sul, and embedded because it is composed of different units of analysis described by the service ecosystem.

3.3 METHODOLOGICAL PROCEDURES

The methodological procedures proposed in this research followed three main steps. The first corresponded to designing and implementing the semi-structured interviews and analyzing their content. After analyzing and categorizing the content, the next step proceeded. The second step corresponded to the content analysis of secondary data from the Alô Caxias channel directed to the Municipal Secretariat of Traffic, Transportation, and Mobility (SMTTM). Alô Caxias is the municipal direct channel with the community that receives service requests and communicates suggestions, complaints, and other demands. Citizens can access Alô Caxias by telephone or on the website (https://caxias.rs.gov.br/ouvidoria/alo-caxias). Also, this step included the researcher's direct observation at the Municipal Forum for Popular Evaluation of the Public Transportation System that happened on July 16th, 2022, at the Union of Neighborhood Associations of Caxias do Sul headquarters. This forum allowed citizens to interact with the SMTTM secretariat directly. Finally, the third step presented the results. A protocol for the methodological procedures developed in this research is shown in Table 7.

Table 7 – Methodological procedures

(continue)

Step 1 Design and implement the data collection	**State qualitative research questions and determine the qualitative approach** - Identify the analysis categories according to the a priori theory - Formulate the questions for the interviews - Validate the questionnaire with an expert
	Obtain permissions - Get permissions from the university ethics committee and from the organizations that will participate in the research

	Identify the qualitative sample - Public services and service concessionaire managers, representatives of civil organizations, and professionals with experience in transport public services
	Collect open-ended data with protocols - Use a semi-structured questionnaire - Record the interviews
	Analyze the qualitative data using procedures of theme development and those specific to the qualitative approach to answer research questions - Transcribe the interviews - Use content analysis technique with the aid of ATLAS.ti 22 Software - Identify the analysis categories according to the a priori theory - Identify emerging categories (categories not considered in theory) - Group similar categories
Step 2 Use secondary data and direct observation	**Define the entries from Alô Caxias that suit the research problem** - Identify the options available on Alô Caxias website that meet the research objectives - Have access to the secondary data made available by the Municipal Secretariat of Traffic, Transportation, and Mobility - Analyze citizens' inputs and categorize them according to their requests, complaints, or comments using Excel 2019
	Direct observation - Participate as an observer at the Municipal Forum for Popular Evaluation of the Public Transportation System - Take notes and record the meeting
Step 3 Interpret the results	**Summarize and interpret the qualitative results** - Present visual schemes, figures, or tables - Compare the findings with the theory
	Data triangulation - Build the final conceptual framework for knowledge-based public services combining the theory, interviews, secondary data, and direct observation

Source: Elaborated by the author (2022).

3.3.1 Data collection

The data collection techniques applied for the interviews are presented next, including the script elaboration, the interviewees' selection, and ethical issues of the study.

3.3.1.1 Elaborating the data collection script

As a technique for collecting qualitative data, the semi-structured interview was used since this data collection technique is an option for research topics in which respondents can discuss the proposed subject. The semi-structure refers to a set of questions previously defined by the researcher, keeping the freedom of an informal conversation (BONI; QUARESMA, 2005). Developing the data collection instrument for the semi-structured interviews started with establishing five a priori categories, according to the initial theoretical discussion, as presented in Table 8.

Table 8 - A priori analyses categories

Category	Theoretical definition	Authors
Personal knowledge mobilization	The solution to social needs requires identifying and locating the best knowledge and efficiently and effectively applying it. This process of knowledge mobilization combines knowledge gained from research, the specialty knowledge of change agents and organizational or community development specialists, and the knowledge acquired from the lived experience of community leaders and citizens.	Bennett and Bennet (2007)
Citizen engagement	The definition of citizen engagement includes in-person attendance or involvement at events such as community consultations, public hearings, pop-up city hall sessions, and other participatory practices, for example, online hearings and webinars. Citizen engagement can also include virtual attendance or involvement through social media or formal engagement tools such as online or paper surveys.	ISO (2017)
	A customer's motivationally driven, volitional investment of focal operant resources (including cognitive, emotional, behavioral, and social knowledge and skills) and operand resources (e.g., equipment) into brand interactions in service systems.	Hollebeek (2018)
Co-production	The co-production of public services involves interaction between the public sector and the citizens, making the best use of each other's assets, resources, and contributions to achieve better outcomes or improved efficiency. Co-production relies on the idea that people represent unexploited resources that can be mobilized to trigger innovation in public services.	Bovaird and Loeffler (2012, 2013).
Value co-creation	S-D logic shifts the focus from the transaction of value being delivered by the organization to the end-user toward that of value being created through the application of resources, which, on their turn, are integrated from various sources, implying that multiple actors engage in value co-creation.	Vargo and Lusch (2016)
	Value co-creation is influenced not only by the use of a particular resource but also by contextual factors, including knowledge, networks of relationships, and social structure (e.g., institutions).	Akaka, Vargo and Lusch (2013)
Public value	The concept of public value is related to the purpose of public services, where citizens support public administration and services because they realize they add value to their lives as citizens and society as a whole.	Gains and Stoker (2009)

Source: Elaborated by the author (2022).

The authors, subjects, and theoretical developments cited in Table 8 present the rationale of the categories defined for this study. However, this theoretical framework does not limit the use of other authors and subjects that complement the discussion and argumentation of the proposed research, as previously presented in the theoretical background.

The initial script was composed of 18 questions and an introductory explanation of each category. An expert validated the script to ensure the credibility of the proposed questions. According to Flick (2018), the validation procedure assists in the reliability of the study. The expert suggested joining some questions and shortening the introductory explanations. As a result, the final script resulted in 15 questions presented in Appendix A. Before continuing to the next

stage of the research, the necessary permissions of the Research Ethics Committee (CEP) of the University of Caxias do Sul were requested, as presented next.

3.3.1.2 Ethical issues

This thesis project was forwarded to the Research Ethics Committee (CEP) of the University of Caxias do Sul via Plataforma Brasil and registered under CAAE number 52978721.5.0000.5341. After evaluation, the project was approved under number 5.312.457 on March 25th, 2022 (Appendix B). It was necessary to inform the CEP about a change in the methodological procedures proposed. Initially, the study contemplated a mixed-methods approach. This modification generated an amendment to the project approved on Augusto 10th, 2022 (Appendix C).

It is important to emphasize that, at the beginning of each interview, the first action of the researcher was to situate the interviewee in the research by reading the Informed Consent Form (Consentimento Livre e Esclarecido - TCLE) so that the participants could make their agreement regarding participation in the research by signing the term, which the researcher should also sign. Two TCLE models were formulated, one for online interviews (Appendix D) and the other for presential interviews (Appendix E). According to each participant's choice, all interviewees received a digital copy of the TCLE. These records are filed together with all the documentation about the ethical aspects of this study.

The organizations involved in the research received the project's information, authorizing the participants through the authorization letters presented in the thesis in Appendixes F, G, H, I, J, and K. After completing the research and final presentation of the thesis, a report will be sent to the CEP that approved the study with its requested information.

3.3.1.3 Interviewees selection

For the selection of interviewees, according to Creswell and Creswell (2018), the most suitable individuals for participation in this stage are those who experienced the central phenomenon, and the intentional sample is adopted. Thus, the interviewees have had experience with co-production and value co-creation with citizens. First, representatives of the municipal management, one responsible for the public transport service, were interviewed. Then, a manager from the public service concessionaire, followed by representatives of civil organizations and professionals with experience in this service. In total, ten interviewees were

selected. As the data collection occurred during a pandemic time, when approached, the interviewees could choose between presential or online interviews. Only two interviewees preferred presential discussions; the others opted for online meetings using the Google meet platform. Table 9 illustrates the interviewees' classification.

Table 9 - Interviewees' classification

Code	Organization	Position	Gender	Interview time	Interview mode
I01	Municipal management	Top manager	Female	51 minutes	Online
I02	Municipal management	Manager	Male	53 minutes	Online
I03	Liberal professional	Former city manager	Male	56 minutes	Presential
I04	VISATE	Manager	Male	51 minutes	Presential
I05	UAB – Union of Neighborhood Associations	Manager	Male	45 minutes	Online
I06	Vivacidade	Member	Male	1h17 minutes	Online
I07	Liberal professional	Architect, former public server	Female	39 minutes	Online
I08	MOBI	Manager	Male	31 minutes	Online
I09	Liberal professional	Architect, former city council	Male	46 minutes	Online
I10	Instituto Helice	Manager	Male	20 minutes	Online

Source: Elaborated by the author (2022).

The participants were approached by phone, with either a call or a message through WhatsApp. On each contact, the researcher introduced herself and briefly explained the study's objective, inviting the interviewee to participate. The interviews happened from March 31st, 2022, through April 14th, 2022.

3.4 SECONDARY DATA

The second step of the methodological procedures corresponded to the content analysis of secondary data provided by the Municipal Secretariat of Traffic, Transportation, and Mobility (SMTTM) from citizens' statements at "Alô Caxias." Alô Caxias is the municipal direct channel with the community that receives service requests and communicates suggestions, complaints, and other demands. Citizens can access Alô Caxias by telephone or on the website (https://caxias.rs.gov.br/ouvidoria/alo-caxias). It started in 2008, and there are 76 different services available on the website that citizens can make their demands and follow their requests. When the citizen contacts Alô Caxias by telephone, a public server writes the request. In both formats, all entries are redirected to the public sector responsible for them.

As a result, the SMTTM receives all requests, complaints, or suggestions related to traffic, transportation, and mobility, including cars parked in incorrect places, signs not working correctly, and crosswalk painting requests. Furthermore, they receive all demands related to the concessionaire and analyze and answer all requests individually.

From 2008 to July 13th, 2022, when the researcher had access to the data, the SMTTM received 9.339 inputs through Alô Caxias. For this research objective, only the information related to public transportation was analyzed, totaling 2762 inputs. However, regarding the public transport service, the SMTTM only started receiving citizens' inputs through Alô Caxias in 2017. Before that, all contact with citizens happened directly through Visate's channel and was analyzed by them.

The SMTTM analyzes all requests from Alô Caxias and records them on an Excel document. After analyzing each request, they record a summary of citizens' statements. For example, a citizen complains about a delay on bus line X at time Y. Another example is a citizen requests one more schedule in the bus line Z. These were the information made available to the researcher, not citizens' original speeches.

3.5 DIRECT OBSERVATION

Direct observation is a data collection technique that uses the senses to understand certain aspects of reality. It consists not only in seeing and hearing but also in examining facts or phenomena to be studied. It helps to identify and obtain evidence about situations that individuals are unaware of but which guide their behavior, subjecting the researcher to more direct contact with reality. This technique can get data without interfering with the studied group (MARCONI; LAKATOS, 1990).

The researcher performed participant observation at the Municipal Forum for Popular Evaluation of the Public Transportation System on July 16th, 2022, at the Union of Neighborhood Associations of Caxias do Sul headquarters. This forum allowed citizens to interact with the SMTTM secretariat and a coordinator of the concessionaire directly. The researcher took written notes (two pages) and recorded the meeting (1h14min). Pictures and information about this meeting are available at https://caxias.rs.gov.br/noticias/2022/07.

3.6 DATA TRIANGULATION

In order to increase the validity and reliability of the research, the triangulation of sources is indicated to reduce biases, intensify the veracity of the social phenomenon under study and improve the results through the selection of varied sources of information or methods (CRESWELL; MILLER, 2000; DENZIN, N.; LINCOLN, 2018; GOLAFSHANI, 2015). Triangulation is a concept used in discussions about quality in qualitative approach research, allowing the researcher to expand the activities by using more than one method, approach, or technique for data collection. The definition of triangulation means that researchers must use different perspectives to conduct or answer the study question. Thus, employing different methods, opposing theoretical approaches, or even several data collection techniques is possible (DENZIN, N. K., 2004; DENZIN, N.; LINCOLN, 2018).

Different forms of triangulation exist, including data, researchers, theories, and methods. Researcher triangulation focuses on neutralizing the biases of the individual researcher. On the other hand, triangulation of theories exists to explain the same phenomenon using different theories. Method triangulation requires the researcher to engage in a complex comparison process between each method used to maximize the validity of field efforts. Finally, data triangulation uses different data sources (DENZIN, N. K., 2004; GOLAFSHANI, 2015). This thesis used different techniques for data collection: semi-structured interviews, secondary data from the municipality stemming from Alô Caxias, direct observation, and available sources, such as scientific articles, resulting in data triangulation.

3.7 DATA ANALYSIS

For the analysis of the interviews, the content analysis technique was proposed. According to Bardin (2011), content analysis consists of a set of communication analysis techniques that aims to obtain systematic and objective procedures for describing the content of messages. These indicators allow the inference of knowledge regarding the production conditions of these messages. In the first moment, the content analysis happened from semi-structured interviews, seeking specific themes and statements from the participants that relate to the a priori categories and identifying the emergence of a posteriori categories (CRESWELL; CRESWELL, 2018).

The presential interviews were recorded on the researcher's phone with the "recorder" app, whereas the online interviews were recorded on Google meet. Both recordings were later

transcribed in text format with the help of MS Word. According to Bardin (2011), three phases are necessary for content analyses: (i) pre-analysis, characterized by organizing the available material and aims to systematize the ideas and develop an analysis plan; (ii) material exploration, which consists of coding operations, decomposition or enumeration of the material; and (iii) data treatment and interpretation, presenting figures, tables or frameworks that represent the analysis conclusion.

For the first phase, after completing and transcribing all interviews, the resulting material was imported into the ATLAS.ti 22 software, where the content analysis technique was applied (BARDIN, 2011). This software assists in analyzing qualitative data and allows the classification and codification of texts, audio, images, and other files. For the second phase, the material was coded manually in thematic nodes. The nodes are represented by the a priori and a posteriori categories, as shown in Figure 8. In total, nine nodes were identified, eight categories, and one node related to citizens' role in public services, which is a specific objective of the research. Moreover, eleven subnodes were identified to help organize the categories.

Figure 8 – Thematic node coding
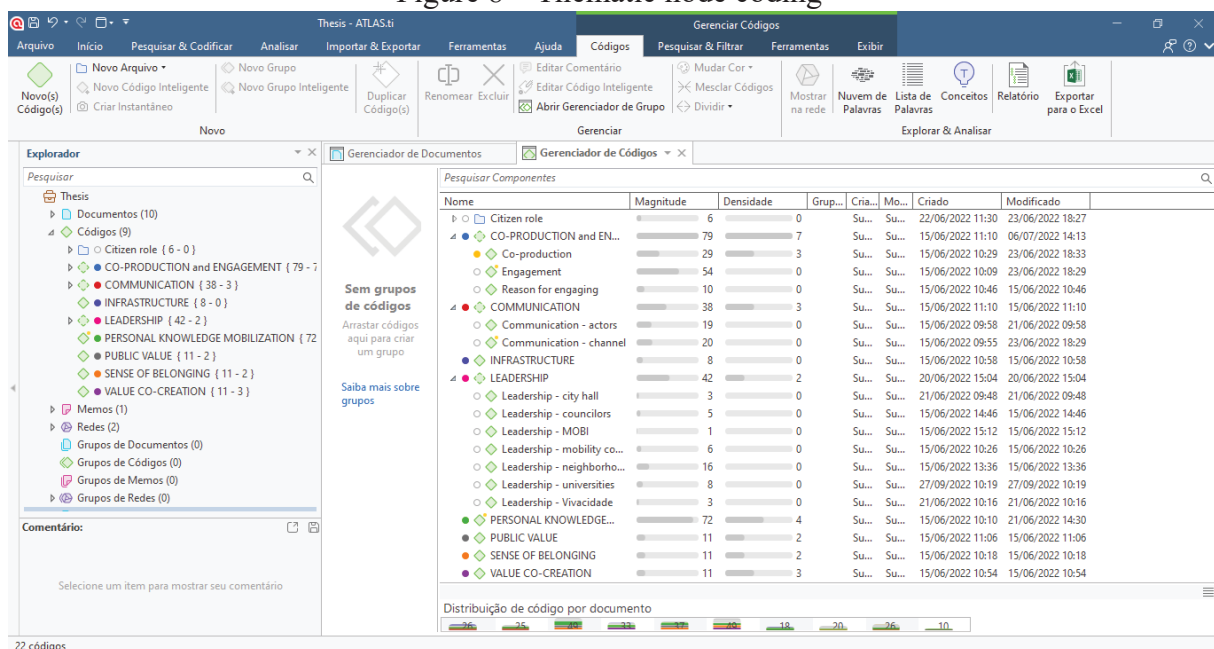
Source: Extracted from ATLAS.ti 22.

The treatment and interpretation of the results constitute the last phase of the analysis and mean the establishment of tables, diagrams or figures, and representative models that demonstrate the conclusion provided by the study (BARDIN, 2011). These results are exposed in the results and analysis chapter. After all the coding was performed, a coding matrix was

assembled, which presents the codings performed in each node for each case (respondent). This helps identify how much each interviewee addressed a particular theme (thematic node) during the research. This matrix is shown in Table 10. The redder the cell is in the matrix, the more codifications it presents, as indicated by the number expressed within the cell.

Table 10 – Coding matrix

Codes	I01	I02	I03	I04	I05	I06	I07	I08	I09	I10	Total
Co-production and engagement	6	8	11	5	12	17	1	6	11	2	79
Communication	6	1	6	8	3	10	2	1	0	1	38
Infrastructure	1	0	0	4	0	0	3	0	0	0	8
Leadership	4	3	7	1	5	6	1	8	4	3	42
Personal knowledge mobilization	4	6	16	10	11	6	9	3	5	2	72
Public value	1	3	2	0	1	0	1	0	3	0	11
Sense of belonging	2	1	2	0	1	3	0	1	1	0	11
Value co-creation	2	2	0	3	0	2	0	0	0	2	11
Total	26	24	44	31	33	44	17	19	24	10	272

Source: Data from research (2022).

Although categorization is not mandatory in a study, Bardin (2011) considers that the procedures should follow analysis, organization, and categorization. Categorization is the classification of elements of the same research by differentiation criteria followed by established criteria, aiming to provide a reduction of data. The categories consist of an effort to synthesize communication. Therefore, categories can be previously provided or not (BARDIN, 2011). In this study, they were previously established through the theoretical background. However, such categories were not definitive; they only served as a basis for coding into thematic nodes.

During the coding process, four a posteriori categories were identified: communication, leadership, sense of belonging, and infrastructure. A priori categories were personal knowledge mobilization, co-production and citizen engagement, public value, and value co-creation. It should be noted that engagement and co-production were first considered separately (presented in Table 8) but grouped in the same category after analysis. The next chapter presents data results and analysis.

4 RESULTS PRESENTATION AND ANALYSIS

The results presentation and analysis follow the methodological procedures proposed for this thesis. First, the qualitative results are presented concerning the interviews performed, followed by the secondary data and direct observation analysis. Each phase of the methodological procedure aimed to answer the objectives proposed in this study, as explained next.

4.1 RESULTS OF THE QUALITATIVE PHASE

The qualitative phase was performed with ten interviewees who have had experience with co-production and value co-creation with citizens. The interviewees included municipal managers, liberal professionals, a manager from the public transport service concessionaire, and representatives of civil organizations. This phase aimed to answer the following specific objectives:

a) examine the categories of knowledge-based public services;
b) identify the role of citizens in the process of developing and delivering public services;
c) assess public value creation in public services as a consequence of value co-creation;
d) identify the actors involved in the public service ecosystem.

Moreover, this research stage aimed to collect more information on the metatheories and mid-range theories proposed for this research (a priori categories) and if other mid-range theories should be included in the theoretical framework (emerging categories). Before analyzing the content of each category, a word cloud was created to identify the words interviewees used the most, as presented in Figure 9. The criteria for including the words were at least five-letter long words, repeated 15 times or more, and unimportant words were excluded, such as "however," "times," and "example." The word cloud was generated in Portuguese, considering the mentioned criteria, and then translated to English. The Portuguese version of the word cloud is presented in Addendum A.

Figure 9 - Word cloud

Source: Elaborated by the author.

As observed in Figure 9, interviewees used words like people, bus, transport, problem, and others, all related to the subject discussed in this thesis. They also used words like mobilization, knowledge, participation, communication, and information, all relevant to the study context. After this first analysis, the codes were classified according to the categories. A priori categories were co-production and citizen engagement, personal knowledge mobilization, value co-creation, and public value. The emerging categories identified were leadership, communication, sense of belonging to the community, and infrastructure. All categories are presented in the order of occurrence, in the order they were cited by interviewees, beginning with the most mentioned. It should be noted that the interviewees speak Portuguese, and their speeches were translated into English. The original speeches are presented in Addendum B.

4.1.1 Co-production and citizen engagement

The first category was established a priori, co-production, and citizen engagement. Although engagement and co-production are distinct concepts, they were grouped in the same category in this research because it is assumed that co-production is leveraged when citizens engage. Furthermore, it should be noted that there is a distinct difference between participation

and engagement. Participation implies that citizens' voices are heard by decision-makers, whereas engagement means ensuring a deliberate process through which citizens influence decisions that result in action (KATHI; COOPER, 2005). Nonetheless, interviewees sometimes refer to both concepts interchangeably.

I09 commented that one local development factor is the relationship between public authority and the community, and the city develops faster when the community and municipal management are engaged. When asked about how important it is to engage citizens to contribute with their personal knowledge, he complemented:

> On two levels: the first is legal; after the Constitution of 1988, the regulation of articles 182 and 183 of the city statute, and other legislation, it became mandatory to pursue these two articles that are the right to the city. In the right to the city, the community's participation is mandatory in any plan's elaboration process. Added to this, the user is notorious because if you don't understand that the user is an authority the same way you are, each one with their own level of importance, there is no way that your construction will be correct, your project won't be complete, your proposal won't be based, your construction won't be sustainable throughout the process (I09).

I03 highlighted that a variety of public bodies form the municipal public sector. Each body looks after its own purpose, always aiming at the community, and community participation is vital. He added that the mayor has his own ideas, but he needs the community's participation to design and deliver the government plan. On the other hand, citizens must follow the city's growth, demands, and accomplishments. For I03, this factor is essential because no one can work without listening to the community, and the community must know which direction the city is taking.

Aiming to engage citizens, I02 said he likes observing and talking to people around the neighborhood. One particular example was a neighborhood he visited, and the residents pointed to a wheelchair user who used public transportation. When checking the bus stops near the house, I02 identified that the wheelchair user always needed assistance to get to the bus stop, as there was no mid-walk ramp. He concluded that if public administration is open to talking and looking for the people, the people look back, and the demands emerge. When asked how they engage people, he commented that it is by showing a better situation or environment, and he believes that people will change behavior when they experience something better than what they are used to, as observed in the speech:

> You have to show it. You have to show that the environment is better, present this, and offer it for the person to understand that it can be better than what they have, than what they live, which is essential. (...) But we have to offer and when we offer a better environment, when in the case of this second one that I told you, even in the area of

public safety, you get to a particular street that is crowded, that there are families there, that people are occupying the space, you feel safer. You have to present this, you know, and offering this, of course, is a cultural issue; it is a habit of life that has to change, and people will gradually evolve with this (I02).

I06 described how they aim to engage people to mobilize their knowledge and contribute to solving public issues. For him, before engaging, people tend to complain about situations. As a result, he commented that their (Vivacidade) goal is to call citizens' attention to their responsibilities because they believe citizens are also responsible for solving public issues.

I think there is a cycle there. You'll never mobilize for something you don't see the value in, or don't perceive as valuable, or don't perceive as important. So, before you mobilize, I think you must realize that you must... "wait! There's no light here in the front... it's starting to get dangerous in my house." Yeah, I realized that the lack of lighting is a security problem for the home. And then, what usually happens afterward is not engagement; it is charging, complaining, I don't know... the resignation of saying, "but it is no use, look how it is here." (...) And we are trying in every action we take to show that this problem can be managed and solved by the citizen because the municipality can no longer do it (I06).

One way of engaging citizens is by having their opinion collected through surveys (ISO, 2017). I05 commented about a project on the city's central avenue, where the municipal management called him to answer a questionnaire about the project. When asked if ordinary citizens also respond to this kind of survey, he commented:

Generally, the entities respond. Of course, we are still going to question this. Tomorrow we will have a transportation council meeting, which is in charge of the Júlio de Castilhos issue, and we will question whether this questionnaire will be open to the communities; we will have to hold a public hearing, all this we will have to participate, the community will have to participate. You can't put something there; I want to do this, and I will do it. No! Therefore, we live in Caxias do Sul, and Caxias do Sul is a community, and this community has to participate. If it is to improve Caxias do Sul, it has to improve; if it is to make it worse, the community must have that part of it that will also make the city worse. So there always has to be a discussion (I05).

When engaging in public hearings, and answering surveys about the viability of a project, for example, citizens are co-producing the service in activities known as co-commissioning (BOVAIRD *et al.*, 2015; BOVAIRD; LOEFFLER, 2013; LOEFFLER; BOVAIRD, 2016). According to I05, the municipal management usually discusses with the community important issues; otherwise, the result is not satisfactory. For him, the community is also responsible for telling the city's history and preserving it.

Direct contact with residents for I03 is a way of engaging them to mobilize their knowledge and co-produce the service. For the interviewee, it is essential to visit the

neighborhoods, explain the projects to the residents, engage them in the ideas, and awaken their passion for participating. He said it is an excellent opportunity to get closer to the residents and educate them on how to take care of their neighborhood by evoking thoughts of a safe, clean, and good environment.

> Going to the neighborhood, you verify several things: "Here we could do this, improve, extend the network, extend the paving, improve this, improve that." List, project, see if we have the resources to do it, and call the residents. Meeting in the neighborhood: "We have an idea to do this, this, this, this...". And then they will say: "Look... we approved it, we didn't approve it, this will be improved this way..." So the participation of everyone in the neighborhood is... today I would say that practically nothing is done without consulting the residents (I03).

Besides the municipal management, the public transport service concessionaire also tries to engage users in the co-production of the service, as observed in the speeches:

> Up to the beginning of the pandemic, we were doing focus groups. We brought groups of users here inside the company; we had a consulting company that specialized in this because people are very shy. So we hired a consulting company, and we observed in another room, with a camera and glass. We managed to catch many things. We got the elderly, students, people from the city, and we managed to improve a lot... many things with this. After the pandemic, we couldn't meet anymore; now that we are going to resume, we spent almost three years doing these focus groups (I04).

> We have the focus groups, the WhatsApp groups, and SAC; when we gave them agility, it all came to a boil. There was much less access, which opened up because they felt valued in the sense of having a faster response and accepting their suggestions. The issue of bringing the driver and the collector to these organizational meetings here too, many things come, a lot of nice things come. Active participation with the neighborhood presidents, any meeting that has to be held, either another manager or I go, is also essential, discussions at the secretariat with this public of neighborhood presidents (I04).

I09 commented on his experience as a city councilor and how citizens' ideas can become law projects. He believes the city councilor reproduces the community ideas. Therefore, citizens get involved in the co-design of services, as he commented:

> As I had experience in the legislative, I always recognized that most of the ideas built by bills or initiatives that I presented came from informal conversations and initiatives from constituents, friends, and acquaintances. Among them, a practical example: today you go to a children's party, there are several norms for children's parties, you have a suitable place for children's parties, in the old days this didn't exist, any site was... children's parties were held, and countless accidents happened to children, countless accidents. It was a period of many problems in the city, and we did legislation to regulate this, a practical example didn't come from me. Another example... another example was concerning the removal or the restructuring of downtown through the use of visual advertising. This discussion also came up not from my head but was matured by other people who came to meet me and saw me as

a representative. The proposal of the metropolitan region of Serra Gaucha, as a congressman, was a process of technical maturity of mine, but there was a technical discussion... academic discussion about it, so I can't say that I am the author, I am the author as a legislator, but the idea is not mine alone. In theory, I am a co-author because I became a tool, an instrument of this process. About public transportation, I remember changes in bus lines, route changes, and route updates, which came from community initiatives to serve them better and consequently rationalize the system, so they were specific, isolated points that ended up contributing (I09).

When asked about public management's concern in engaging citizens to mobilize their knowledge to co-produce services, I06 commented that he believes the current administration is calling other actors to discuss some issues, even though the decision relays on public management. However, he complemented that there is still a barrier we could not pass: the ordinary citizen, the user, because we are still calling and involving entities and companies. I02 corroborated this argument by saying he misses society's participation in the planning area. For him, there are few opportunities to share with citizens.

I06 commented that these companies and entities serve as co-producers and advisory councils. However, in his opinion, these processes should be faster and broader for the city's challenges. Moreover, usually, the same people get involved, as he contextualized:

Vivacidade is called every week. Sometimes we say, "Look, we can't help with this flag, or with this project, we can't get involved, we have no arm." So, we even participated in a podcast a while ago, and John Doe, a journalist, asked a question that he said, "Don't you think that concerning the footbridge in the Planalto neighborhood, Vivacidade could have been more involved?" I said, "John Doe, I'll be very honest with you. I didn't even know about the problem with the footbridge. And another thing, I don't even have a way to get there." You have to contextualize things a little. Because sometimes, I need something: call Viva, so-and-so, or I don't know who. It doesn't work, you know? You have to decentralize. You have to see what the problem is. There is a problem with the footbridge in Planalto. Look at the ecosystem around Planalto; who is there? There is company X, entity X, and many people live there, a community leader and the... call these people. And these people get involved with the problem and solve it because it is their problem. "Oh, it's the government's problem." It's their problem! The public administration is there at the City Hall, at Alfredo Chaves, it's there. The most that will happen is that they won't be reelected. So the actual, physical, first-person problem is the community that lives around this problem. So I think it should be a little bit faster and a little bit more open and wider. And then, for this to become more inviting, communicative, and systematized, there are other challenges for us to do this on a larger scale and faster (I06).

I09 complemented his experience in the public sector when asked about public management's concern in engaging citizens to mobilize their knowledge to co-produce services and highlighted that various actors engage in co-producing services.

Yes, there is this effort; yes, there is this agenda. My experience is a daily agenda; it is an agenda... every week, we stopped to do this alignment of supply, of demand. Proof of this is that in our time, we removed all the bus terminals from Bento and

created the Bento corridor to relieve the Sinimbu corridor. All of these were permanent collective processes, some initiatives from the community, some from technicians, others from the secretariat, others from the company that provides the services, the service concessionaire, the technology itself... with the help of technology. Because when you have data that comes from the technology, you end up understanding users' profiles, so you can better serve them, so there is this effort (I09).

Regarding the service concessionaire, I05 reported that they call the neighborhood presidents to show and explain what they have changed and improved in the service. I05 commented that these actions are essential and demonstrate that the company cares about citizens. He also reported that the SMTTM meets with the neighborhood presidents weekly to discuss improvements in the bus lines, accesses, signs, and other issues related to public transport. According to I05, "we don't have any other magic than to have a dialogue and the governors listen to the community; that's the only way we can make a better city."

When asked what motivates citizens to engage in the co-production of services, some interviewees commented that citizens tend to have individualistic behavior, and they might engage when they are individually affected somehow. I06 complemented that the population has passive and critical behavior and expects the public management to solve all the problems, as observed in the excerpt:

I think that, in part, this is kind of generational; you absorb this because you grew up in a house where you saw your father, your mother, or whoever raised you complaining about the public administration or demanding the public administration. Unless you wake up through knowledge, through experiences, and say: "Whoa, wait a minute! There are cases of actions, of associations, of movements that started to solve public problems, let me study this more", then you see that it is possible. If you don't do this, you will replicate the behavior you absorbed in your upbringing; this is natural for many other types of behavior. I think we have a passive behavior, and two, we are often unaware of the ways to make the change (I06).

As evidenced in the I06 speech, knowledge from experience can be mobilized to engage in the co-production of services. However, he believes public management should improve communication with citizens, showing how they could engage and facilitate the processes. For I08, people should realize their commitment to giving back to the city what the city provided and improve it for the next generations. He emphasized:

I see it this way that the citizen and this is my criticism, not only to the traditional models but the new ones that are emerging (...) but the link, the central fact is what you were talking about now, is the citizen. The citizen understands and feels motivated or prepared to do it. The model that we have, the traditional model, only leads the user, the citizen, to criticize, you know, and raise problems, but not to solve them. Again, this is a personal position (...). But simply to demand, to demand from the Executive Power, to demand from the Legislative Power, but not to contribute, "oh no, this is the municipal management role." No, ok. There is a space in a public

hearing at the City Council, and I go there to criticize, but I don't bring a solution, I don't bring a suggestion, and worse, I don't participate. So, this is the flaw I think we do need to develop (I08).

I09 complemented on what he believes takes citizens to mobilize their knowledge and engage in the co-production of services:

First, the interest, some kind of interest, either personal or collective, is legitimate. I can go and participate in a public hearing or change a piece of legislation because I want ten floors to be built on my land instead of four. Is it a participation way? Yes. Is it legitimate? Yes. Is it legal? Yes. To defend your interest? Your interest. But there are also people that, because of their level of education, end up understanding that somehow they need to get involved with the city, either through a public commission, a City Council, or indirectly through entities and institutions that represent their education, or through companies, CNPJ or individuals, "I want to improve my neighborhood." I go there, I look for the community, the councilor, and the city council, so I'm interested in improving it. But all of them demand a minimum level of consciousness, and before consciousness, it is... in your ability... or better ability comes later. The ability, then the awareness, and before that I... I believe it is in the initiative (I09).

As observed in the I09 speech, there is also collective interest when engaging in the co-production of services. He highlighted that it is a process of creating a commitment with the community and that, as the community gets involved, your interests are not always the same as the collective ones. Therefore, the challenge is to motivate citizens to work for a common purpose. I02 emphasized this argument in his remarks:

The citizen must understand that this service is essential for them and it is essential for the whole society. If it weren't for public transportation, we wouldn't be able to move around if everyone had a car, for example. So we do have to promote this social understanding that it is essential, not only for those people who can't afford it, who pay cheaper to take the bus but the fact that they, any person, are using a public vehicle, they are relieving the city's traffic capacity (I02).

As a citizen engaged in mobilizing his knowledge to co-produce public services, I06 commented about what motivates him, as observed in the speech:

I do not know exactly what motivates me, but it is... it is that I see a city where... I don't know, you know, I think I can walk around in a city that I look at the sides and say: "Wow, what a nice city, you know." (...) That feeling of being like, I am in a place that is good for me. I think it is to recognize yourself as an individual, and that is different from being selfish, but I am an individual that is undoubtedly influenced by the environment in which I live. So, if I live in an environment that positively stimulates me, I know that will make me a better individual. Because this counter logic also works. When I'm in a place that discourages me, I also become a little bit worse (...) Deep down, what motivates and excites me in terms of the city as a citizen, is knowing that I'm in a place and in an ecosystem that I, as a small cell, will develop within this space. Because deep down, deep down, deep down, that's what everybody

should want to do, to get out of this journey better than they got in. So, self-development is also important in an ecosystem that provokes you to this at least (...) It's something that I say that I said to you before; I think there is a predisposition of the individual to say, "man, I'll fix this thing here that is around me at least; I'll see what I can do to get a little bit better" (I06).

When asked how to increase citizens' engagement, I09 commented that education is critical in forming individuals concerned with collective and social issues. In his opinion, it is essential to start educating children soon at school about their role as citizens, collective values, and how they can engage in co-producing services. Moreover, he believes it is harder to raise awareness among adults about contributing to improving the city if they have not learned that during their educational years. This argument was also brought by I07, that when children have good experiences sooner at school, they can become better-informed citizens and know the difference between a good and a precarious service.

4.1.2 Personal knowledge mobilization

The category personal knowledge mobilization was identified a priori. All interviewees recognized citizens' personal knowledge as essential and necessary to contribute to better public services and a better city. They commented that the knowledge each community has within their neighborhood is unique and challenging for other actors in the ecosystem to access without the help of citizens. Therefore, citizens' personal knowledge, when mobilized, can contribute to better public transport services as they live the everyday experience and dynamics of their neighborhood, as evidenced in the speech below:

> The citizen lives in their community, in their neighborhood. They are the ones who feel all the needs of the neighborhood. Of course, the municipal management has a planning team; it plans the road system, transportation, the expansion of the neighborhoods, and all that stuff, improvements, but the citizen is there. And they come to the City Hall; usually, when they come, it is to claim something to benefit the neighborhood (...) They are important for the development of that neighborhood and its expansion. So, we always receive them because they are the ones who live there. We, of course, visit the neighborhood once every six months. We are not there every day (I03).

Knowledge becomes even more important for a service ecosystem when implemented and mobilized to action. This is evidenced when I01 commented, "knowledge without any doubt because it gives consistency, opens the head, but attitude is also very important. So, knowledge is very important, but then we must think about how to come out in practice".

When mobilized to action, citizens' personal knowledge can effectively change or improve public service processes. This was evidenced by I02, who commented that citizens' suggestions to improve transport services are ordinary. And after analyzing each request, the SMTTM puts them into practice and adopts them as standard procedures. I05 reinforced this argument:

> The demands come from people. Bus schedules come from people, and these improvements in the streets and accessibility also came from people who asked us to make this contact with the municipal management so that it could improve more and more the mobility situation in Caxias. (...) And today, we know that this mobility issue has improved a lot. Today you see more wheelchair users on the streets because, in the old days, you did not see these wheelchair users because there was no way you could move around. How would you get up, like on the sidewalk with no ramp, in other places with no ramp? So this was all the work of the communities, of the disabled who asked for it (I05).

Interviewee 04, who speaks for the service concessionaire, commented that they receive around eight suggestions directly from users daily. From those, they can perform 70 to 75%. According to the interviewee, the channel between the concessionaire and users is vital for improving the service. He said, "This link was something that has recently changed. Before, we didn't have this proximity with the user. You were only close to the neighborhood president, to the councilor, and not to the user".

The process of knowledge mobilization combines knowledge gained from research, the specialty knowledge of change agents and organizational or community development specialists, and the knowledge acquired from the lived experience of community leaders and citizens (BENNETT; BENNET, 2007). This argument supports the service ecosystem view that different actors combine and integrate their resources (knowledge) to create new knowledge, which was evidenced in the speeches:

> Everything we see in the neighborhood, we have the technical vision, which sometimes they don't have. They have the day-to-day, the business sensibility, and we have the technical orientation (I03).

> I think it's looking at your technical knowledge, your knowledge of the cause, with your experience. There is an experience there. Okay, come here, my little friend, I have technical knowledge that can help you, but I need to have knowledge of experience. Let's talk together here, explaining this urban dynamic, how you live, and... This is the coolest thing, almost like a requirement program (I06).

> This requires a permanent level of humility and the convergence between technical and community reasoning. I have a systemic vision of the problem, but I don't know a particular street and neighborhood as a daily user, so they have more authority to express their opinion about where they live than I, who don't live and have a systemic

vision of the city. I have to understand that they are an authority, and they need to realize that what they want must be, and I will give you a strong word, umbilically linked with the strategies and the visions of the city (I09).

According to I04, when planning the routes and bus schedules, the service concessionaire considers users' inputs, municipal management requests, and fieldwork. They have personnel on the streets who talk to the bus drivers, observe the system, and then make suggestions to the concessionaire. As a result, they consider all information, check the viability, and talk to the SMTTM when they should be involved.

Additionally, I07 commented that users usually have a general request, for example, a bus stop. However, technical knowledge is necessary to develop the solution for a bus stop concerning the accessibility issues and identifying users' profiles. According to I07, most of the time, users do not realize they could request accessible routes where the access to the bus and the platform are at the same level. Therefore, the technicians' responsibility is to have this perception and provide users with a better experience. I06 complemented that technical analysis is necessary when proposing an intervention because citizens usually do not see or understand the whole picture, as everything involved in city planning, like legislation, for example.

I04 described a situation in which they developed a new route based on the specific needs of the users. This was possible by talking with users and observing their environment, as I04 reported:

> I'll tell you an example now that came to my mind; that was very nice. It fell into our lap, during the bidding, the issue of the interior lines, of Vila Oliva, São Sebastião do Caí, Fazenda Souza. I went with the group here; we have an engineering group only to look at the line. Let's look at the line. I know that it took us two days to make the three lines. And we identified that the personnel's greatest difficulty is when they receive their salary. They come here, buy groceries, and carry everything in a bus with no trunk. "Well, let's put some buses with luggage racks." It was a success because people carry TVs... everything they had to carry on their laps, and the bus has a trunk, you can buy a bus with a trunk, and we did, it was a joy. Another thing we identified: in the extremely cold winter, we installed buses with heating. Because the bus there leaves at 5:30 or 6:00 in the morning, it is very cold in that region of Santa Lúcia and Vila Oliva. So we are very attentive to these things, you know, very attentive in this sense that everything we do makes it easier for the user. Of course, we are dealing with public transportation, so it can't be an individual need; we must look at the whole when making a decision (I04).

I06 described an action the group he participates in performed to call authorities and people's attention to the sidewalk issue. This action resulted in the change in the secretariat responsible for supervising sidewalks, originating a new process. This evidences that citizens can contribute to improving services when they mobilize themselves.

I'll give you a recent example: sidewalks and sidewalk inspection. For me, this is one of the craziest problems we have because the responsibility lies with the property owner and the inspection with the municipal management. Neither one does its role. Neither the property owner takes care of the sidewalk in a general way. Let's say there are exceptions, but often the property owner doesn't realize that the sidewalk is their responsibility, and the municipal management is also not on the street all the time to inspect whether the sidewalk in place X has a hole or not. When we had World Pedestrian Day, Vivacidade performed an action: stick some band-aids on some sidewalks with holes. We took pictures, which ended up going to the Pioneiro and others (...) To sum up, the urban planner called me on WhatsApp and said: "Where are these places?" And I said: "Dude, there is a list of all the places on the Pioneiro website." They will want to kill the guy from Vivacidade afterward because we will notify the owners. Anyway, many places belonged to municipal management. The municipal management went there, fixed them up, notified the owners, and gave us the report: "We did our part, for ten stickers placed." And then, in another meeting that we had with the Municipal Council of Urban Mobility, John Doe, who was there chairing the council along with the others who were present, informed us that from that moment on, the inspection of the sidewalks would leave the urbanism portfolio and would be transferred to the mobility portfolio, which, after being told, you think: yes, it is obvious, right? Mobility, top of the pyramid, the human being, why is urbanism taking care of this? And then it becomes easier for the yellow guy, the traffic inspector who is walking on the street, if this is part of a process, to say that now you are going to have one more job, which is to map the places in the city where the sidewalks are bad and generate a report. That which is public, the city will have to fix, and that which is private, the city will have to notify. So, a new process was created within the mobility portfolio that it will also have to control now (I06).

Personal knowledge mobilization is the first step to action, directly connected to the other categories identified in the study. The interviewees corroborated what was evidenced in the literature, that different actors integrate their knowledge (resource integration) and engage in the co-production of public services. As evidenced by the interviewees, when citizens have space, they mobilize their knowledge and connect to other actors' knowledge.

4.1.3 Leadership

The first emerging category identified was leadership. All interviewees commented on the actors involved in the service ecosystem and leading individuals' roles. These individuals are noticed by their leadership and are the relationship source people count on when they experience some public-related issue. Moreover, these actors connect the citizen and the public managers, as observed in the I10 speech:

During your speech, I kept thinking that a very delicate thing in public participation is who does this co-creation facilitation, right? There is this person who, if it is the public power, is the interested party. And then there can be a bias deviation, a deviation of interest if it is the citizen in the same way. So, I think it is important to have a neutral entity; even if democracy does not have absolute neutrality, I believe it is important to have at least this intermediation between the citizens and the government. It can be a civil society entity, it can be a professional, it can be the

> University, maybe, I am not absolutely sure, but I think so. But it is important to know who does this facilitation, right? That neither the citizen nor the public power, they are extremes like that, I think they can't be the primary conductor (I10).

Adding to I10 thought, I06 also commented that some actors are the connectors in the ecosystem. At the neighborhood level, most interviewees pointed out that a vital leadership figure is the community leader, also called the neighborhood president. These community leaders serve as the bridge between the residents, the municipal management, and other institutions.

Caxias do Sul has a congregation formed from the community movement, Union of Neighborhood Associations of Caxias do Sul (UAB), founded in 1963. The UAB comprises 227 neighborhood associations in the municipality intending to organize and centralize the forces of residents of a given community to claim, propose ideas, and monitor the execution of policies effectively in the collective interest (UNIVERSIDADE DE CAXIAS DO SUL, 2021). The connecting role of the neighborhood association with the public management is evidenced in the speech:

> The neighborhood association figure is very important (...) In other cases, the figure of the neighborhood association is very strong because it demands initiative and a permanent relationship with the community in the service process. This relationship of complicity or this need for construction between the community and the government is only given by the degree of need. Then this representation becomes a leadership and becomes a primary link with the public power (I09).

I05 reported that the neighborhood president is the first contact citizens make when they experience some issue. He described how they proceed when it is a specific situation:

> We always say that Caxias do Sul is what it is today thanks to the community movement. Why is that? Because the municipal management doesn't have the legs to do all the work it does in Caxias do Sul. "Ah, the light bulb burned out in front of my house." The municipal management doesn't even dream of the light bulb burning in front of my house. Then the neighborhood president, sometimes even the resident, calls Alô Caxias, or even the president makes a letter asking for the repair of this bulb. "Ah, a manhole burst and is open." The municipal management also doesn't have this knowledge. Who makes this request? The neighborhood president does. "Ah, they need a paint job at an intersection, a sign." Everything is done through the neighborhood president. And often, the community asks the president, and the president doesn't have the legs to take care of an entire neighborhood. So the community helps the president and the president always requests the repair through an official letter or Alô Caxias (I05).

However, when the problem deserves more attention, the president usually contacts the UAB who connects with the municipal management, as observed in the speech:

> Usually, there is a problem in the... in the southern region, at the airport, for example, in the airport neighborhood. There is a problem. The president calls us, and he schedules a meeting with the community, and we go there and talk to the people and see what can be done. Sometimes we take a secretariat, and if we need to take the mayor, we schedule an audience and take the mayor along. So, this is the community we are referring to. Each subdivision and neighborhood has an association, and as soon as it has a problem, we ask for a meeting, and we go there we try to solve the problem (I05).

The neighborhood president plays a leadership role by engaging citizens to co-produce the services. I05 highlighted that the presidents motivate the residents to engage in the causes and not wait for the municipal management to solve them because they are unaware of everything; they need citizens' input. The leader's role is highlighted in the speeches:

> Some communities, such as the Colina Sorriso or many others, are super engaged. But I remember Colina was a case where they organized security, self-organized, created an association, and started to make a neighborhood self-management. But someone pushed them to do it. There was a leader there; he organized and was president of this association (I06).

> When the neighborhood president pre-disposes himself for free to be the community's leader, to have all the wear and tear of being bothered on Saturday, Sunday, day, night, morning... These are people who are a little more enlightened and want to see the neighborhood improve. They have a vision that is already a little different from most of the residents. So they help you with their knowledge, experience, and day-to-day (I03).

Specifically concerning the public transport service, I02 reported how they work with the neighborhood presidents, the service concessionaire, and other actors that should be involved, as evidenced in the speech:

> I always have this as a characteristic; I want to have direct contact with society. So I have very close contact with the UAB (union of neighborhood associations) through president John Doe and all the neighborhood presidents. And what do we usually do? Whenever there is an alteration or a change in some route, we call the neighborhood president to have this conversation with him so that he can take this information to the neighborhood because we might be causing someone inconvenience. So, these meetings, to complement this part, since last year, almost like this, two or three a week at most, or once a week, I promote, we promote these meetings at the secretariat, with the technical area of the concessionaire's administration and the people involved in certain regions (I02).

I02 speech also highlights the importance of public management engaging other actors to co-produce the services. The neighborhood president connects citizens and municipal management at the neighborhood level, and the mayor, vice-mayor, and secretariats represent the municipal management. However, other actors play a leadership role, characterized by the

city councilors, the Mobility, Traffic and Transportation Council, the service concessionaire (Visate), and entities or civil society organizations like MOBI, Vivacidade, and others.

I06 commented about the people occupying important positions in municipal management (mayor and secretariats) and how they can positively or negatively affect the city. He added that the city could take a different direction when city rulers change, impacting ongoing projects. His argument is reflected in the speech below:

> I think you can't generalize that this feeling is common to all public managers, but you can notice when a public manager has a genuine feeling of saying: let's make the city better. These people are in politics for the sake of politics, let's say social politics." I will put my ability, intelligence, and time for the city's benefit" (...) So I think some people in public leadership positions today have this feeling. And if they are in a position of "power," let's say, in terms of hierarchy, they can do a lot of nice things, even if it is for a short time, you know, even if it is for four or eight years. The power that a well-intentioned person has and that has the power in their hand - I usually say they are the captain of the boat - to make significant changes, or at least to start substantial changes that also involve public policy, is very great. We can never underestimate this (I06).

The interviewees also pointed out the city councilors as citizens' representatives. According to I08, the councilors represent and bring up the issues citizens count on for discussion. This was previously evidenced by I09 when he talked about his experience as a city councilor and how he enabled the co-production of services.

The interviewees evidenced the Mobility, Traffic and Transportation Council as an essential forum to discuss all issues related to this theme, which is evidenced in the speeches below:

> What we have as a guideline is to increase citizen participation through conscious participation. We have one thing, I think it's very important, of co-participation, which is the councils. We have a very active council, the Mobility, Traffic, and Transportation Council, which meets here every two weeks and participates in all the decisions and so on (...) So, everything related to mobility goes through the council. The council is a representation of society (...) More than thirty councils are an official representation of public and private power. So, it is very important, and I see that a way to work with co-creation necessarily goes through the councils (I01).

> We have the Municipal Mobility Council. There we have the institutions, the members of the city government, but also members of the civil community, and there I understand it is a moment where we have discussions. I do not doubt in saying that it is the council that produces the most in the city. We have already closed twenty-two meetings this year with diverse themes. Last year we ended the year with twenty-four meetings; we produce a lot. I have an opportunity to verify that it is a robust production (I02).

> The council is there to warn the mayor if things are going in a direction they shouldn't be going. They are the force of the city concentrated at one point to take care of the

city's development for the next 10 years, 20 years, 30 years. So this council's core is the thinking body that assists the mayor in the decisions. The mayor is not only in charge of paving the street, but the mayor also has the whole macro of the city in his head, and sometimes he: "I am in doubt about this, that..."; what does he do? He sends it to the council and asks for orientation. Then the council sits down to study that issue, gives the mayor a solution that the community thinks is the most correct, and guides the mayor to make the right decision. So, the councils help the municipality make the right decisions, guide the mayor, and guide the managers to make the right decision and not waste time doing and undoing. I think there should be councils in almost all areas (I03).

Concerning other entities or civil society organizations that perform a leadership role and are connectors in the ecosystem, there is MobiCaxias (Mobilização por Caxias do Sul). MobiCaxias connects the quadruple helix actors and plans the city for the future. According to I05, projects like the airport, the port, and regional train discussed by the actors engaged in Mobi are also important and impact neighborhood mobility. As a result, I08 explained that Mobi aims to connect the entities, city council, municipal management, universities, and the civil society of Caxias do Sul to discuss the city's future and work to accomplish these projects.

Finally, the universities were mentioned by interviewees for exercising a leadership position and helping conduct value co-creation. In this respect, I01 commented that the municipal management contacted the universities to help them conduct certain activities in the city by applying their technical knowledge, as observed in the speech:

We went to the academy for help so that we could have more arms in all senses so that we could do more PPCI projects in the schools, preventive care in the UBSs, using the whole curricular part, the practical part, and even the research part so that we could solve all the demand (I01).

According to I08, the universities have the role of using the knowledge produced with research to support the municipal management and other entities involved in developing a mobilization framework that involves and calls citizens to participate. According to him, the university could help develop this efficient and practical model of listening to citizens and also make them participate.

4.1.4 Communication

The second emerging category was called communication. This category concerns the transport service users' communication channels with the municipal management and the concessionaire, the people involved in communication, and how the municipal management communicates with citizens.

The interviewees reported that if citizens need to communicate with the municipal management, the main channel is by telephone or webpage, through "Alô Caxias." In I01 opinion, this is an archaic system and should evolve into an application that could use geolocation to request services faster and more accurately. Moreover, I01 believes that the technology should be used favorably for citizens when communicating with public management.

When citizens need to talk about public transport, according to I02, they call Alô Caxias' number or contact the service concessionaire. These contacts vary from reporting problems to making suggestions or requests. I04 said that the concessionaire has an application, SAC, 0800 number, website, and WhatsApp number. Every day the concessionaire answers around one thousand contacts through these channels. However, in his opinion, the bus driver and collector are the primary channels citizens use to get information and also suggest something. Regarding technology applications, WhatsApp is the most used because it is simple and faster.

According to I02, the secretariat tries to answer all citizens, even when they cannot attend to a request, as observed in the speech:

> All and any demand that comes into the secretariat, even if we can't attend it, I want it to be answered. And today, I centralize a little the input, but I dispatch everything. I want you to get in touch with that citizen and explain why we can't or can't afford to put the pedestrian traffic light they asked for in front of their house, next to the school in their neighborhood. Or there is some technical difficulty that prevents this from happening. But even when we can't attend them, I make a point of answering this citizen. So, this contact we were talking about before, this interaction with society, today the traffic secretariat has much of it. The traffic inspector never used to do this; it was not an assignment. Today I have a traffic director and a traffic manager, who are inspectors, and I put them permanently in search of the citizen. The citizen asks for something, and sometimes they do the actions registered and written in handwriting, you know, and we even have a hard time interpreting or reading what is written there, so there is no problem. We take a car, go to the citizen's house, identify the address and telephone number, and talk to the person and see exactly what they need (I02).

One crucial issue interviewees commented on concerning communication is how the public management communicates with citizens. I06 reported that sometimes the citizen does not know where to get information or report something, as observed in the excerpt:

> It's about knowing whom to look for, right. And I realize that most people don't know. The vast majority of people don't know. I need to prune a tree in front of my house, and I'll call SEMA. First of all, people call the municipal management. Then I'll contact SEMA, but it's not for SEMA either; you have to call RGE. So I understand that today there is a lot of... a vision that the municipal management is the centralizer of all urban services and doesn't realize that there are subdivisions. SEMA, among others, doesn't realize that many times other companies are subcontracted, for

example, CODECA, which is not the municipal management, or RGE, which will perform that service (I06).

When asked who is responsible for knowing whom to contact when the citizen needs to talk about public service, I06 said that it is the one offering the service: the municipal management. In his opinion, the information does not get to citizens, and communication campaigns could help to have citizens better informed, as observed in the speech:

It's not that people are uninformed. The information hasn't reached the people. I believe that everyone knows where to go to the health center and where they will deposit or get money. So, some services do their role of communicating and informing what they do. For me, it is the public government. It would have to be much more apparent, an awareness campaign, an information campaign. I think there would have to be a greater investment in this and greater attention (…). I think you would shorten the process if you knew exactly where to find the solution to that problem (I06).

In the same reasoning, I07 commented that citizens should have a place to interact and make their proposals, such as the municipal management website or a telephone number. She commented that, in her opinion, the municipal management is the fiscal agent and should be in charge of these contacts. However, citizens do not perceive that and contact the concessionaire (Visate), as observed in the speech:

It is this cycle of realizing who is defending the public interest. So, this perception could be given perhaps in the vehicles and at the bus stops where users have contact, on the city's website, but making it clear that it is the inspection agent and not directly the company (I07).

The interviewees commented that the neighborhood presidents are a vital source of communication between the communities or neighborhoods and the public management. According to I01, the actual municipal management has a community coordinating body that performs the relationship with the Neighborhood Associations' presidents. This evidences the strength of the association as a source of information and knowledge and the bridge the president has between the community and the public management.

I03 reported that when he worked in the municipality planning sector, he was used to working with the neighborhood presidents. He commented that the communication with them was accessible, and they knew the problems each neighborhood faced. He further described that the neighborhood presidents are the source of information the secretariat needs to explain what is happening in the community, facilitate the service order, and save time and resources when answering a request.

4.1.5 Value co-creation

Value co-creation, public value, and sense of belonging had the same number of comments; however, value co-creation will be presented first. Value co-creation is an a priori category that suggests that "there is no value until an offering is used - experience and perception are essential to value determination" (VARGO; LUSCH, 2006, p. 44). This statement was evidenced in the speech below:

> We were at the beginning of the pandemic, "what's going to happen?" I remember how important it was for the public authorities when the big companies gave collective vacations to their employees. You know, it gave them some time to organize: "let's plan here, what is going to happen, we are going to stop everything, we are not going to stop." Then the companies offered masks. When we participate, when we use them, we have the opportunity to see the complexity. And so, when you were talking, I remembered several people who wrote, "congratulations on the vaccine, I was very well assisted." So, people who don't have or don't use SUS think they would be badly assisted at SUS. I received many testimonials from people who called me to tell me how well helped they were, and they were surprised (I01).

Value co-creation assumes that service providers do not deliver value to the end-user. Instead, it is co-created among the actors involved in the service ecosystem, as evidenced in the speech:

> Nowadays, you can't do anything within a community, when I say the community, I mean the neighborhood, you can't do anything within the neighborhood without listening to the citizens because everything that is going to happen there, they are the ones who are going to live, they are the ones who are going to participate. So the works that will take place in the neighborhood, the modifications in the road system, or some improvement in a square, have to have their participation because they also help conserve and maintain it. This is very important... I have always participated with the neighborhood presidents; I have been used to them all my life. So that the ease with which we could communicate with them was interesting, and they are the ones who live there, the ones who know where their shoes are being squeezed, and that if we can improve their conditions, great. The municipal management is there for that (I03).

Value co-creation was also evidenced in I01, I02, and I04 speeches when they stated that every citizen contact receives a response. Both public managers and the concessionaire manager said they try to keep close contact with citizens because they realize the service outcome depends on citizens' knowledge. I05 complemented this argument by saying that public management and the concessionaire are concerned that the community has a good service and that this direct contact with the neighborhood presidents enables it to happen.

4.1.6   Public value

The last a priori category presented is the public value. The interviewees were asked if they realize that public value emerges to citizens and whether public management is concerned with that. According to I01, everything the municipal management does is to attend to citizens. She complemented that internal efficiency is necessary because any service delay directly interferes with citizens' lives.

For I02, the emergence of public value to citizens is a daily concern. He reported that the current municipal management, particularly the SMTTM, is devoted to changing the relationship between public management and citizens. As a result, when the citizens inform or request something, even when they cannot deliver the request, the secretariat gets back to the citizen with an answer. This close relationship shows that the public management values each citizen individually.

I03 talked about when they evidence that public value emerged for citizens, as observed in the speech below:

> The secretariats have internal controls for production and quality of service provision; this is an internal thing. But the most vivid part of all of this, of this service provision, is the resident, is the public when they tell you: "what a job well done," "the service you did solved the problem," "we will never have this problem again," "thank you." So this community satisfaction gives you the index of how you provide the service. This is your relationship because there is no other way to measure it (I03).

I09 discussed what he believes to be related to public value when talking about a concession service, as is the case of the public transport service in Caxias do Sul. Furthermore, he added that transport service users perceive value tangibly through time and price. However, other subjective feelings are also associated, like distress, non-conformism, and the sense of belonging.

> The solution to a problem is not always the person's satisfaction because I can solve a problem for you, but you are not satisfied (...). In public service, in general, there is no metric for you to compare concession A with concession B so that you can create a reference of satisfaction if that service is better than the other. So, in general, I believe that it fulfills the role for which it was offered to users. But satisfaction, in my understanding, has three values, two or three values. Let's see if I can build these two or three values: user and public value. The public value is broader and more dynamic, I would say that it is satisfaction with a sustainable bias and an inclusive bias, and from the user's point of view, it is economic satisfaction and time satisfaction. Economical because you want to go from your origin to your destination with the lowest price and as fast as possible. And from the standpoint of the government, inclusive because every service provision has to end up including people, and I'm not just talking about PCDs, people with needs, the service provision as a process of social

inclusion; and sustainable because, in the past, transportation did not have this bias, did not have this concern and ended up generating new concerns, among them, this one (I09).

As a result, the interviewees realize that public value emerges for citizens as a consequence of the value co-creation that happens by integrating the resources of the different actors involved in the service ecosystem.

4.1.7 Sense of belonging to the community

The third emerging category identified was the sense of belonging to the community. A sense of belonging refers to "the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment" (HAGERTY *et al.*, 1992). Here, the environment is the community the citizen belongs to. This category was evidenced in the interviewees' speeches, as an example of I03:

> A city is your city, where you have your children, who will be educated. So you always want the best for your city. This community spirit, or at least the spirit that we have in our region here, that everyone wants the street clean, the lights working, the buses clean, everything working, is the spirit of passion for the city. It is having that love for the land where you were born and passing it on to your children, where they will get knowledge, graduate, and make a family. So, participating in this, I think, is a matter of obligation. Every citizen should participate, regardless of their education level, to give their opinion. This is the most important thing for a city to stay alive and active (I03).

When asked what motivates citizens to engage in the co-production of public services, some interviewees pointed out factors related to the sense of belonging, as evidenced in the speech below:

> It is a civic duty, the perception that we, the world, are all in the same boat. So what makes people have a more collaborative, constructive participation, in construction, in this case, is this civic duty, realizing that they are part of society. Because education is important, but sometimes there are people, even with a good education level, who only have a critical role of sometimes destroying and not building. I see that it is the moral formation of the person, the construction of responsibility, that I am part of this universe, that I am also responsible for this (I01).

The sense of belonging was evidenced as necessary for citizens to engage in the co-production of services. According to I08, citizens must feel responsible and a part of society and not just expect action from the public management. I05 also commented that he talks to community citizens and tries to awaken them with a sense of belonging. I06 spoke about the

sense of belonging and how, in his opinion, it is affected by the individuals' involvement in the co-production. For him, citizens will take care of the public good if they feel they belong, as observed in his speech:

> Point one is that there is a predisposition to take care of the surroundings, to do things, you know. I think there is a predisposition that can be natural, induced and both. I think that there comes a point in life that the person doesn't change anymore or changes very little. So, either they were born with this and molded for it, or it will be difficult to change some people. That's why we always say that we must connect with the few people who do it and then believe it will change in the long run. And those few people who have a predisposition to get involved will only have a sense of belonging, and those who have the sense of belonging soon have the sense of care, in my vision, if they participate in the sense of creation. If I participated in creating something, then I belong to that something, and if I belong to that, I take care of that. So I think that wanting to jump over some barrier like this, the municipal management came here and delivered a square to the community. Okay, what did the community do? Nothing, the square was closed for three months, the municipal management came here, put it up, removed the siding, and the square was brand new. Hmmm, I don't know, I don't know if that is the way I believe. Now, if the municipal management comes here or someone comes here and says: "man, let's organize this square together here?" Call everyone to participate, bring paint and material, get the technicians to orientate, and get the community involved. Not everyone will come, half a dozen will come, but this half dozen will participate, and this half dozen will feel part of it because they will be proud to say: "I helped to make this." And if they have a sense of belonging that comes from a sense of participation, I believe that closes the care cycle. Because then you participate, you belong, care, and feed this back. If you want people to only take care without feeling they belong because, after all, they didn't participate, it's kind of crazy, right? (I06).

Complementing this idea, I09 commented about his experience when studying in a public high school. He reported that the school's lack of teachers and infrastructure aroused the community and collective spirit to improve the situation. In his opinion, this sense of community should be developed in school as he said: "I realize this deficiency of education, because after I become an adult, to make so-and-so or so-and-so work for the city in something that I didn't learn in my educational training is much more difficult" (I09).

4.1.8 Infrastructure

The fourth and last emerging category identified was infrastructure. This category refers to infrastructure aspects necessary to perform the public transport service. I03 reported that the Secretariat of Infrastructure and Public Services is responsible for keeping all municipal roads and streets in good condition for cars and buses to move around. This requires the macro planning of the city and not just looking at neighborhoods separately.

I04 added that it is the public management's responsibility to provide the proper infrastructure for the transport service and plot the bus routes and travel itineraries, whereas the concessionaire must have suitable buses and trained employees. According to I04, the infrastructure is critical to improving the total service because one can have a new bus, but the bus stops unprotected from the rain. As a result, user perception will not be satisfying. This idea is evidenced in the speech below:

> Mobility today does not depend only on the concessionaire. The concessionaire is a little link in the chain of events. What weighs the most today, in terms of mobility, I think is very closely related to the area, is the infrastructure issue, which is not very clear to the user (...). The speed of the public management with the concessionaire is also different because the concessionaire is a private company, and the public management is a public service in what it says. I'll give you an example. Sometimes you are identifying a critical point that is delaying the travel of thousands of people, and you can't, no matter how much you may be able to activate the municipal management, it also has some limits, bus corridors. So, today you leave your service much to be desired because you don't have adequate infrastructure (I04).

Caxias do Sul does not yet have a Mobility Plan, which is currently being planned, and according to I04, it is a problem each time the municipal government changes because there is no continuation of projects or major planning. As a result, the actions are reactive and not preventive. For him, planning is necessary to prepare for the future and prevent future problems.

I07 emphasized that all infrastructures related to the transport system, like the bus stop, the sidewalk conditions, and the bus, complete the user experience. She commented on how we could improve the service for the future, as evidenced in the speech:

> I think a look at the issue of schools. Because if the users, the children specifically, have a good service from a young age, they will naturally create an acute sense concerning the infrastructure. Because the adults, the parents, for example, who already come from a situation that has been going on for years, that is not well resolved, sometimes they don't know where to look for help or don't realize that it could be better. But when this comes from the school system, the children, and the teenagers, who already know how to choose better, they have seen other models, I think they can... they could, this new generation could help more. A new look on this. For example, we have here, in the city of Caxias, the traffic school. But then, why not include this structure issue, urban planning too, to have a critical look at the system as a whole, the quality of the equipment, good quality products, and a bus stop that welcomes people? And also, perhaps, bring the infrastructure to natural spaces. So, next to a square and not so far away from these more environmentally pleasant areas. I think that, for example, if we believe that a person gets used to taking the bus, let's take the example of the Praça da Bandeira, it... the users stay... when boarding and waiting there, it is next to a square. It's an environment that ventilates well, so the person already has a better feeling. This difference is perceived when they start to use the transportation system at a bus stop, which is the opposite. So then you can... you can begin to understand that things can be better, you know. But if the situation is always bad, then among several bad alternatives, how will they choose? The question is not to choose the least worst; it shouldn't be like that. I think it has to be based on "I know it can be better," and you want that, you know what is better. A better, more

ventilated, clearer environment with accessible information, information about the name of the bus, the schedules, and itineraries, and the lighting at the bus stops at night, mainly. So all these issues qualify the environment at the time of boarding and waiting (I07).

I04 also commented on the reasons citizens do not use public transport services. For him, this is due to security and price. He claims the walking distance and the bus stops are the major issues concerning security. In relation to the ticket price, he claims the system's inefficiency and the lack of planning reflect the costs and the price the user pays. I01 also supported this argument by saying that it will be expensive when there is no city planning that values collective transportation.

The infrastructure also reflects the punctuality and speed of the system. I05 observed that travel time would be longer if other types of cars use the bus corridor or change traffic, like allowing car conversions. As a result, users might not consider the bus an adequate alternative to making their trips because of time lost in traffic and delays in their appointments. This issue was raised by him when giving the example of previous municipal management that changed the traffic downtown.

Finally, Figure 10 presents the categories identified in the study, including a priori categories identified in the literature review and a posteriori categories identified in the interviews.

Figure 10 – A priori and a posteriori categories
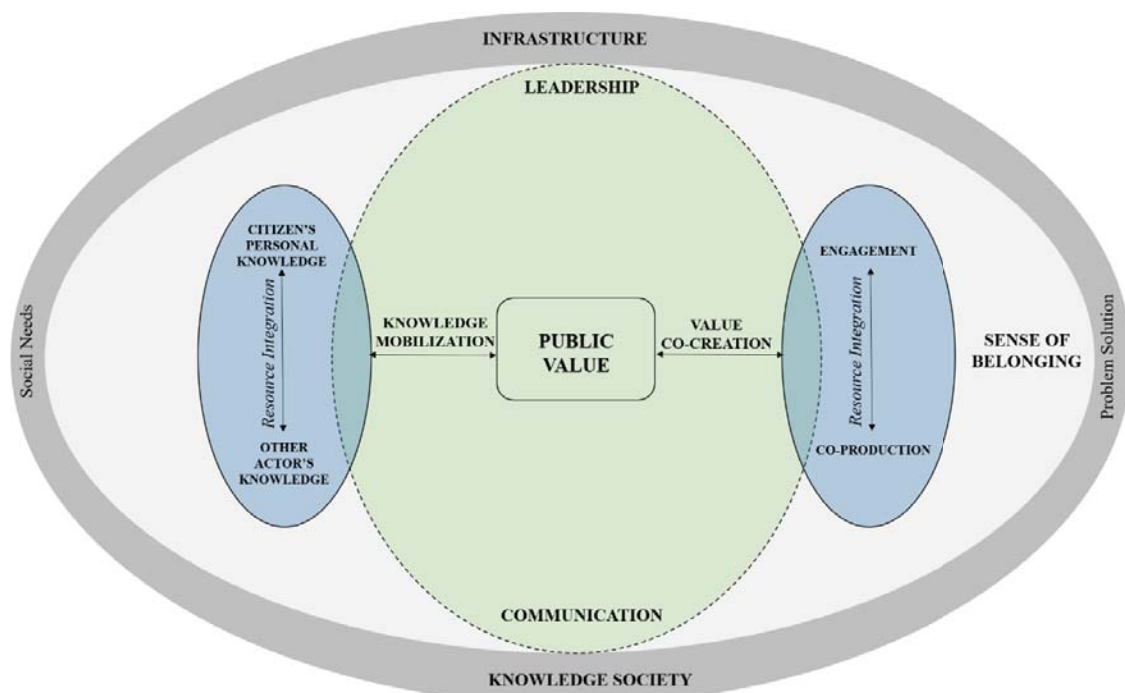
Source: Elaborated by the author (2022).

The categories identified a priori were co-production and citizen engagement, personal knowledge mobilization, value co-creation, and public value. The emerging categories identified were communication, leadership, sense of belonging to the community, and infrastructure.

This research stage confirmed the literature that advocates that citizens integrate knowledge with other actors involved in the service ecosystem for personal knowledge mobilization. To engage in the co-production of services, citizens must contribute with their personal knowledge, co-creating the value of the service with other actors. The sense of belonging to the community may influence citizen engagement, and the more they engage, the more they feel belonging.

Other categories may influence citizen knowledge mobilization and engagement in the co-production of services; as evidenced in the interviews, leadership, and communication play a vital role in this relationship. Although the interviewees reported that citizens tend to have individualistic behavior and might engage when they are individually affected, knowledge mobilization is collective and transversal, involving various actors. Infrastructure was also highlighted as a critical factor, as it influences citizens' perception of the overall service.

The next topic discusses the interviewees' opinions concerning citizens' role in developing public services.

4.1.9   Citizens' role in the public service

The second specific objective of the research was to identify citizens' roles when developing a public service. In this regard, I02 commented that besides engaging in improving the service, they should value the public transport service. In his opinion, citizens should understand that this service is essential for them and society because we could not move around if everyone used a car. He added that we should promote the social understanding that public transport is essential, not only for those who cannot afford to use cars, who pay less to ride the bus but the fact that they are using a public vehicle relieving the city's traffic capacity.

Interviewees agreed that citizens are as responsible for public services as public management. I08, giving the example of garbage separation, commented that the service begins inside people's houses by correctly separating the garbage. So, one should not blame the service provider if one does not separate it properly. Complementing this idea, I06 argued:

> I think that even in an unconscious way at first, and from the moment we realized this, it became a premise of Viva, but if I look back today and see all the actions we did, it was always trying to show the citizen that it is their responsibility (...) When we make this kind of provocation that, again, is very simple, it is punctual, it is even, sometimes, a poke. Like this: "let's put some stickers, each one takes them out of the pocket; how much? Put 20 bucks each, have a sticker made, and so on..." It is to shed light on the problem first. We understand that if there is a problem and we identify it, it doesn't mean that everyone sees it as such because if everyone saw it as a problem, it wouldn't exist anymore, right? Look at how much dirt road there is in the city; there isn't. Because people understood this was a problem, let's pave, organize the traffic, and ok, it's no longer a problem. Now, if we look at the sidewalks, it is a problem. Only people may not perceive it as a problem, so we always want to throw light on the problem (I06).

I03 emphasized that citizens are essential for improving public services because they know where they live, and their communication with the municipal management is crucial. Therefore, in I03 opinion, their role is to contribute with their knowledge, which evidences that personal knowledge plays a central role when mobilized to action. The close relation citizens should have with public services provision is evidenced in the speech:

> They are the thermometer. I believe they are the thermometer. I believe they... they are... I'll make an analogy with St. Augustine in the book the City of God. St. Augustine says the following: Look at a citizen's relationship with their city is as close as a letter to a word; there is no way to disassociate. So, in analogy to this, a citizen's relationship with service is as close as a word to the letter; there is no way to disassociate (I09).

To continue the methodological procedures proposed for this thesis, the following section presents the results of the secondary data analysis.

4.2   RESULTS OF THE SECONDARY DATA ANALYSIS

The secondary data aimed to answer the specific objective of analyzing how citizens mobilize their personal knowledge in the co-production of services and identify the actors involved in the service ecosystem. After receiving the data from the SMTTM with the 9.339 inputs from Alô Caxias, the researcher manually separated in Excel the subjects related to the public transport service, explicitly concerning the service concessionaire (Visate), which resulted in 2.762 entries analyzed.

The first analysis performed was a word frequency counting to see the most used words. It should be noted that these words are not necessarily the same used by citizens in their statements but the ones used by the SMTTM when recording them. Non-content words were

excluded and presented only the words repeated over 50 times, as shown in Table 11. The original words are in Portuguese (see Addendum C) and translated to English by the researcher.

Table 11 – Word frequency

Word	Frequency
route	1398
schedule	1227
Visate	1198
schedules	826
non-compliance	542
problems	438
change	428
driver	417
bus	350
complaint	348
itinerary	296
collective	258
acting	196
EPI	171
return	169
bus stop	140
transport	138
Covid	131
says	127
Coronavirus	125
neighborhood	119
downtown	104
overcrowding	102
street	101
complains	99
demands	96
capacity	89
service	72
turns	61
delay	56

Source: Data from research (2022).

The word frequency gives an idea of the most used words by citizens when filling a form or calling Alô Caxias, mostly related to the routes and schedules. Following the analysis, the subjects related to the public transport service were separated into twelve issues: schedule non-compliance, schedule changes, itinerary, overcrowding, driver and operator, bus aspects,

information disagreement, suggestion, compliment or acknowledgment, information request, coronavirus, and general. The issues by year are presented in Table 12, totaling 2762 entries.

Table 12 – Alô Caxias inputs by year and issue

Issue	Year						Total
	2017	2018	2019	2020	2021	2022	
Schedule non-compliance	202	306	116	73	17	4	718
Schedule changes	16	16	24	133	151	587	927
Itinerary	124	176	19	35	4	2	360
Overcrowding	13	27	5	66	8	70	189
Driver and operator	79	132	99	36	20	9	375
Bus aspects	10	21	5	7	3	1	47
Information disagreement	6	8		4	5	6	29
Suggestion	9	6	2	1			18
Compliment / acknowledgment	3			3	1		7
Information request	2			2	2		6
Coronavirus				29	2		31
General	23	9	5	10	3	5	55
Total	487	701	275	399	216	684	**2762**

Source: Data from research (2022).

Schedule non-compliance concerns complaints of late or early buses. Citizens usually specify the bus route, date, and time it happened. Many of these complaints say delays are usual. However, it is also a problem when the bus is early because the user might miss it. Schedule changes comprehend requests for more bus schedules in a bus route, dissatisfaction with a bus schedule that has been changed, requests for returning previous bus schedules, and adequacy of schedule. The itinerary primarily concerns non-compliance with the itinerary. That is, when the bus does not pass by a street or stop at a bus stop, it was supposed to. In addition, a few comments on including a street in an itinerary or requesting a new itinerary. Overcrowding is identified when many passengers are standing and when the bus does not stop at a bus stop because it is crowded. Users comment that the reasons for overcrowding are related to changes in schedule or itinerary, and also during the COVID-19 pandemic when the number of buses available was reduced.

Driver and operator issues relate to accusations of imprudence when driving and bad behaviors, like disrespect to passengers or not stopping at a bus stop after a passenger requested. The bus aspects concern the cleaning conditions of the bus, requests for changing a bus for a bigger one, complaints about bus elevators that do not work, and the overall conservation status of the bus. Information disagreement refers to the divergence between planned and executed scheduled available at Visate's website, app, or schedule chart.

The suggestions are about new routes, changes in schedules, changes in bus size, or new bus stops. The same issues appeared before, but the citizens writing these 18 suggestions chose to place them in the suggestion option available on the website or when calling Alô Caxias. Also, the language used is different from complaining or requesting. Compliments and acknowledgments are directed to the bus drivers and attended requests, and information requests refer to asking for information about bus schedules or itineraries.

Coronavirus complaints are about the absence of alcohol gel in the bus, agglomeration reports, passengers and bus drivers not wearing masks, and bus windows closed. In addition, during the pandemic, the complaints about schedule changes increased significantly, as well as the fleet reduction observed in the schedule change issue. Visate reduced the fleet and schedule due to municipal decrees closing commerce, industry, schools, and other services for a time. However, some citizens that continued working or needed to use the bus to go around the city were harmed.

General issues refer to problems with the card system used in the bus, wrong bus identification, issues with the ticket purchasing website, the way buses are parked on stations difficulting with pedestrian access, the need for schedule charts missing on bus stops, or the stations, and the difficulties people with special needs find to have access to a bus.

As shown in Table 12, complaints concerning schedule changes significantly increased in 2022. According to a public server who works directly with receiving and answering Alô Caxias demands, this happened because, during the pandemic restrictions in 2020 and 2021, the secretariat received direct calls from citizens with requests not recorded at Alô Caxias. Also, they increased the number of inspectors on buses, enabling citizens to interact with them in person, thus reducing phone contact.

Furthermore, after ending the restrictions from the pandemic period, the usual fleet from before the pandemic has not returned. This is happening because the number of bus users dropped significantly, as evidenced by I02 and I04 speeches. At the end of 2021, the concessionaire was operating at half capacity, reducing schedule availability, which caused an increase in complaints and demands for more schedules. Table 13 presents this analysis by month and year. It should be highlighted that February and March 2022 are the months with more requests and complaints about this issue, also a result of the school vacation period when the concessionaire historically reduces the fleet. However, due to the increase in complaints through Alô Caxias, the SMTTM interfered and requested the return of itineraries (ZANROSSO, 2022). These actions evidence the importance of citizens' personal knowledge mobilization in solving their problems.

Table 13 – Alô Caxias inputs by month, year, and issue

(continue)

Year	Issue	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
2017	Sch. non-comp.	1	1			2			46	58	48	26	20	202
	Sch. changes							3	4	4	2	1	2	16
	Itinerary								16	24	40	29	15	124
	Overcrowding			1		1			2	6	2	1		13
	Driver-operator			1	1				21	15	15	13	13	79
	Bus aspects		1				1		3	4			1	10
	Info. disagree.									6				6
	Suggestion						1			3	2	3		9
	Compliment								1	2				3
	Info. request										1		1	2
	General					2	1		1	9	3	2	5	23
	Total	**1**	**2**	**2**	**1**	**5**	**3**	**3**	**94**	**132**	**112**	**75**	**57**	**487**
2018	Sch. non-comp.	14	20	36	34	45	9	27	23	15	32	24	27	306
	Sch. changes	2		1	1				2	2	2	3	3	16
	Itinerary	14	11	23	27	24	9	17	16	10	9	12	4	176
	Overcrowding	3	1	4	4	4		1	4		3	3		27
	Driver-operator	14	8	16	16	15	8	8	11	7	11	9	9	132
	Bus aspects	2	2	4	1	2			3		3	4		21
	Info. disagree.			1	4				1		2			8
	Suggestion	1	2	1		2								6
	General	1	1	1	4		1		1					9
	Total	**51**	**45**	**87**	**91**	**92**	**27**	**53**	**61**	**34**	**62**	**55**	**43**	**701**
2019	Sch. non-comp.	28	15	10	3	3	3	7	3	23	10	6	5	116
	Sch. changes	4	5	1	1			1	4	2	3	1	2	24
	Itinerary	1	14				2			1			1	19
	Overcrowding	2	3											5
	Driver-operator	6	4	3	7	2	4	15	10	16	11	16	5	99
	Bus aspects	1	1				1	1	1					5
	Suggestion	1									1			2
	General	2	2	1										5
	Total	**45**	**44**	**15**	**11**	**6**	**10**	**24**	**17**	**42**	**25**	**23**	**13**	**275**
2020	Sch. non-comp.	11	8	12	6	15	8	6		2	4	1		73
	Sch. changes		2	9	11	13	17	10	5	9	37	14	6	133
	Itinerary	4	2	5	6	11	6		1					35
	Overcrowding		1	3	25	22	15							66
	Driver-operator	6	10	4		6	1		1	1	2	2	3	36
	Bus aspects	2	1	2	1								1	7
	Info. disagree.	1			2							1		4
	Suggestion			1										1
	Compliment						2		1					3
	Info. request								1		1			2
	Coronavirus			7	9	7	4	1					1	29
	General		2			1	2	1	1	1	2			10
	Total	**24**	**24**	**45**	**60**	**75**	**55**	**18**	**10**	**13**	**46**	**18**	**11**	**399**

(conclusion)

Year	Category													Total
2021	Sch. non-comp.	6		3	1	2	1	2					2	17
	Sch. changes	7	5	17	17	25	9	6	14	6	11	13	21	151
	Itinerary	2	2											4
	Overcrowding	2	2	2	1								1	8
	Driver-operator	3	3	3		1	1	1		3	2		3	20
	Bus aspects	1	1		1									3
	Info. disagree.			3		2								5
	Compliment				1									1
	Info. request								1		1			2
	Coronavirus		2											2
	General				1					1		1		3
	Total	21	15	29	21	30	11	9	15	10	14	14	27	216
2022	Sch. non-comp.	3		1										4
	Sch. changes	74	270	185	44	5	7	2						587
	Itinerary	1		1										2
	Overcrowding	7	45	16	2									70
	Driver-operator	3		2	2	1	1							9
	Bus aspects		1											1
	Info. disagree.	4		2										6
	General			4		1								5
	Total	92	316	211	48	6	9	2						684
	Overall total	234	446	389	232	214	115	109	197	231	259	185	151	2762

Source: Data from research (2022).

The analysis presented from Alô Caxias inputs allowed an understanding of the main issues users face when using public transportation. These inputs are crucial for the municipal management to improve and inspect the concessionaire's service. However, most citizens' interactions through the municipal management channel are particular requests to solve their individual issues: changing a bus schedule, asking for a new schedule, or complaining about the driver. Nonetheless, only 18 suggestions out of 2762 total inputs were recorded.

As a result, through the main channel of contact between the municipal management and citizens, it seems that citizens mobilize their personal knowledge to solve their individual and timely issues. This conclusion was also evidenced by most interviewees when asked what they believe motivates citizens to engage in the co-production of services, stating that citizens tend to have individualistic behaviors. In order to complement this analysis, the following section presents the results of the direct observation.

4.3 RESULTS OF THE DIRECT OBSERVATION ANALYSIS

The direct observation was also an opportunity to answer the specific objective of analyzing how citizens mobilize their personal knowledge in the co-production of services,

assess public value creation in public services as a consequence of value co-creation, and identify actors involved in the service ecosystem. The direct observation happened during the Municipal Forum for Popular Evaluation of the Public Transportation System (Forum Municipal para Avaliação Popular do Sistema de Transporte Público) on July 16th, 2022, at the Union of Neighborhood Associations of Caxias do Sul headquarters. The meeting counted on the presence of the SMTTM secretariat, servers from the transportation inspection, the concessionaire's operations coordinator, and the UAB president. Besides them, around twenty citizens from eight different neighborhoods attended the meeting.

The forum allows citizens to interact directly with the municipal government and the service concessionaire representatives. Ten present citizens spoke with their requests, complaints, or comments. One citizen commented about a spine in the wrong position in front of a school; another requested painting a spine also in front of a school; one complained about a bus stop that was changed from a place and is not in a good position; one requested adjusting the size of a bus in a route; another asked for more schedules on weekends; another complained of a bus driver behavior and the lack of inspector to check for overcrowding. The professionals took notes of all these issues and committed to giving back to the citizens during the week following.

Two citizens complained about a route that would stop operating the next week and requested to keep this route and include stopping in a school in its itinerary. About this last request, the secretariat, the concessionaire's operator, the UAB president, and the residents from that neighborhood agreed to have a public meeting with the Neighborhood Association to discuss the issue with other community residents. The meeting was scheduled for the week following the forum.

One citizen complimented the secretariat for a previous request concerning a traffic circle that was attended and made the same recommendation to another intersection. Another citizen also complimented the secretariat for previous requests and commented that it is not only the secretariat's responsibility to improve the service, but other issues are involved. In this sense, she commented that the citizens have the obligation of demanding the public administration but also submitting projects. Furthermore, she commented that the room in the forum should be full of citizens proposing solutions for city mobility. And she believes a forum is a place for citizens to speak and participate, regretting the few attendances.

Concerning how citizens mobilize their personal knowledge in the co-production of services, their engagement is limited. By organizing the forum, the public management demonstrates the concern in engaging citizens to mobilize their knowledge and participate in

finding solutions to the public transport issues. However, considering Caxias do Sul's population, citizens' participation was poor. Moreover, of the citizens present in the forum, their requests aim to attend to their individual interests or their surrounding neighborhood.

The forum was an opportunity to identify value co-creation by integrating citizens' personal knowledge and technical knowledge from the SMTTM and the concessionaire. As most requests needed to be checked and analyzed in loco, the technicians took note of the citizens' requests, places, and phone numbers to contact them the following week and visit them together to find the best solution. This also evidences citizens' engagement in the co-production of services.

About the bus route that would stop working, the SMTTM secretariat, the representative from the service concessionaire, the UAB president, and the citizens requesting to maintain the route agreed that the community should involve and meet at another time to find a collective solution. As a result, value co-creation would involve more actors in the ecosystem to deliver better public value.

4.3.1 Actors involved in the public service ecosystem

The fifth specific objective concerned identifying the actors involved in the public service ecosystem. There are a variety of actors, but only the ones who can possibly interact with citizens are discussed, as the intention was to detect resource integration opportunities with citizens. As identified in the interviews, the institutions represented by the municipal management and the transport service concessionaire are on one side.

The actors from the municipal management comprehend the mayor, vice mayor, SMTTM secretariat, traffic inspectors, and public servers. Each actor has a degree of interaction with citizens, depending on the situation. For example, the mayor can participate when there is a public hearing, whereas the SMTTM secretariat visits the neighborhoods and talk to the citizens to check on demands. Public servers play the role of answering requests by phone, giving back responses to requests through Alô Caxias, and are also the personnel performing some repair or a service request.

The service concessionaire also involves different actors, like managers who participate in the mobility council, interact with the neighborhood presidents and citizens when the concessionaire participates in the Municipal Forum or promotes focus groups. Furthermore, the traffic inspectors, bus drivers, and operators have direct contact with citizens, and the concessionaire's employees respond to citizens through the channels.

On the citizen side, there are the other citizens in the community they live in, work with, or interact in daily activities. Furthermore, the leading figures are essential to resource integration with citizens, mainly the neighborhood president at the community level. However, councilors, the mobility council, civil society organizations, and the universities are crucial for resource integration through knowledge mobilization and citizen engagement. Finally, the following section presents the conceptual framework for knowledge-based public services proposed for this thesis.

4.4 A CONCEPTUAL FRAMEWORK FOR KNOWLEDGE-BASED PUBLIC SERVICES

This research's main objective was to propose a conceptual framework for knowledge-based public services for smart cities by mobilizing citizens' personal knowledge in the value co-creation of public services. By triangulating the theory adopted in this thesis, the results of the semi-structured interviews, the analysis of the secondary data from Alô Caxias, and the direct observation in the Municipal Forum for Popular Evaluation of the Public Transportation System, the final Framework for Knowledge-Based Public Services is proposed in Figure 11.

Figure 11 – Framework for knowledge-based public services
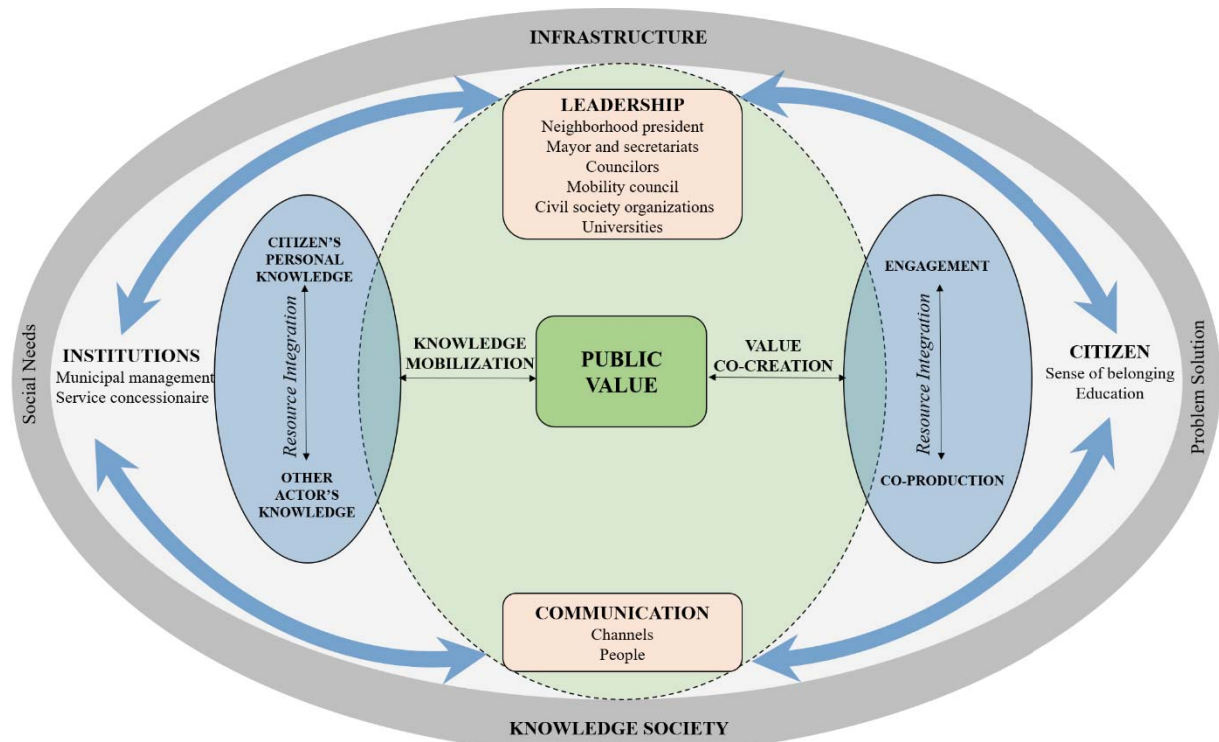
Source: Elaborated by the author (2022).

As observed in Figure 11, the categories identified both in theory and in the interviews form the public services ecosystem. Also, the actors involved in the ecosystem can be observed. On one side, there are the institutions, in this thesis, represented by the municipal management and the public transport service concessionaire. On the other side, there is the citizen. The institutions have a macro look at planning the city that considers all the areas involved when designing the service. Moreover, they consider the collective interest in decision-making, whereas citizens usually have a narrow look, primarily to their neighborhood.

The institutions, represented by the municipal management and the service concessionaire, are committed to engaging citizens in service co-production, as evidenced in the interviewees' speeches. All analyses evidenced that citizens contribute with their personal knowledge, but the citizen is mainly represented by a leadership figure: the neighborhood president, a councilor, or another entity. These leaderships and the institutions constantly get together to discuss and plan the transport service, confirming that they integrate their knowledge resources and that value is co-created.

Citizens' personal knowledge is necessary for all projects the municipal management proposes. The interviewees confirmed the literature by saying that it is with the integration of citizens' personal knowledge and technical knowledge that they come up with a solution that best meets the community's needs and results in public value. Besides, knowledge resource integration goes through all the actors in the service ecosystem, as the example of the former councilor that commented on how law projects emerged from citizens' ideas. As a result, different knowledge is mobilized to action.

As evidenced by the interviews, the connection or bridge between institutions and citizens usually happens through the leading figures, key actors in the ecosystem. At the neighborhood level, most interviewees pointed out that a vital leadership figure is the community leader, also called the neighborhood president, and the neighborhood president represents the citizens' voice before the institutions. People occupying leading positions in the municipal management (mayor and secretariats) are also important leadership figures because the city could take a different direction when city rulers change, impacting ongoing projects.

Other actors, like the councilors, mobility council, and civil society organizations, are essential for their leadership because they defend citizens' interests. Civil society organizations aim to create citizens' awareness about social issues and be close to communities by recognizing each neighborhood ecosystem and looking to engage the surrounding citizens. In this sense, civil society organizations actively participate in government activities and

empower ordinary citizens to become proactive members of society, as evidenced by I06 and I08 in their speeches.

Moreover, leaders enable personal knowledge mobilization and integration, as they can integrate the knowledge of all actors in the ecosystem and mobilize it to action. Therefore, knowledge mobilization is collective and transversal, involving all actors in the ecosystem. Leaders are also responsible for engaging citizens in the co-production of public services; otherwise, citizens tend to have individualist behavior, as evidenced by the secondary data and direct observation analysis. The study context showed that citizens tend to mobilize their personal knowledge to solve specific issues affecting their daily activities by contacting the municipal management through Alô Caxias or Visate through its channels. However, when it comes to macro issues that impact other people in the community, the leader plays a vital role in mobilizing citizens.

Communication between institutions and citizens is crucial to engaging citizens in service co-production. Communication can happen with the help of channels like Alô Caxias or through people like traffic inspectors or leaders. As reported by interviewees, technology could help enable direct contact between institutions and citizens, such as Visate using an app and WhatsApp number. Furthermore, when it comes to daily issues, like getting information on a bus schedule or complaining about a delay, citizens usually interact through the channels by contacting Visate or calling Alô Caxias. They can also contact the SMTTM inspectors at the bus stations; however, they reach the neighborhood president regarding macro issues.

Other authors have also found leadership and communication essential attributes of knowledge-based public services. Brillantes, Lopos and Perante-Calina (2018) discussed the Philippines case and pointed out that leadership matters and is a key to responsive, meaningful, and sustainable knowledge creation and innovation in public organizations. Leaders who can judge best, grasp reality as it is, create common platforms, communicate the essence, exercise political power well, and foster practical wisdom in others can help accomplish the purpose of knowledge-based public services. Moreover, communication plays a vital role, but for communication to be effective, it must be a two-way approach having a feedback mechanism between the government and the citizens (BRILLANTES; LOPOS; PERANTE-CALINA, 2018).

In this sense, there is a potential for the municipal management to use technology in favor of communication. This could happen through an application that works as a channel to direct contact with citizens, which the concessionaire already has, as they informed they have an app and use WhatsApp, enabling direct communication with citizens. Furthermore,

information about bus schedules and routes should be displayed at the bus stops facilitating citizens' access to essential information, as evidenced in the secondary data analysis. The bus stop and even the bus are also places for other communication, like campaigns.

Sometimes, citizens do not have all the necessary information to understand the service provision and do not know where to look up this information. Additionally, citizens believe it is the municipal management's responsibility to solve all public issues, whereas citizens only demand them. The analyses also evidenced that citizens tend to behave passively by raising a problem but not engaging in solving it. As a result, it is necessary to increase ordinary citizen engagement, which could be achieved through communication and education. In this sense, communication campaigns could efficiently inform citizens about their rights, duties, and who and how they should contact when they have a problem.

Moreover, this kind of communication could start in school, during the formation of the student as a citizen. Educating individuals about their role in society might be easier or more likely in the early years. As I09 commented, education is necessary to build individuals' social responsibility.

Another element composing the knowledge-based public services framework is the sense of belonging. The interviewees pointed out the sense of belonging as an element that directly influences citizens' behavior, which is particularly important to increase citizen engagement. As citizens feel part of their community, they might care more about improving and taking care of it. When feeling they belong, they might also increase their engagement in the co-production of services or other activities involving their neighborhood or the city. Involving citizens and calling them to participate in public decisions is also a way of increasing and raising the sense of belonging.

Infrastructure was found to be an important attribute of the public transport service, and it is the basis for the service to happen. Bebber *et al.* (2021) also found public transportation infrastructure a dimension when developing a mobility scale. Infrastructure issues were observed in the secondary data analysis when citizens complained about bus and accessibility conditions. In this regard, I07 commented that city planning should be a priority, including standardizing sidewalks, better bus stops close to green areas and improving the accessibility of buses. Furthermore, she believes educating children and teenagers about urban planning and showing them good examples of services could enhance future services, as they will grow better informed and know how improved the service could be, also becoming more engaged adults. Once again, educating citizens seems to be a key to increasing their sense of belonging

and engagement in the co-production of services, which can resonate in all other categories of the ecosystem, as an example of infrastructure.

      Finally, the conceptual framework for knowledge-based public services concludes that citizens' personal knowledge is vital in the service ecosystem, recognized by the institutions and leading figures. This knowledge is integrated into the other actors' knowledge and mobilized to action. When it comes to engaging in co-production, ordinary citizen engagement is limited, and a leading figure usually represents them, who are very important to connecting citizens and institutions. However, when citizens engage, value is co-creation, and they can experience the public value by using the service. Communication is key to value co-creation and an opportunity to increase citizens' engagement along with education. Engaging also increases citizens' sense of belonging, feeding back the engagement cycle.

5 FINAL REMARKS

This research aimed to propose a conceptual framework of knowledge-based public services for smart cities by mobilizing citizens' personal knowledge in the value co-creation of public services. This general objective was accomplished through the empirical study applied. Moreover, the research aimed to move forward in searching for elements that collaborate to understand public services that contribute to more humane, smart, knowledge-based, and sustainable cities. The study sought to answer questions such as: What motivates citizens to engage in the co-production of services? How do citizens mobilize their personal knowledge and experience to co-produce services and solve social needs? How do citizens integrate their personal knowledge resources to co-create value? How can public service managers benefit from citizens' role in this process? All these questions could also be answered and will be discussed in the next items.

This thesis presented a discussion about the service-dominant logic theory and its surrounding themes, such as engagement, co-production, and value co-creation. It also discussed the knowledge mobilization theory, approaching personal knowledge. From the theoretical perspective, S-D logic's first publication was in 2004 and disseminated in the marketing literature; however, there is room to grow in the public management literature. As a result, the search for studies that comprehend both theories proposed in this thesis has not presented results.

From the empirical perspective, the motivation for this thesis started with the need for countries and cities to meet the Sustainable Development Goals, particularly goal 11: "make cities and human settlements inclusive, safe, resilient and sustainable," which includes providing access to safe, affordable, accessible and sustainable transport systems for all. Furthermore, in Brazil, the Urban Mobility Law assigns municipalities to plan and execute the urban mobility policy and organize and provide collective public transportation services.

Therefore, the empirical object selected for this study was services managed by the municipal government or municipal public services, more specifically, the collective public transport services of Caxias do Sul. The research method used to meet the objectives adopted a subject-object interaction ontology, constructivist epistemology, interpretive paradigm, and qualitative approach with descriptive and exploratory objectives. The single case study method was chosen, and data collection techniques for data triangulation included semi-structured interviews, secondary data, and direct observation. From the data collection, data analyses were performed using content analysis with software ATLAS.ti 22 and Excel 2019.

Based on the results presented in chapter four, the main findings, the study limitations, and suggestions for future studies are presented next.

5.1 THEORETICAL IMPLICATIONS

The theoretical implications will be presented following the objectives proposed in the study. The first specific objective aimed to examine the categories of knowledge-based public services. From theory, as exposed in the theoretical background, five a priori categories were identified: personal knowledge mobilization, citizen engagement, co-production, value co-creation, and public value. After ten interviews with people who have had experience with co-production and value co-creation with citizens, other categories emerged. The emerging categories identified were communication, leadership, sense of belonging to the community, and infrastructure. Besides, citizen engagement and co-production were grouped in the analysis, as co-production is leveraged when citizens engage.

The second specific objective aimed to identify citizens' role in developing and delivering public services. According to the interviewees' opinion, citizens should value public services, in this case, the public transport service. They believe citizens are as responsible as municipal management for their services, confirming what the theory discusses about this subject. In this sense, citizens should mobilize their personal knowledge and act as coproducers, and the public value they get will result from their engagement. Their role, according to the interviewees, should be becoming active actors in the service ecosystem, mobilizing their personal knowledge to action, and engaging in the co-production of services.

A question raised by this research concerned what motivates citizens to engage in the co-production of services. In the context studied, citizens tend to have individualistic and passive behavior, and they might engage when they are individually affected somehow. As a result, they engage in solving a particular problem that is directly affecting them. This result was also evidenced in the secondary data and direct observation analyses. However, this behavior is not common to all citizens, and collective interest also exists when engaging in the co-production of services. People can engage because they believe they must contribute and give back to the city, increasing their sense of belonging and creating a good personal relationship with the city.

The third specific objective aimed to assess public value creation in public services as a consequence of value co-creation. According to the analysis of the interviews and collaborating with the theory proposed for this thesis, public value emerges for citizens as a

consequence of the value co-creation that happens by integrating resources of the different actors involved in the service ecosystem. It seems that, for the case studied, the municipal management is concerned that public value emerges for citizens.

Moreover, the Municipal Forum for Popular Evaluation of the Public Transportation System was an opportunity to identify value co-creation by integrating citizens' personal knowledge and technical knowledge from the SMTTM and the transport service concessionaire. As most requests during the forum needed further analysis, the emergence of public value is assumed to have happened after concluding the services during the weeks following. Nevertheless, by observing the citizens in the forum, the researcher believes they seemed satisfied that the municipal management, service concessionaire manager, and neighborhood president association were there to listen to their demands.

The fourth specific objective proposed was to analyze how citizens mobilize their personal knowledge in the co-production of services. The results showed that through the main contact channel between the municipal management and citizens, Alô Caxias, citizens seem to mobilize their personal knowledge to solve their individual and timely issues. This conclusion was also evidenced by most interviewees when asked what they believe motivates citizens to engage in the co-production of services, stating that citizens tend to have individualistic behaviors. Also, their engagement was limited when observing the Municipal Forum.

Another question raised in this research was how citizens integrate their personal knowledge resources to co-create value. It was evidenced that the leading figures are key actors in resource integration because they communicate with citizens and the institutions, integrating their knowledge resources. These resource integration opportunities can happen when citizens contact the neighborhood president to discuss a situation, when they talk to a city council to request or suggest something, when a civil society organization promotes an event, or when the institutions call citizens for a Municipal Forum or a focus group, for example.

The last specific objective concerned identifying the actors involved in the public service ecosystem. There are a variety of actors, but only the ones who can possibly interact with citizens were discussed, as the intention was to identify resource integration opportunities with citizens. As discussed through the presentation of the results and in the final framework, a variety of actors could be identified. Of course, it was impossible to exhaust this discussion, and other actors could be involved. However, from the actors identified, the leading figures play a crucial role when interacting with citizens because they are the ones that engage them in service co-production besides integrating citizens' personal knowledge resources.

Finally, this research's main objective was to propose a conceptual framework for knowledge-based public services for smart cities by mobilizing citizens' personal knowledge in the value co-creation of public services. By triangulating the theory adopted in this thesis, the results of the semi-structured interviews, the analysis of the secondary data from Alô Caxias, and the direct observation in the Municipal Forum for Popular Evaluation of the Public Transportation System, it was possible to meet this objective.

The Framework for Knowledge-Based Public Services represents the analysis categories for the case of the public transport service, the actors involved in the service ecosystem, and how they are all involved in value co-creation. Citizens from a knowledge society are valuable assets and hold an essential resource, knowledge, that, when mobilized and engaged in the co-production of public services, results in higher-value services. Higher public value benefits both citizens and service providers since public services impact people perceived quality of life and well-being in cities. Citizens' sense of belonging might also increase by participating and engaging in service co-production.

As evidenced in the literature review and contributing to the S-D logic theory, a service ecosystem view offers a more networked, interconnected, and recursive notion of value creation. All stakeholders are interconnected through shared institutions and service provision, and value creation occurs throughout the network at each exchange encounter rather than at the end of the value chain. In the framework, the institutions are represented by the municipal management and the public transport service concessionaire. However, other institutions could be identified but are essential because of their leading figures: mobility council, city council, civil society organizations, and association of neighborhood presidents, and they are necessary for the leadership they exercise on citizens. This finding is significant and singular to the study context. Although other researchers found leadership to influence knowledge-based public services, how the leaders interact and the leaders themselves are closely related to the case study. Moreover, the Union of Neighborhood Associations of Caxias do Sul (UAB) and the civil society organizations researched (Mobi and Vivacidade) are unique to the context.

Communication was also found to be a complex element for knowledge-based public services. For good communication, the channels used by the municipal management and the concessionaire and the technology they use to operate these channels could improve how information gets to citizens and, consequently, impact their engagement in the co-production of services. Besides, people are equally important for communication; once again, the leading figures play a crucial role because they are the bridge between citizens and the institutions.

The service infrastructure was found in the framework as an inherent part of the service and is vital to determine citizens' overall experience when using it, in this case, the public transport service. According to citizens' inputs from the secondary data analysis and some of the interviewees' comments, the value citizens experience is impacted by the infrastructure issues.

Given the exposed discussion, the proposed framework has evidenced that the citizen is an essential actor in a knowledge society to help develop knowledge-based solutions to social problems, specifically the public transport service. Therefore, citizens contribute with their knowledge resources and engage in the co-production of public services as value co-creators of the service ecosystem and, consequently, help improve the public value achieved to all citizenry. Communication and leadership are critical in this relationship to connect citizens and the municipal management. Moreover, these dimensions are essential to raising citizens' awareness of their role in society and that they should mobilize their personal knowledge to action and engage in the co-production of services.

Concerning the service-dominant logic theory, the study has contributed by proposing that citizens use their personal knowledge from daily experience to mobilize to action and engage in the co-production of services. By integrating their knowledge resources with the other actors in the ecosystem, they co-create value that results in public value. The research also aimed to bring more evidence-based insights into the S-D logic's mid-range theory by approaching co-production and engagement. Next, the practical implications identified will be discussed.

5.2 PRACTICAL IMPLICATIONS

This thesis could identify necessary actions and points the municipal management should consider to achieve knowledge-based public services. This section discusses one question this research raised concerning how public service managers benefit from citizens' role in the value co-creation of public services.

Managerially, the main contributions relate to the conceptual framework for knowledge-based public services, which aims to support municipal management to engage citizens in planning, design, and delivery of services, as they can be active agents of this process. Thus, the framework serves as a basis for sound public management practices, and social innovations since social interactions with citizens can provide valuable knowledge to management. Besides, citizens' inclusion in the initial processes of service production and the citizen's sense of

belonging to the community can deliver higher public value and decrease citizens' dissatisfaction and the costs of the services provided.

In this sense, in the study context, the municipal management counts on important allies that connect them with the citizenry, which are the leading figures. These people exercise a leadership role in the communities and are a direct link the municipal management has with the citizens. As a result, the synergy among the institutions and leadership identified in this thesis is essential and could be a way for public management to get closer to ordinary citizens.

The leaders can be natural leaders, as citizens who understand that they can do more for their community and voluntarily act in leadership positions. However, this is an opportunity for the municipal management to develop more leaders within the communities. The municipal management could have programs for leadership development and training involving different groups, like teenagers and women, for example. With more leaders directly acting in their communities and citizens identifying themselves with those leaders, there is a higher chance of engaging more citizens in the co-production of services.

The universities are essential in composing the leadership role with the other leadership actors to promote actual change. Universities are transformation agents that hold and develop knowledge that can be applied in society to help solve their needs. They have an educational role directly connected to the citizens, as by forming professionals, they are developing citizens. As a result, universities can help engage citizens to mobilize the knowledge they acquire in favor of their communities.

As the results pointed out, citizens tend to be individualists, and improving their sense of belonging to the community is necessary to work for a common purpose. Therefore, the leaders can help the municipal management engage the ordinary citizenry in the co-production of services and create awareness of their role in society. This could happen by increasing communication and education through communication campaigns, improving the channels with the help of technology, and educating children about their role in society from the early years of school. There could be programs directed to children educating them about citizenship, the principles of urban planning, the importance of collective and nonmotorized transportation, and other issues related to the city that could help achieve the SDGs.

The study also pointed out that when the municipal management or the service concessionaire looks for the citizens to engage them, they usually give back by mobilizing their knowledge and contributing to improving the services. This evidences that if we educate the citizen from their early years, this might be a habitual behavior. Moreover, the municipal management could improve and increase the communication with citizens, as communication

is also a way of educating and informing citizens about their rights and duties and calling them to participate and engage in common causes.

As an emerging category, communication evidenced the importance of the institution's investment in Information and Communication Technologies (ICTs). ICTs in public management can enable the interaction between society and governments and increase citizens' engagement in co-producing public services, as collective knowledge contributes to co-producing sustainable solutions for cities. Besides, ICTs allow the sharing of knowledge and information. Moreover, digital tools can be used in favor of the government to enable open data to educate and inform citizens about the impact of individual transportation on climate change, pollution, and other choices citizens make that impact the environment and their city, creating awareness of how individual decisions influence the collective environment.

Promoting citizens' personal knowledge mobilization with environments that enable discussion is also essential. Knowledge mobilization is collective and transversal and needs more places to happen. The Municipal Forum for Popular Evaluation of the Public Transportation System is a good example of a place that enables this collective discussion. However, other opportunities could be created, for example, at schools listening to teenagers and learning from their experience with the public transport service. This could also be an opportunity for forming new leaders, engaging them in the co-production of services, creating awareness of their role in society, and educating the teenagers about the importance of public transport, possibly engaging them in making a habit of using this service.

Other environments for discussion could be considered, like involving women and learning about the challenges they face when using the transport service, such as walking distances they encounter and the feeling of insecurity they might feel walking alone at night, for example. These environments for collective discussion could raise various issues and engage the group in co-producing the solution.

Furthermore, other secretariats from other public services could benefit from the findings of this study, applying the proposed implications in their specific services. Although if applied to other services, like public health services or garbage collection services, the results could have been different, the findings from this study can give hints to other services about the attribute of knowledge-based public services in other areas.

5.3 STUDY LIMITATIONS

This thesis can present theoretical limitations, as it has not exhausted the reading of references surrounding the themes and approaches proposed. It is necessary to consider the filters applied during the searches, which resulted from the researcher's choices, causing the exclusion of several materials that, if included, could alter the composition and proposition of the project's theoretical framework. In the same way, concerning the method proposed for this thesis, although the justification used for the choice of each level of research is clear, if different decisions had been made, the results could undoubtedly have presented other answers. Likewise, each of the techniques chosen has its limitations.

The study's participants are also a limitation, as other interviewees could have a different point of view concerning the subject. Furthermore, the empirical object selected for the study, the municipal public services, specifically the public transport service, can be a limitation. Different categories could have emerged if another service was established, maybe education or health service, which would also have changed the interviewees who participated.

Finally, there are theoretical limitations arising from decisions taken during the execution of the research. One such limitation concerns the aggregations level proposed by Vargo and Lusch (2017). In this regard, the study could not approach value co-creation on all levels (micro, meso, and macro) throughout the service ecosystem. The next section discusses the future studies suggestions based on the research analysis.

5.4 FUTURE STUDIES SUGGESTIONS

Although this thesis has achieved the objectives proposed in its initial project, some choices have excluded the possibility of making certain comparisons, investigations, and relationships and of employing specific theories, approaches, and methods. As a result, alternatives for future studies have arisen.

Future research could investigate value co-creation in its aggregation levels (micro, meso, and macro), approaching the service encounters and resource integration through the entire service ecosystem. For that, future research could deeply study the leaderships identified in this thesis, for example, by examining the UAB and the unfoldings of their work through their interactions with the municipal management, the service concessionaire, and citizens.

Another contribution could be proposing a communication campaign to engage citizens in service co-production. It could also measure the campaign impact on citizen engagement and

their satisfaction with the service. Moreover, an education plan could be proposed involving children in the public education system.

Finally, other methods could be proposed, like the quantitative method applying a survey to identify citizens' perceptions about the subjects studied. The results could be beneficial in confirming this study's findings and determining if citizens have a different perception of the subjects.

REFERENCES

ABERBACH, Joel D.; CHRISTENSEN, Tom. Citizens and consumers: An NPM dilemma. **Public Management Review**, [*s. l.*], v. 7, n. 2, p. 225–246, 2005. Disponível em: https://doi.org/10.1080/14719030500091319

ACKROYD, Stephen. From public administration to public sector management: understanding contemporary change in British public services. **International Journal of Public Sector Management**, [*s. l.*], v. 8, n. 2, p. 19–32, 1995. Disponível em: https://doi.org/10.1108/09513559510086049

AFGAN, Naim Hamdija; CARVALHO, Maria G. The knowledge society: a sustainability paradigm. **Cadmus**, [*s. l.*], v. 1, n. 1, p. 28–41, 2010. Disponível em: https://www.cadmusjournal.org/node/14

AKAKA, Melissa Archpru; VARGO, Stephen L.; LUSCH, Robert F. The complexity of context: A service ecosystems approach for international marketing. **Journal of International Marketing**, [*s. l.*], v. 21, n. 4, p. 1–20, 2013. Disponível em: https://doi.org/10.1509/jim.13.0032

ALFORD, John. Defining the client in the public sector: A social-exchange perspective. **Public Administration Review**, [*s. l.*], v. 62, n. 3, p. 337–346, 2002. Disponível em: https://doi.org/10.1111/1540-6210.00183

ALFORD, John; HUGHES, Owen. Public value pragmatism as the next phase of public management. **American Review of Public Administration**, [*s. l.*], v. 38, n. 2, p. 130–148, 2008. Disponível em: https://doi.org/10.1177/0275074008314203

ALFORD, John; YATES, Sophie. Mapping public value processes. **International Journal of Public Sector Management**, [*s. l.*], v. 27, n. 4, p. 334–352, 2014. Disponível em: https://doi.org/10.1108/IJPSM-04-2013-0054

BAGOZZI, Richard P. Marketing as an Organized Behavioral System of Exchange. **Journal of Marketing**, [*s. l.*], v. 38, n. 4, p. 77, 1974. Disponível em: https://doi.org/10.2307/1250397

BARDIN, Laurence. **Content analysis**. [*S. l.*]: São Paulo: Edições, 2011. v. 70

BEBBER, Suélen *et al.* Sustainable mobility scale: A contribution for sustainability assessment systems in urban mobility. **Cleaner Engineering and Technology**, [*s. l.*], v. 5, 2021. Disponível em: https://doi.org/10.1016/j.clet.2021.100271

BELANCHE, D; CASALÓ, L V; ORÚS, C. City attachment and use of urban services: Benefits for smart cities. **Cities**, University of Zaragoza, Facultad de Ciencias Sociales y Humanas, Ciudad Escolar s/n, Teruel, 44003, Spain, v. 50, p. 75–81, 2016. Disponível em: https://doi.org/10.1016/j.cities.2015.08.016

BENNET, Alex; BENNET, David Hughes. An Overview of Knowledge Mobilization: Mobilizing Research in the Social Sciences and Humanities. **Mountain Quest Institute**, [*s. l.*], v. 10, 2015. Disponível em: https://doi.org/10.13140/RG.2.1.3236.4964

BENNET, Alex; BENNET, David. Context: The shared knowledge enigma. **Vine**, [*s. l.*], v. 37, n. 1, p. 27–40, 2007. Disponível em: https://doi.org/10.1108/03055720710742007

BENNETT, Alex; BENNET, David Hughes. **Knowledge Mobilization in the Social Sciences and Humanities: Moving from Research to Action**. [*S. l.*]: MQIPress, 2007. *E-book*.

BENNETT, Alex; BENNETT, David. Knowledge, theory and practice in knowledge management: Between associative patterning and context-rich action. **Journal of Entrepreneurship, Management and Innovation**, [*s. l.*], v. 10, n. 4, p. 7, 2014.

BOLÍVAR, Manuel Pedro Rodríguez. Creative citizenship: the new wave for collaborative environments in smart cities. **Academia Revista Latinoamericana de Administracion**, [*s. l.*], v. 31, n. 1, p. 277–302, 2018. Disponível em: https://doi.org/10.1108/ARLA-04-2017-0133

BONI, Valdete; QUARESMA, Sílvia Jurema. Aprendendo a entrevistar: como fazer entrevistas em Ciências Sociais. **Revista Eletrônica dos Pós-Graduandos em Sociologia Política da UFSC**, [*s. l.*], v. 2, n. 1, p. 68–80, 2005. Disponível em: https://doi.org/10.5007/%X

BOSTANCI, Bülent; ERDEM, Nuri. Investigating the satisfaction of citizens in municipality services using fuzzy modelling. **Socio-Economic Planning Sciences**, [*s. l.*], v. 69, n. October 2019, p. 100754, 2020. Disponível em: https://doi.org/10.1016/j.seps.2019.100754

BOVAIRD, Tony *et al.* Activating citizens to participate in collective co-production of public services. **Journal of Social Policy**, [*s. l.*], v. 44, n. 1, p. 1–23, 2015. Disponível em: https://doi.org/10.1017/S0047279414000567

BOVAIRD, Tony. Beyond engagement and participation: User and community coproduction of public services. **Public Administration Review**, [*s. l.*], v. 67, n. 5, p. 846–860, 2007. Disponível em: https://doi.org/10.1111/j.1540-6210.2007.00773.x

BOVAIRD, Tony; LOEFFLER, Elke. From engagement to co-production: the contribution of users and communities to outcomes and public value. **Voluntas**, [*s. l.*], v. 23, n. 4, p. 1119–1138, 2012. Disponível em: https://doi.org/07/s 11266-012-9309-6

BOVAIRD, Tony; LOEFFLER, Elke. We're all in this together: harnessing user and community co-production of public outcomes. **Birmingham: Institute of Local Government Studies: University of Birmingham**, [*s. l.*], v. 1, n. June, 2013. Disponível em: https://www.birmingham.ac.uk/Documents/college-social-sciences/government-society/inlogov/publications/2013/chapter-4-bovaird-loeffler.pdf

BOYLE, D.; HARRIS, M. The challenge of co-production. **London, New Economics Foundation**, [*s. l.*], v. 56, p. 18, 2009. Disponível em: https://neweconomics.org/uploads/files/312ac8ce93a00d5973_3im6i6t0e.pdf

BRANDSEN, Taco; HONINGH, Marlies. Distinguishing Different Types of Coproduction: A Conceptual Analysis Based on the Classical Definitions. **Public Administration Review**, [*s. l.*], v. 76, n. 3, p. 427–435, 2016. Disponível em: https://doi.org/10.1111/puar.12465

BRASIL, Senado Federal. Constituição da república federativa do Brasil. **Brasília: Senado Federal, Centro Gráfico**, [*s. l.*], 1988. Disponível em: http://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm

BRASIL. Decreto nº 10.282, de 20 de março de 2020. Regulamenta a Lei nº 13.979, de 6 de fevereiro de 2020, para definir os serviços públicos e as atividades essenciais. **Diário Oficial da União**, [*s. l.*], v. Seção 1, n. Extra, p. 1–2, 2020. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2020/decreto/D10282.htm#:~:text=1º Este Decreto regulamenta a,públicos e as atividades essenciais.&text=Âmbito de aplicação- ,Art.,privados e às pessoas naturais.

BRASIL. Estatuto da Cidade: Lei nº 10.257/2001. **Diário Oficial da União**, [*s. l.*], p. 102, 2008. Disponível em: http://www.planalto.gov.br/ccivil_03/leis/leis_2001/l10257.htm

BRASIL. Lei n. 12.187, de 29 de dezembro de 2009. Institui a Política Nacional sobre Mudança do Clima - PNMC e dá outras providências. **Diário Oficial da União**, [*s. l.*], 2009. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2007-2010/2009/lei/l12187.htm

BRASIL. Lei n. 12.587, de 3 de janeiro de 2012. Institui as diretrizes da Política Nacional de Mobilidade Urbana. **Diário Oficial da União**, [*s. l.*], 2012. Disponível em: http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2012/Lei/L12587.htm

BRASIL. Lei n. 13.460, de 26 de junho de 2017. Dispõe sobre participação, proteção e defesa dos direitos do usuário dos serviços públicos da administração pública. **Diário Oficial da União**, [*s. l.*], 2017. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2017/lei/l13460.htm

BRASIL. Plano Nacional Sobre Mudança Do Clima-Pnmc-Brasil. **Decreto nº 6.263, de 21 de novembro**, [*s. l.*], p. 1–129, 2007.

BRILLANTES, Alex B; LOPOS, Bootes Esden; PERANTE-CALINA, Lizan E. Knowledge-based public sector reform: the Philippine experience. *In*: KNOWLEDGE CREATION IN PUBLIC ADMINISTRATIONS. [*S. l.*]: Springer, 2018. p. 211–236.

BRODIE, Roderick J. *et al*. Customer engagement: Conceptual domain, fundamental propositions, and implications for research. **Journal of Service Research**, [*s. l.*], v. 14, n. 3, p. 252–271, 2011. Disponível em: https://doi.org/10.1177/1094670511411703

BRODIE, Roderick J.; SAREN, Michael; PELS, Jaqueline. Theorizing about the service dominant logic: The bridging role of middle range theory. **Marketing Theory**, [*s. l.*], v. 11, n. 1, p. 75–91, 2011. Disponível em: https://doi.org/10.1177/1470593110393714

CAMPBELL, Tim. **Beyond smart cities: how cities network, learn and innovate**. London: Routledge, 2013. Disponível em: https://doi.org/https://doi.org/10.4324/9780203137680

CARRILLO, Francisco Javier. Knowledge-based development as a new economic culture. **Journal of Open Innovation: Technology, Market, and Complexity**, [*s. l.*], v. 1, n. 2, 2015. Disponível em: https://doi.org/10.1186/s40852-015-0017-5

CARRILLO, Francisco Javier. What "knowledge-based" stands for? A position paper.

International Journal of Knowledge-Based Development, [*s. l.*], v. 5, n. 4, p. 402–421, 2014. Disponível em: https://doi.org/10.1504/IJKBD.2014.068067

CASAKIN, H; HERNÁNDEZ, B; RUIZ, C. Place attachment and place identity in Israeli cities : The influence of city size. **Cities**, [*s. l.*], v. 42, p. 224–230, 2015. Disponível em: https://doi.org/10.1016/j.cities.2014.07.007

CAXIAS DO SUL. Decreto nº 20.846, de 25 de março de 2020. Aprova o Regimento Interno da Secretaria Municipal de Trânsito, Transportes e Mobilidade, nos termos da Lei Complementar nº 321, de 22 de dezembro de 2008, e revoga o Decreto nº 20.421, de 9 de setembro de 2019. **Secretaria Municipal de Trânsito, Transportes e Mobilidade**, Brazil, p. 1–30, 2020. Disponível em: https://gcpstorage.caxias.rs.gov.br/documents/2020/04/a5c9a70e-9438-475e-95ee-a06a806120cc.pdf

CAXIAS DO SUL. **O que é o Planmob?**. [*S. l.*], 2022. Disponível em: https://caxias.rs.gov.br/servicos/transito/planmob/o-que-e-o-planmob. Acesso em: 27 set. 2022.

CHANDLER, Jennifer D; VARGO, Stephen L. Contextualization and value-in-context: How context frames exchange. **Marketing theory**, [*s. l.*], v. 11, n. 1, p. 35–49, 2011. Disponível em: https://doi.org/10.1177/1470593110393713

CHANDRA, Yanto; MAN LEE, Erica Kim; TJIPTONO, Fandy. **Public versus private interest in social entrepreneurship: Can one serve two masters?** [*S. l.*]: Elsevier Ltd, 2021. ISSN 09596526.v. 280 Disponível em: https://doi.org/10.1016/j.jclepro.2020.124499

COHEN, Wesley M.; LEVINTHAL, Daniel A. Absorptive Capacity: A New Perspective on Learning and Innovation. **Administrative Science Quarterly**, [*s. l.*], v. 35, n. 1, p. 128, 1990. Disponível em: https://doi.org/10.2307/2393553

COLEMAN, James S. **Norms as social capital**. New York: Paragon House: New York, 1987.

CRESWELL, John W; CRESWELL, David J. **Research design: Qualitative, quantitative, and mixed methods approaches**. 5th. ed. [*S. l.*]: Sage publications, 2018.

CRESWELL, John W.; MILLER, Dana L. Determining validity in qualitative inquiry. **Theory into Practice**, [*s. l.*], v. 39, n. 3, p. 124–130, 2000. Disponível em: https://doi.org/10.1207/s15430421tip3903_2

DA SILVA, Marcelo Benetti Correa *et al.* City life satisfaction: A measurement for smart and sustainable cities from the citizens' perspective. **International Journal of Knowledge-Based Development**, [*s. l.*], v. 10, n. 4, p. 338–383, 2019. Disponível em: https://doi.org/10.1504/IJKBD.2019.105126

DAVID, Paul A.; FORAY, Dominique. An introduction to the economy of the knowledge society. **International Social Science Journal**, [*s. l.*], v. 54, n. 171, p. 9–23, 2002. Disponível em: https://doi.org/10.1111/1468-2451.00355

DENZIN, Norman K. Symbolic interactionism. *In*: FLICK, Uwe; VON KARDOFF, Ernst; STEINKE, Ines (org.). **A companion to qualitative research**. [*S. l.*]: Sage Publications, London, 2004. p. 81–87.

DENZIN, Norman; LINCOLN, Yvonna. **The SAGE Handbook of Qualitative Research**. Fifthed. [*S. l.*]: SAGE Publications, Inc., 2018. ISSN 15730964.v. 195 Disponível em: https://doi.org/10.1007/s11229-017-1319-x

DEZI, Luca *et al.* Unpacking open innovation neighborhoods: le milieu of the lean smart city. **Management Decision**, [*s. l.*], 2018. Disponível em: https://doi.org/10.1108/MD-04-2017-0407

DÍAZ-DÍAZ, R; MUÑOZ, L; PÉREZ-GONZÁLEZ, D. Business model analysis of public services operating in the smart city ecosystem: The case of SmartSantander. **Future Generation Computer Systems**, Department of Business Administration, University of Cantabria, Spain, v. 76, p. 198–214, 2017. Disponível em: https://doi.org/10.1016/j.future.2017.01.032

DRUCKER, Peter. **The age of discontinuity: guidelines to our changing society**. [*S. l.*]: London: William Heineman Ltd, 1969. Disponível em: https://doi.org/10.1016/C2013-0-04383-6

DRUCKER, Peter F. The Next Society. **The Economist**, [*s. l.*], 2001. Disponível em: https://www.economist.com/special-report/2001/11/03/the-next-society

DRUCKER, Peter F. The post-capitalist world. **The Public Interest**, [*s. l.*], v. 109, p. 89–100, 1992. Disponível em: https://www.nationalaffairs.com/public_interest/detail/the-post-capitalist-world

EDVARDSSON, bo *et al.* Why is service-dominant logic based service system better? **International Journal of Quality and Service Sciences**, [*s. l.*], v. 5, n. 2, p. 171–190, 2013. Disponível em: https://doi.org/10.1108/IJQSS-07-2012-0007

EDVINSSON, Leif Edvinsson. Aspects on the city as a knowledge tool. **Journal of Knowledge Management**, [*s. l.*], v. 10, n. 5, p. 6–13, 2006. Disponível em: https://doi.org/10.1108/13673270610691134

EISENHARDT, Kathleen M. Building theories from case study research. **Academy of Management Review**, [*s. l.*], v. 14, n. 4, p. 532–550, 1989. Disponível em: https://doi.org/10.4467/20843887PI.11.002.0578

ERGAZAKIS, Kostas; METAXIOTIS, Kostas; PSARRAS, John. Knowledge cities: The answer to the needs of knowledge-based development. **Vine**, [*s. l.*], v. 36, n. 1, p. 67–84, 2006. Disponível em: https://doi.org/10.1108/03055720610667381

FACHINELLI, Ana Cristina; D'ARRIGO, Fernanda Pauletto; BREUNIG, Karl Joachim. The value context in knowledge-based development: Revealing the context factors in the development of Southern Brazils Vale dos Vinhedos region. **Knowledge Management Research and Practice**, [*s. l.*], v. 16, n. 1, p. 32–41, 2018. Disponível em: https://doi.org/10.1080/14778238.2017.1405143

FLICK, Uwe. **An introduction to qualitative research**. 4th. ed. [*S. l.*]: Sage Publications Limited, 2009.

FREMPONG, Joseph *et al.* The relationship among customer operant resources, online value co-creation and electronic-word-of-mouth in solid waste management marketing. **Journal of Cleaner Production**, [*s. l.*], v. 248, p. 119228, 2020. Disponível em: https://doi.org/10.1016/j.jclepro.2019.119228

GAINS, Francesca; STOKER, Gerry. Delivering "public value": Implications for accountability and legitimacy. **Parliamentary Affairs**, [*s. l.*], v. 62, n. 3, p. 438–455, 2009. Disponível em: https://doi.org/10.1093/pa/gsp007

GAWŁOWSKI, Robert. Co-production as a tool for realisation of public services. **Zarządzanie Publiczne**, [*s. l.*], n. 2(44)/2018, p. 71–81, 2018. Disponível em: https://doi.org/10.15678/zp.2018.44.2.05

GEBAUER, Heiko; JOHNSON, Mikael; ENQUIST, Bo. Value co-creation as a determinant of success in public transport services: A study of the Swiss Federal Railway operator (SBB). **Managing Service Quality**, [*s. l.*], v. 20, n. 6, p. 511–530, 2010. Disponível em: https://doi.org/10.1108/09604521011092866

GOLAFSHANI, Nahid. Understanding reliability and validity in qualitative research. **The Qualitative Report**, [*s. l.*], v. 8, n. 4, p. 597–606, 2015. Disponível em: https://doi.org/10.46743/2160-3715/2003.1870

GOMES, Adalmir Oliveira; MOURA, Walter José Faiad. The concept of service co-production : proposal for application in the Brazilian Judiciary. **FGV Ebape**, [*s. l.*], v. 16, n. 3, p. 469–485, 2018. Disponível em: https://doi.org/https://doi.org/10.1590/1679-395162832

GRÖNROOS, Christian. Reforming public services: does service logic have anything to offer? **Public Management Review**, [*s. l.*], v. 21, n. 5, p. 775–788, 2019. Disponível em: https://doi.org/10.1080/14719037.2018.1529879

GRÖNROOS, Christian. **Service management and marketing: customer management in service competition**. 3rd. ed. [*S. l.*]: John Wiley & Sons, 2007.

GRÖNROOS, Christian. Value co-creation in service logic: A critical analysis. **Marketing Theory**, [*s. l.*], v. 11, n. 3, p. 279–301, 2011. Disponível em: https://doi.org/10.1177/1470593111408177

GRÖNROOS, Christian; VOIMA, Päivi. Critical service logic: Making sense of value creation and co-creation. **Journal of the Academy of Marketing Science**, [*s. l.*], v. 41, n. 2, p. 133–150, 2013. Disponível em: https://doi.org/10.1007/s11747-012-0308-3

GRUMET, Madeleine R. The Politics of Personal Knowledge. **Curriculum Inquiry**, [*s. l.*], v. 17, n. 3, p. 319–329, 1987. Disponível em: https://doi.org/10.1080/03626784.1987.11075295

GUTIÉRREZ, Verónica *et al.* Empowering citizens towards the co-creation of sustainable cities. **IEEE**, [*s. l.*], v. 5, n. 2, p. 668–676, 2017. Disponível em:

https://doi.org/10.1109/JIOT.2017.2743783

GUTIÉRREZ RODRÍGUEZ, Pablo *et al*. Quality dimensions in the public sector: Municipal services and citizen's perception. **International Review on Public and Nonprofit Marketing**, [*s. l.*], v. 6, n. 1, p. 75–90, 2009. Disponível em: https://doi.org/10.1007/s12208-009-0030-0

GZH. **Número de carros em Caxias do Sul ultrapassa metade da população**. [*S. l.*], 2018. Disponível em: https://gauchazh.clicrbs.com.br/pioneiro/noticia/2018/09/numero-de-carros-em-caxias-do-sul-ultrapassa-metade-da-populacao-10590682.html. Acesso em: 13 mar. 2021.

HAGERTY, Bonnie M.K. *et al*. Sense of belonging: A vital mental health concept. **Archives of Psychiatric Nursing**, [*s. l.*], v. 6, n. 3, p. 172–177, 1992. Disponível em: https://doi.org/10.1016/0883-9417(92)90028-H

HO, Ezra. Smart subjects for a Smart Nation? Governing (smart)mentalities in Singapore. **Urban Studies**, [*s. l.*], v. 54, n. 13, p. 3101–3118, 2017. Disponível em: https://doi.org/10.1177/0042098016664305

HOLLANDS, Robert G. Will the real smart city please stand up? Intelligent, progressive or entrepreneurial? **City**, [*s. l.*], v. 12, n. 3, p. 303–320, 2008. Disponível em: https://doi.org/10.1080/13604810802479126

HOLLEBEEK, Linda D. Individual-level cultural consumer engagement styles: Conceptualization, propositions and implications. **International Marketing Review**, [*s. l.*], v. 35, n. 1, p. 42–71, 2018. Disponível em: https://doi.org/10.1108/IMR-07-2016-0140

HOLLEBEEK, Linda D.; SRIVASTAVA, Rajendra K.; CHEN, Tom. S-D logic–informed customer engagement: integrative framework, revised fundamental propositions, and application to CRM. **Journal of the Academy of Marketing Science**, [*s. l.*], v. 47, n. 1, p. 161–185, 2019. Disponível em: https://doi.org/10.1007/s11747-016-0494-5

IBGE. **Caxias do Sul**. [*S. l.*], 2021. Disponível em: https://cidades.ibge.gov.br/brasil/rs/caxias-do-sul/panorama. Acesso em: 29 set. 2021.

IEA, International Energy Agency. CO2 emisions from fuel combustion. **IEA Publications**, [*s. l.*], p. 1–165, 2019. Disponível em: https://iea.blob.core.windows.net/assets/eb3b2e8d-28e0-47fd-a8ba-160f7ed42bc3/CO2_Emissions_from_Fuel_Combustion_2019_Highlights.pdf

IPCC. **Climate Change 2021: The Physical Science Basis.Cambridge University Press**. [*S. l.: s. n.*], 2021. Disponível em: https://www.ipcc.ch/report/ar6/wg1/.

ISLAM, Jamid Ul *et al*. Customer engagement in the service context: An empirical investigation of the construct, its antecedents and consequences. **Journal of Retailing and Consumer Services**, [*s. l.*], v. 50, n. May, p. 277–285, 2019. Disponível em: https://doi.org/10.1016/j.jretconser.2019.05.018

ISO. 37122 Sustainable development in communities - Indicators for Smart Cities. 2017.

International Organization for Standardization., [*s. l.*], v. 37122, 2017.

ITDP, Brasil. **Mobilidados em foco - boletim #1**. [*S. l.: s. n.*], 2019. Disponível em: http://itdpbrasil.org/wp-content/uploads/2019/02/MobiliDADOS_Boletim1.pdf.

JARKE, Juliane. Co-creating digital public services. *In*: PUBLIC ADMINISTRATION AND INFORMATION TECHNOLOGY. [*S. l.*]: Springer, 2021. v. 6, p. 15–52. Disponível em: https://doi.org/10.1007/978-3-030-52873-7_3

JARVIS, Wade *et al.* A large class engagement (LCE) model based on service-dominant logic (SDL) and flipped classrooms. **Education Research and Perspectives**, [*s. l.*], v. 41, p. 1–24, 2014.

JASPERS, Sylke; STEEN, Trui. Does Co-Production Lead to the Creation of Public Value? Balancing the Dimensions of Public Value Creation in Urban Mobility Planning. **Administration and Society**, [*s. l.*], v. 53, n. 4, p. 619–646, 2021. Disponível em: https://doi.org/10.1177/0095399720957613

JEROME, Martin. **The basis of corporate and institutional knowledge management.** [*S. l.*], 2006. Disponível em: https://doi.org/10.7763/ijssh.2013.v3.275.

JOINER, Keith; LUSCH, Robert. Evolving to a new service-dominant logic for health care. **Innovation and Entrepreneurship in Health**, [*s. l.*], v. 3, n. 3, p. 25–33, 2016. Disponível em: https://doi.org/10.2147/IEH.S93473

KATHI, Pradeep Chandra; COOPER, Terry L. Democratizing the administrative state: Connecting neighborhood councils and city agencies. **Public Administration Review**, [*s. l.*], v. 65, n. 5, p. 559–567, 2005. Disponível em: https://doi.org/10.1111/j.1540-6210.2005.00483.x

KING, Stephen; COTTERILL, Sarah. Transformational Government? The role of information technology in delivering citizen-centric local public services. **Local Government Studies**, [*s. l.*], v. 33, n. 3, p. 333–354, 2007. Disponível em: https://doi.org/10.1080/03003930701289430

KNIGHT, R. V. Knowledge-based development: policy and planning implications for cities. **Urban Studies**, [*s. l.*], v. 32, n. 2, p. 225–260, 1995. Disponível em: https://doi.org/10.1080/00420989550013068

KUMAR, V. *et al.* Customer engagement in service. **Journal of the Academy of Marketing Science**, [*s. l.*], v. 47, n. 1, p. 138–160, 2019. Disponível em: https://doi.org/10.1007/s11747-017-0565-2

LAAMANEN, Mikko; SKÅLÉN, Per. Collective–conflictual value co-creation: A strategic action field approach. **Marketing Theory**, [*s. l.*], v. 15, n. 3, p. 381–400, 2015. Disponível em: https://doi.org/10.1177/1470593114564905

LANE, Robert E. The Decline of Politics and Ideology in a Knowledgeable Society. **American Sociological Review**, [*s. l.*], v. 31, n. 5, p. 649–662, 1966. Disponível em: https://www.jstor.org/stable/2091856

LAUD, Gaurangi *et al.* The role of embeddedness for resource integration: Complementing S-D logic research through a social capital perspective. **Marketing Theory**, [*s. l.*], v. 15, n. 4, p. 509–543, 2015. Disponível em: https://doi.org/10.1177/1470593115572671

LOEFFLER, Elke; BOVAIRD, Tony. Co-commissioning of public services and outcomes in the UK: Bringing co-production into the strategic commissioning cycle. **Public Money and Management**, [*s. l.*], v. 39, n. 4, p. 241–252, 2019. Disponível em: https://doi.org/10.1080/09540962.2019.1592905

LOEFFLER, Elke; BOVAIRD, Tony. User and Community Co-Production of Public Services: What Does the Evidence Tell Us? **International Journal of Public Administration**, [*s. l.*], v. 39, n. 13, p. 1006–1019, 2016. Disponível em: https://doi.org/10.1080/01900692.2016.1250559

LUSCH, Robert F.; VARGO, Stephen L. **Service-dominant logic: Premises, perspectives, possibilities.** [*S. l.*]: Cambridge University Press, 2014. Disponível em: https://doi.org/10.1017/CBO9781139043120

LUSCH, Robert F.; VARGO, Stephen L. Service-dominant logic: Reactions, reflections and refinements. **Marketing Theory**, [*s. l.*], v. 6, n. 3, p. 281–288, 2006. Disponível em: https://doi.org/10.1177/1470593106066781

MAHR, Dominik; LIEVENS, Annouk; BLAZEVIC, Vera. The value of customer cocreated knowledge during the innovation process. **Journal of Product Innovation Management**, [*s. l.*], v. 31, n. 3, p. 599–615, 2014. Disponível em: https://doi.org/10.1111/jpim.12116

MARCHETTI, Dalmo; OLIVEIRA, Renan; FIGUEIRA, Ariane Roder. Are global north smart city models capable to assess Latin American cities? A model and indicators for a new context. **Cities**, [*s. l.*], v. 92, n. April 2018, p. 197–207, 2019. Disponível em: https://doi.org/10.1016/j.cities.2019.04.001

MARCONI, Marina de Andrade; LAKATOS, Eva Maria. **Técnicas de pesquisa**. São Paulo: Atlas, 1990.

MINISTÉRIO DAS CIDADES. **Política Nacional de Mobilidade UrbanaMinistério das Cidades**, Brasilia: [*s. n.*], 2012. Disponível em: https://www.capacidades.gov.br/biblioteca/detalhar/id/269/titulo/politica-nacional-de-mobilidade-urbana---lei-nº-1258712#:~:text=Cartilha da Lei nº 12.587%2F12&text=A Política Nacional de Mobilidade,das cidades de forma ordenada.

MINTZBERG, Henry. Managing government governing management. **Harvard Business Review**, [*s. l.*], v. 74, n. 3, p. 75–83, 1996. Disponível em: https://hbr.org/1996/05/managing-government-governing-management

MOORE, James F. A New Ecology of Competition. **Harvard Business Review**, [*s. l.*], v. 71, n. 3, p. 75–86, 1993. Disponível em: http://blogs.law.harvard.edu/jim/files/2010/04/Predators-and-Prey.pdf

MOORE, Mark Harrison. **Creating public value: Strategic management in government**. [*S. l.*]: Harvard university press, 1995.

MUÑOZ, Laura Alcaide; BOLIVAS, Manuel Pedro Rodríguez. Using tools for citizen engagement on large and medium-sized European Smart Cities. *In*: E-PARTICIPATION IN SMART CITIES: TECHNOLOGIES AND MODELS OF GOVERNANCE FOR CITIZEN ENGAGEMENT. [*S. l.*]: Springer, 2018. p. 23–35. Disponível em: https://doi.org/10.1007/978-3-319-89474-4_2

NEILL, Darren O; PEOPLES, Cathryn. Using IT to monitor well-being and city experiences. **IEEE Potentials**, [*s. l.*], v. 35, n. 6, p. 29–34, 2016. Disponível em: https://doi.org/10.1109/MPOT.2016.2555518

NESELLO, Priscila; FACHINELLI, Ana Cristina. Towards a Knowledge-Based Development Framework for the Manufacturing Industry: Insights from Brazilian Companies. **International Journal of Knowledge-Based Development**, [*s. l.*], v. 11, n. 4, p. 338–356, 2020. Disponível em: https://doi.org/10.1504/IJKBD.2020.115026

NONAKA, Ikujiro; TAKEUCHI, Hirotaka. **The knowledge-creating company: How Japanese companies create the dynamics of innovation**. New York, NY: Oxford university press, 1995.

NTU. **Os grandes números da mobilidade urbana**. [*S. l.*], 2022. Disponível em: https://www.ntu.org.br/novo/AreasInternas.aspx?idArea=7. Acesso em: 31 maio 2022.

OECD. **Citizens as partners: OECD handbook on information, consultation and public participation in policy-making**. Paris: OECD Publishing, 2001. Disponível em: https://doi.org/10.1787/9789264195578-en.

ORLIKOWSKI, Wanda J. Material knowing: The scaffolding of human knowledgeability. **European Journal of Information Systems**, [*s. l.*], v. 15, n. 5, p. 460–466, 2006. Disponível em: https://doi.org/10.1057/palgrave.ejis.3000639

OSBORNE, Stephen P. Delivering public services: time for a new theory? **Public Management Review**, [*s. l.*], v. 12, n. 1, p. 1–10, 2010. Disponível em: https://doi.org/10.1080/14719030903495232

OSBORNE, Stephen P. From public service-dominant logic to public service logic: are public service organizations capable of co-production and value co-creation? **Public Management Review**, [*s. l.*], v. 20, n. 2, p. 225–231, 2018. Disponível em: https://doi.org/10.1080/14719037.2017.1350461

OSBORNE, Stephen P *et al*. The SERVICE framework : a public-service-dominant approach to sustainable public services. **British Academy of Management**, [*s. l.*], v. 26, p. 424–438, 2015. Disponível em: https://doi.org/10.1111/1467-8551.12094

OSBORNE, Stephen P.; RADNOR, Zoe; NASI, Greta. A New Theory for Public Service Management? Toward a (Public) Service-Dominant Approach. **American Review of Public Administration**, [*s. l.*], v. 43, n. 2, p. 135–158, 2013. Disponível em: https://doi.org/10.1177/0275074012466935

OSBORNE, Stephen P.; RADNOR, Zoe; STROKOSCH, Kirsty. Co-production and the co-creation of value in public services: A suitable case for treatment? **Public Management**

Review, [*s. l.*], v. 18, n. 5, p. 639–653, 2016. Disponível em: https://doi.org/10.1080/14719037.2015.1111927

OSTROM, Elinor. Crossing the great divide : Synergy , and development. **World Development**, [*s. l.*], v. 24, n. 6, p. 1073–1087, 1996. Disponível em: https://doi.org/10.1016/0305-750X(96)00023-X

OSTROM, Vincent; OSTROM, Elinor. A different approach to the study of public administration. **Public Administration Review**, [*s. l.*], v. 31, n. 2, p. 203–216, 1971. Disponível em: https://doi.org/10.2307/974676

PARK, Sunggeun. Beyond patient-centred care: a conceptual framework of co-production mechanisms with vulnerable groups in health and social service settings. **Public Management Review**, [*s. l.*], v. 22, n. 1, p. 1–23, 2019. Disponível em: https://doi.org/10.1080/14719037.2019.1601241

PARKER, D.; WALLER, K.; XU, H. Private and public services: Productivity and performance migration. **International Journal of Productivity and Performance Management**, [*s. l.*], v. 62, n. 6, p. 652–664, 2013. Disponível em: https://doi.org/10.1108/IJPPM-10-2012-0119

PASKALEVA, Krassimira; COOPER, Ian. Open innovation and the evaluation of internet-enabled public services in smart cities. **Technovation**, [*s. l.*], v. 78, p. 4–14, 2018. Disponível em: https://doi.org/10.1016/j.technovation.2018.07.003

PETRESCU, Maria. From marketing to public value: towards a theory of public service ecosystems. **Public Management Review**, [*s. l.*], v. 21, n. 11, p. 1–20, 2019. Disponível em: https://doi.org/10.1080/14719037.2019.1619811

POLANYI, Michael. **Personal Knowledge: Towards a Post-Capitalist Philosophy**. London: Routledge and Kegan Paul, 1958. ISSN 1098-6596. Disponível em: https://doi.org/10.1017/CBO9781107415324.004

POLANYI, Michael. **The Tacit Dimension**. London: Garden City, 1966.
RYAN, A B. Post-positivist approaches to research. **Researching and writing your thesis: A guide for postgraduate students**, [*s. l.*], p. 12–28, 2006.

SACCOL, Amarolinda Zanela. Um retorno ao básico: compreendendo os paradigmas de pesquisa e sua aplicação na pesquisa em administração. **Revista de Administração da UFSM**, [*s. l.*], v. 2, n. 2, p. 250–269, 2009. Disponível em: https://doi.org/10.5902/198346591555

SCHAFFERS, Hans *et al*. Smart cities and the future internet: Towards cooperation frameworks for open innovation. *In*: THE FUTURE INTERNET. Berlin: Springer, 2011. v. 6656, p. 431–446. Disponível em: https://doi.org/10.1007/978-3-642-20898-0_31

SECRETARIA DE PLANEJAMENTO GOVERNANÇA E GESTÃO. **Região Metropolitana da Serra Gaúcha - RMSG**. [*S. l.*], 2020. Disponível em: https://atlassocioeconomico.rs.gov.br/regiao-metropolitana-da-serra-gaucha. Acesso em: 10 abr. 2021.

SHAW, Gareth; BAILEY, Adrian; WILLIAMS, Allan. Aspects of service-dominant logic and its implications for tourism management: Examples from the hotel industry. **Tourism management**, [*s. l.*], v. 32, n. 2, p. 207–214, 2011. Disponível em: https://doi.org/10.1016/j.tourman.2010.05.020

SHITTU, Afeez Kolawole. Public Service and Service Delivery. *In*: FARAZMAND, Ali (org.). **Global Encyclopedia of Public Administration, Public Policy, and Governance**. Cham: Springer International Publishing, 2020. p. 1–8. Disponível em: https://doi.org/10.1007/978-3-319-31816-5_4005-1

SKÅLÉN, Per; EDVARDSSON, Bo. Transforming from the goods to the service-dominant logic. **Marketing Theory**, [*s. l.*], v. 16, n. 1, p. 101–121, 2016. Disponível em: https://doi.org/10.1177/1470593115596061

STEHR, Nico. **Knowledge as a Capacity for Action**. [*S. l.*]: Statistics Canada, Science and Technology Redesign Project, 1996.

STEHR, Nico. Knowledge Society, History of. **International Encyclopedia of the Social & Behavioral Sciences: Second Edition**, [*s. l.*], v. 13, p. 105–110, 2015. Disponível em: https://doi.org/10.1016/B978-0-08-097086-8.03160-3

STEHR, Nico. **Nico Stehr: Pioneer in the Theory of Society and Knowledge**. [*S. l.*]: Springer International Publishing, 2018. v. 16 Disponível em: https://doi.org/10.1007/978-3-319-76995-0

STEHR, Nico. Useful scientific knowledge: What is relevant science for society? **Journal of Applied Social Science**, [*s. l.*], v. 3, n. 1, p. 18–26, 2009. Disponível em: https://doi.org/10.1177/193672440900300103

STORBACKA, Kaj *et al.* Actor engagement as a microfoundation for value co-creation. **Journal of Business Research**, [*s. l.*], v. 69, n. 8, p. 3008–3017, 2016. Disponível em: https://doi.org/10.1016/j.jbusres.2016.02.034

SUTTON, Melanie. Knowledge citizenship for active informed citizenship. **SA Journal of Information Management**, [*s. l.*], v. 11, n. 1, 2009. Disponível em: https://doi.org/10.4102/sajim.v11i1.392

TAKEUCHI, Hirotaka. Knowledge-based view of strategy. **Universia Business Review**, [*s. l.*], v. 40, n. 40, p. 68–79, 2013.

TRISCHLER, Jakob *et al.* The Value of Codesign: The Effect of Customer Involvement in Service Design Teams. **Journal of Service Research**, [*s. l.*], v. 21, n. 1, p. 75–100, 2018. Disponível em: https://doi.org/10.1177/1094670517714060

TRISCHLER, Jakob; CHARLES, Michael. The Application of a Service Ecosystems Lens to Public Policy Analysis and Design: Exploring the Frontiers. **Journal of Public Policy and Marketing**, [*s. l.*], v. 38, n. 1, p. 19–35, 2019. Disponível em: https://doi.org/10.1177/0743915618818566

TRISCHLER, Jakob; DIETRICH, Timo; RUNDLE-THIELE, Sharyn. Co-design: from

expert- to user-driven ideas in public service design. **Public Management Review**, [*s. l.*], v. 21, n. 11, p. 1595–1619, 2019. Disponível em: https://doi.org/10.1080/14719037.2019.1619810

TRISCHLER, Jakob; SCOTT, Donald Robert. Designing Public Services: The usefulness of three service design methods for identifying user experiences. **Public Management Review**, [*s. l.*], v. 18, n. 5, p. 718–739, 2016. Disponível em: https://doi.org/10.1080/14719037.2015.1028017

UN HABITAT. **State of Latin American and Caribbean Cities 2012**. [*S. l.*]: UN-Habitat, 2012. ISSN 0924-9338. Disponível em: https://doi.org/10.1016/S0924-9338(02)00696-X

UNESCO. **Towards knowledge societies: UNESCO world report**. [*S. l.*]: UNESCO Publishing, 2005. *E-book*.

UNITED NATIONS. **New urban agenda - Habitat III**. Quito: United Nations, 2017. *E-book*.

UNITED NATIONS. **The sustainable development goals report 2019United Nations**. [*S. l.: s. n.*], 2019. Disponível em: https://unstats.un.org/sdgs/report/2019/The-Sustainable-Development-Goals-Report-2019.pdf.

UNITED NATIONS. **The Sustainable Development Goals Report 2021United Nations**. New York: [*s. n.*], 2021. Disponível em: https://unstats.un.org/sdgs/report/2021.

UNITED NATIONS. **Transforming our world: the 2030 Agenda for sustainable development**. New York: [*s. n.*], 2015. Disponível em: https://doi.org/10.1201/b20466-7.

UNITED NATIONS. **World Urbanization Prospects**. [*S. l.: s. n.*], 2018. v. 12 Disponível em: https://doi.org/10.4054/demres.2005.12.9

UNIVERSIDADE DE CAXIAS DO SUL. **Perfil socioeconômico de Caxias do Sul.** Caxias do Sul: UCS, 2021. Disponível em: https://caxias.rs.gov.br/servicos/desenvolvimento-economico/perfil-socioeconomico-de-caxias-do-sul

VAN EIJK, C. J.A.; STEEN, T. P.S. Why People Co-Produce: Analysing citizens' perceptions on co-planning engagement in health care services. **Public Management Review**, [*s. l.*], v. 16, n. 3, p. 358–382, 2014. Disponível em: https://doi.org/10.1080/14719037.2013.841458

VARGO, Stephen L. On A Theory of Markets and Marketing: From Positively Normative to Normatively Positive. **Australasian Marketing Journal**, [*s. l.*], v. 15, n. 1, p. 53–60, 2007. Disponível em: https://doi.org/10.1016/S1441-3582(07)70029-0

VARGO, Stephen L *et al*. Service-dominant logic: a review and assessment. **Review of marketing research**, [*s. l.*], v. 6, p. 125–167, 2010. Disponível em: https://doi.org/10.1108/S1548-6435(2009)0000006010

VARGO, Stephen L.; AKAKA, Melissa Archpru. Service-Dominant Logic as a Foundation for Service Science: Clarifications. **Service Science**, [*s. l.*], v. 1, n. 1, p. 32–41, 2009.

Disponível em: https://doi.org/10.1287/serv.1.1.32

VARGO, Stephen L.; AKAKA, Melissa Archpru. Value Cocreation and Service Systems (Re)Formation: A Service Ecosystems View. **Service Science**, [*s. l.*], v. 4, n. 3, p. 207–217, 2012. Disponível em: https://doi.org/10.1287/serv.1120.0019

VARGO, Stephen L.; AKAKA, Melissa Archpru; VAUGHAN, Claudia M. Conceptualizing Value: A Service-ecosystem View. **Journal of Creating Value**, [*s. l.*], v. 3, n. 2, p. 117–124, 2017. Disponível em: https://doi.org/10.1177/2394964317732861

VARGO, Stephen L.; LUSCH, Robert F. Evolving to a New Dominant Logic for Marketing. **Journal of Marketing**, [*s. l.*], v. 68, n. 1, p. 1–17, 2004. Disponível em: https://doi.org/10.1509/jmkg.68.1.1.24036

VARGO, Stephen L.; LUSCH, Robert F. Institutions and axioms: an extension and update of service-dominant logic. **Journal of the Academy of Marketing Science**, [*s. l.*], v. 44, n. 1, p. 5–23, 2016. Disponível em: https://doi.org/10.1007/s11747-015-0456-3

VARGO, Stephen L.; LUSCH, Robert F. It's all B2B...and beyond: Toward a systems perspective of the market. **Industrial Marketing Management**, [*s. l.*], v. 40, n. 2, p. 181–187, 2011. Disponível em: https://doi.org/10.1016/j.indmarman.2010.06.026

VARGO, Stephen L.; LUSCH, Robert F. Service-dominant logic: Continuing the evolution. **Journal of the Academy of Marketing Science**, [*s. l.*], v. 36, n. 1, p. 1–10, 2008a. Disponível em: https://doi.org/10.1007/s11747-007-0069-6

VARGO, Stephen L.; LUSCH, Robert F. Service-dominant logic: What it is, what it is not, what it might be. *In*: LUSCH, Robert F.; VARGO, Stephen L. (org.). **The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions**. New York: M. E. Sharpe, Inc, 2006. p. 43–56.

VARGO, Stephen L.; LUSCH, Robert F. Service-dominant logic 2025. **International Journal of Research in Marketing**, [*s. l.*], v. 34, n. 1, p. 46–67, 2017. Disponível em: https://doi.org/10.1016/j.ijresmar.2016.11.001

VARGO, Stephen L.; LUSCH, Robert F. Why "service"? **Journal of the Academy of Marketing Science**, [*s. l.*], v. 36, n. 1, p. 25–38, 2008b. Disponível em: https://doi.org/10.1007/s11747-007-0068-7

VARGO, Stephen L.; MAGLIO, Paul P.; AKAKA, Melissa Archpru. On value and value co-creation: A service systems and service logic perspective. **European Management Journal**, [*s. l.*], v. 26, n. 3, p. 145–152, 2008. Disponível em: https://doi.org/10.1016/j.emj.2008.04.003

VARGO, Stephen L; MORGAN, Fred W. Services in Society and Academic Thought : An Historical Analysis. **Journal of Macromarketing**, [*s. l.*], v. 25, n. 1, p. 42–53, 2005. Disponível em: https://doi.org/10.1177/0276146705275294

VARGO, Stephen L.; WIELAND, Heiko; AKAKA, Melissa Archpru. Innovation through institutionalization: A service ecosystems perspective. **Industrial Marketing Management**,

[*s. l.*], v. 44, n. 2013, p. 63–72, 2015. Disponível em:
https://doi.org/10.1016/j.indmarman.2014.10.008

VISATE. **A História**. [*S. l.*], 2021. Disponível em:
https://www.visate.com.br/empresa/historia. Acesso em: 4 out. 2021.

VOORBERG, W. H. *et al.* A systematic review of co-creation and co-production: embarking
on the social innovation journey. **Public Management Review**, [*s. l.*], v. 17, n. 9, p. 1333–
1357, 2015. Disponível em: https://doi.org/10.1080/14719037.2014.930505

WESTRUP, Ulrika. The potential of service-dominant logic as a tool for developing public
sector services: A study of a Swedish case. **International Journal of Quality and Service
Sciences**, [*s. l.*], v. 10, n. 1, p. 36–48, 2018. Disponível em: https://doi.org/10.1108/IJQSS-
02-2016-0013

WIIG, K M. The importance of personal knowledge management in the knowledge society.
In: PERSONAL KNOWLEDGE MANAGEMENT: INDIVIDUAL, ORGANIZATIONAL
AND SOCIAL PERSPECTIVES. [*S. l.*]: Gower Publishing, 2011. *E-book*.

WILDEN, R. *et al.* The role of cocreation and dynamic capabilities in service provision and
performance: A configurational study. **Industrial Marketing Management**, [*s. l.*], v. 78, n.
March 2017, p. 43–57, 2019. Disponível em:
https://doi.org/10.1016/j.indmarman.2018.06.008

WILKIE, William L; MOORE, Elizabeth S. Scholarly research in marketing: Exploring the
"4 eras" of thought development. **Journal of Public Policy & Marketing**, [*s. l.*], v. 22, n. 2,
p. 116–146, 2003.

WRI. **Transporte é a fonte de emissões que mais cresce. Veja o que dizem os números**.
[*S. l.*], 2019. Disponível em: https://www.wri.org/insights/everything-you-need-know-about-
fastest-growing-source-global-emissions-transport. Acesso em: 3 set. 2021.

XIE, Chunyan; BAGOZZI, Richard P.; TROYE, Sigurd V. Trying to prosume: Toward a
theory of consumers as co-creators of value. **Journal of the Academy of Marketing
Science**, [*s. l.*], v. 36, n. 1, p. 109–122, 2008. Disponível em: https://doi.org/10.1007/s11747-
007-0060-2

YIGITCANLAR, Tan. Knowledge-based Urban Development Redefined: from Theory to
Practice Knowledge-based Development of Cities. **4th Knowledge Cities World Summit**,
[*s. l.*], p. 389–399, 2011. Disponível em: https://eprints.qut.edu.au/46970/2/46970.pdf

YIGITCANLAR, Tan. **Technology and the city: Systems, applications and implications**.
[*S. l.*]: Routledge, 2016.

YIGITCANLAR, Tan *et al.* Understanding 'smart cities': Intertwining development drivers
with desired outcomes in a multidimensional framework. **Cities**, [*s. l.*], v. 81, n. April, p.
145–160, 2018. Disponível em: https://doi.org/10.1016/j.cities.2018.04.003

YIGITCANLAR, Tan; HAN, Hoon; KAMRUZZAMAN, Md. Approaches, advances, and
applications in the sustainable development of smart cities: A commentary from the guest

editors. **Energies**, [*s. l.*], v. 12, n. 23, 2019. Disponível em: https://doi.org/10.3390/en12234554

YIN, Robert K. **Case study research: design and method**. Fifthed. [*S. l.*]: SAGE Publications Inc, 2013. ISSN 1544452X. Disponível em: https://doi.org/10.1300/J145v03n03_07

YIN, Robert K. **Qualitative research from start to finish**. 2nd. ed. [*S. l.*]: The Guilford Press, 2016. v. 59

ZANROSSO, Pedro. Aumento da demanda obriga Visate a reorganizar linhas antes do fim das férias escolares em Caxias. **Pioneiro**, Caxias do Sul, 2022. Disponível em: https://gauchazh.clicrbs.com.br/pioneiro/geral/noticia/2022/01/aumento-da-demanda-obriga-visate-a-reorganizar-linhas-antes-do-fim-das-ferias-escolares-em-caxias-ckz1ls1ys00230188wfeaqly9.html. Acesso em: 25 jul. 2022.

APPENDIX A - SEMISTRUCTURED QUALITATIVE SCRIPT

1.   Por favor, diga seu nome, setor ou órgão que representa, cargo e a quanto tempo o ocupa.

2.   Explique resumidamente as atribuições da secretaria/ conselho/...

3.   Poderia falar sobre os canais de contato dos usuários com a xxx. Se há algum canal de contato por telefone, site da internet, ou aplicativo? Se sim, o que estes canais oferecem aos usuários (informação, possibilidade de opinar ou interagir com a prestadora de serviço).

4.   Entende-se que o processo de um serviço público se origina a partir das necessidades sociais e, como resultado, há a entrega da solução ao cidadão. Poderia explicar como acontece o processo de desenvolvimento do serviço, desde a identificação da demanda (ou necessidade dos usuários dos serviços) até a entrega (ou solução do problema)? Nesse processo, quem são os atores envolvidos?

5.   Tem algum caso que você lembre de algum serviço que tenha surgido a partir do cidadão? Como foi? Ou, se acontecesse, como poderia ser?

A solução para as necessidades sociais requer a identificação e localização do melhor conhecimento e a sua aplicação eficiente e eficaz. Este processo de mobilização do conhecimento combina o conhecimento adquirido através de pesquisa, o conhecimento especializado dos agentes e dos especialistas em desenvolvimento organizacional, e o conhecimento adquirido a partir da experiência de vida dos líderes comunitários e dos cidadãos, ou seja, o conhecimento pessoal dos usuários do serviço.

6.   Você lembra de alguma situação de desenvolvimento do serviço de transporte público, em que os usuários mobilizaram seu conhecimento pessoal para contribuir com o serviço? Se sim, como? Se não, o que você acha que impede? Como seria se acontecesse?

7.   Quão importante é a contribuição do conhecimento do usuário a partir da sua experiencia para a melhora ou desenvolvimento de novos serviços?

O engajamento dos cidadãos é um atributo crítico para um planejamento e elaboração de políticas eficazes. O envolvimento bem sucedido dos cidadãos melhora este processo porque a comunidade contribui com o plano do governo municipal. O engajamento compreende o investimento voluntário do cidadão ou usuário de seus recursos operantes (incluindo

conhecimentos e competências cognitivas, emocionais, comportamentais e sociais), e recursos operados (por exemplo, um equipamento) em interações com os sistemas de serviços.

Partindo da premissa que os cidadãos não são consumidores passivos, e que o governo não é um produtor independente, a coprodução de serviços públicos pode ser entendida como a interação entre o setor público e os cidadãos, fazendo o melhor uso dos bens, recursos e contribuições uns dos outros, a fim de alcançar melhores resultados. A ideia básica da coprodução é que ninguém sabe melhor quais são os serviços públicos mais importantes para o seu bem-estar do que os próprios usuários dos serviços, as suas famílias, os seus amigos e as comunidades em que vivem.

A co-produção envolve uma variedade de atividades de serviços: co-comissão (por exemplo, participação pública na elaboração de políticas, orçamento participativo, ou outras atividades em que o cidadão possa priorizar o que é mais importante, conselhos), co-design (envolve a experiencia do usuário e da comunidade na criação e planejamento do serviço), co-entrega (por exemplo, pacientes e alunos que precisam colaborar para o resultado do serviço), e co-avaliação (foco no monitoramento e avaliação do serviço).

Com base nas definições:

8.   Há iniciativas por parte da secretaria/prefeitura/prestadora em engajar os usuários na comissão, design, entrega ou avaliação dos serviços, ou seja, coproduzir o serviço? Se sim, quais atividades são mais comuns? Qual o papel do cidadão nestas práticas e como eles se envolvem e contribuem?

9.   Você identifica o que leva o cidadão a se engajar na coprodução do serviço? Fatores como dever cívico ou o desejo de melhorar o governo são notados? E quanto ao traço pessoais, como nível de educação, habilidades ou condições familiares? E o contexto em que o cidadão está inserido? O que falta para que o cidadão se engaje mais na coprodução dos serviços públicos?

Não há valor até que uma oferta seja utilizada - a experiência e a percepção são essenciais para a determinação do valor. Esta abordagem desloca o foco do valor ser entregue pela organização ao usuário para o valor a ser criado através da aplicação de recursos, os quais são integrados a partir de várias fontes, o que implica que múltiplos atores se envolvam na co-criação de valor. Portanto, a co-criação de valor é influenciada não só pela utilização de um determinado

recurso, mas também por fatores contextuais, incluindo o conhecimento, as redes de relações e a estrutura social dos envolvidos.

10. Você recorda de alguma situação em que os recursos, como o conhecimento, do setor público e dos usuários foram integrados para juntos cocriarem valor? Se sim, quais fatores fizeram com que tal fato ocorresse? (por parte do usuário e também da empresa... o que a empresa faz para engajar o cidadão). Se não, como poderia ser para isso acontecer?

11. O que, para vocês, é considerada como medida de desempenho? Ou como a empresa mede o desempenho dos serviços?

Alguns autores comentam que a eficiência interna da organização é necessária, mas não suficiente para manter a sustentabilidade das organizações de serviços públicos e deve ser alcançada a partir do valor público centrado no usuário (cidadão). O valor público envolve o que o cidadão determina ser valioso e o que os atores envolvidos na implementação veem como valioso. O valor, portanto, é baseado na percepção do usuário do serviço e é criado na interação entre o usuário e o provedor a partir das trocas que ocorrem, ou seja, co-criado.

12. Há a preocupação por parte da empresa para que o valor emerja para o cidadão?

13. De que forma o valor acontece para o cidadão? É mais percebido quando o engajamento e coprodução dos serviços com os usuários estão presentes?

14. Quais elementos são necessários para promover valor publico ao cidadão no serviço público de transporte?

15. Qual você considera ser o papel do cidadão no processo de entrega de um serviço público? Esse papel é alcançado? Qual deveria ser o papel do cidadão?

APPENDIX B - CEP PERMISSION

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PARECER CONSUBSTANCIADO DO CEP

DADOS DO PROJETO DE PESQUISA

Título da Pesquisa: PUBLIC SERVICES VALUE CO-CREATION IN THE KNOWLEDGE SOCIETY
Pesquisador: SUELEN BEBBER
Área Temática:
Versão: 4
CAAE: 52978721.5.0000.5341
Instituição Proponente: Universidade de Caxias do Sul-RS
Patrocinador Principal: Financiamento Próprio

DADOS DO PARECER

Número do Parecer: 5.312.457

Apresentação do Projeto:
Extraído do Resumo de PB_Informações_Básicas - versão 3 de 20/02/2022:

"... Esta pesquisa tem o objetivo de construir, discutir e testar um modelo conceitual de serviços públicos baseados no conhecimento para as cidades inteligentes, a partir do engajamento do conhecimento dos cidadãos na cocriação de valor nos serviços públicos. É proposta uma investigação de métodos mistos, seguindo a estratégia exploratória sequencial, que envolve uma fase qualitativa inicial e uma fase quantitativa posterior. Na fase qualitativa, a técnica proposta para a coleta de dados é a entrevista semiestruturada, e os entrevistados serão organizações e gestores de serviços públicos com experiência em coprodução e cocriação de valor com os cidadãos. Na posse dos resultados, a fase quantitativa deverá desenvolver e validar um questionário para a aplicação de uma survey com os cidadãos. Entre as contribuições esperadas, teoricamente, o estudo pretende contribuir para a teoria da lógica dominante dos serviços, analisando a forma como os cidadãos utilizam os seu conhecimento e experiências para se engajarem na coprodução de serviços, bem como para a cocriação de valor que resulte em valor público. Além disso, a pesquisa pretende trazer mais perspectivas baseadas em evidências sobre teorias que dão suporte a lógica dominante dos serviços, abordando a coprodução e o engajamento. Gerencialmente, as principais contribuições esperadas referem-se ao modelo de coprodução e

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cocriação de valor nos serviços públicos, que visa apoiar a gestão pública para envolver os cidadãos no processo de planejamento, concepção e prestação de serviços, uma vez que estes são agentes ativos neste processo."

Objetivo da Pesquisa:
Extraido de PB_Informações_Básicas - versão 3 de 20/02/2022:

Objetivo Primário:
Esta pesquisa visa construir, discutir, e testar um modelo conceitual de serviços públicos baseados no conhecimento para cidades inteligentes a partir do envolvimento do conhecimento dos cidadãos na cocriação de valor nos serviços públicos.

Objetivo Secundário:
a) analisar a forma como os cidadãos envolvem os seus conhecimentos e experiência na co-produção de serviços;
b) avaliar a criação de valor público nos serviços públicos como consequência da co-criação de valor;
c) identificar o papel dos cidadãos no processo de desenvolvimento e prestação de serviços públicos;
d) examinar as categorias de práticas de co-criação de valor;
e) construir um modelo de serviços públicos baseados no conhecimento.

Avaliação dos Riscos e Beneficios:
Extraido de PB_Informações_Básicas de 21/02/2022:

Riscos:
Ao participar da pesquisa na fase qualitativa, há o risco de identificação do respondente ao ser vinculado a instituição/órgão que representa. Para diminuir esse risco a pesquisadora e orientadora da pesquisa assinam um termo de confidencialidade e comprometessem a mascarar a identidade do respondente ao apresentar os dados. Por exemplo, ao invés de informar que o respondente tem o cargo de vice-prefeita da cidade de Caxias do
Sul, será informado que tem um cargo de gestão na prefeitura. Na fase quantitativa, há um risco minimo de quebra de sigilo dos dados, visto que os respondentes não se identificarão ao responder a pesquisa.

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Benefícios:

As principais contribuições relativas a este estudo residem na discussão da cocriação de valor nos serviços públicos, em que os cidadãos aplicam os seus conhecimentos nesta interação, resultando em serviços públicos baseados em conhecimento. A partir da análise teórica apresentada, salienta-se que o envolvimento dos cidadãos na prestação de serviços públicos pode ser uma resposta às necessidades sociais (ou seja, falta de qualidade nos serviços públicos, utilização ineficiente do dinheiro público). Os cidadãos de uma sociedade do conhecimento são bens valiosos e possuem um recurso essencial, que é o conhecimento, que quando aplicado na coprodução de serviços públicos e no processo de cocriação de valor, resulta em serviços de valor mais elevado. Um valor público mais elevado beneficia tanto os cidadãos ou utilizadores como os prestadores de serviços, uma vez que os serviços públicos têm impacto na qualidade de vida e no bem-estar das pessoas nas cidades. A reforma das políticas públicas é uma questão de destaque, especialmente nos países em desenvolvimento. Uma sociedade do conhecimento pode ajudar a gestão pública a resolver alguns dos problemas sociais, enquanto agentes ativos nesses processos.

Assim, o modelo teórico centra-se no usuário dos serviços, o cidadão, de duas formas. Em primeiro lugar, o usuário ou cidadão como detentor de conhecimento que participa nos processos de coprodução e cocriação de valor e, em segundo lugar, os resultados dos serviços públicos de maior valor aumentam a qualidade de vida e o bem-estar das pessoas, bem como a vida nas cidades. Teoricamente, o estudo pretende contribuir para a teoria da lógica dominante dos serviços, analisando a forma como os cidadãos utilizam o seu conhecimento e experiência para se engajarem na coprodução de serviços, bem como cocriar valor que resulte em valor público. Além disso, a investigação pretende trazer mais conhecimento baseado em evidências sobre a teoria em torno da lógica dominante dos serviços, abordando a coprodução e o engajamento. Em última análise, a contribuição teórica visa a construção de um modelo de serviços públicos baseado em conhecimento para o desenvolvimento de serviços públicos. Em termos gerenciais, as principais contribuições esperadas dizem respeito ao modelo de coprodução e cocriação de valor nos serviços públicos, que visa apoiar a gestão pública a fim de envolver os cidadãos no processo de planejamento, concepção e prestação de serviços, uma vez que eles são agentes ativos deste processo. Assim, o modelo servirá de base para as boas práticas de gestão pública e inovações sociais, uma vez que as interações sociais com os cidadãos podem proporcionar conhecimentos valiosos à gestão. Além disso, a inclusão dos cidadãos nos processos iniciais de produção de

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serviços, bem como o sentimento de participação dos cidadãos, pode proporcionar um maior valor público à comunidade como um todo e diminuir a insatisfação dos cidadãos e os custos dos serviços prestados. Tendo em vista a discussão exposta, este projeto de pesquisa demonstra que, numa sociedade do conhecimento, o cidadão é um ator essencial para ajudar a desenvolver soluções baseadas no conhecimento para os problemas sociais, especificamente no que diz respeito aos serviços públicos. Assim, os cidadãos podem contribuir com o seu recurso de conhecimento e participar na coprodução de serviços públicos, como cocriadores de valor do ecossistema de serviços e, consequentemente, ajudar a melhorar o valor público alcançado para todos os cidadãos, resultando em serviços públicos baseados no conhecimento.

Comentários e Considerações sobre a Pesquisa:

Como já comentado nas versões 1 e 2, o projeto de pesquisa de tese de doutorado configura-se como uma pesquisa científica, bem documentada e clara em seu propósito que é o de colocar o cidadão como sujeito na co-criação de valor e na co-criação do próprio conhecimento em relação serviços públicos que são prestados à comunidade. É uma pesquisa relevante e de fôlego por envolver duas etapas, qualitativa e quantitativa, e um número expressivo de respondentes na amostra, 500 participantes.

Considerações sobre os Termos de apresentação obrigatória:

Os termos estão apresentados.

Conclusões ou Pendências e Lista de Inadequações:

As pendências foram atendidas.

Considerações Finais a critério do CEP:

Diante do exposto, o Comitê de Ética em Pesquisa da Universidade de Caxias do Sul aprova o projeto.

De acordo com a Resolução CNS 466/2012, inciso XI.2., e com a Resolução CNS 510/2016, artigo 28, incisos III, IV e V, cabe ao pesquisador:

- Elaborar e apresentar os relatórios parciais e final;

- Apresentar no relatório final que o projeto foi desenvolvido conforme delineado, justificando, quando ocorridas, a sua mudança ou interrupção;

- Apresentar dados solicitados pelo CEP ou pela CONEP a qualquer momento;

- Manter os dados da pesquisa em arquivo, físico ou digital, sob sua guarda e responsabilidade, por um período de 5 anos após o término da pesquisa;

- Encaminhar os resultados da pesquisa para publicação, com os devidos créditos aos

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pesquisadores associados e ao pessoal técnico integrante do projeto; e

- Justificar fundamentadamente, perante o CEP ou a CONEP, interrupção do projeto ou a não publicação dos resultados.

Este parecer foi elaborado baseado nos documentos abaixo relacionados:

Tipo Documento	Arquivo	Postagem	Autor	Situação
Informações Básicas do Projeto	PB_INFORMAÇÕES_BÁSICAS_DO_PROJETO_1845279.pdf	23/03/2022 15:35:00		Aceito
Projeto Detalhado / Brochura Investigador	Projeto_v4.docx	23/03/2022 15:34:39	SUELEN BEBBER	Aceito
Cronograma	Cronograma_v4.docx	23/03/2022 15:34:21	SUELEN BEBBER	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	TCLEquanti_v3_.docx	20/02/2022 11:36:37	SUELEN BEBBER	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	TCLEquali_presencial_v3.doc	20/02/2022 11:36:29	SUELEN BEBBER	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	TCLEquali_meet_v3.pdf	20/02/2022 11:36:17	SUELEN BEBBER	Aceito
Projeto Detalhado / Brochura Investigador	Projeto_v3.docx	20/02/2022 11:36:00	SUELEN BEBBER	Aceito
Cronograma	Cronograma_v3.docx	20/02/2022 11:35:40	SUELEN BEBBER	Aceito
Outros	Carta_resposta_2.docx	20/02/2022 11:35:21	SUELEN BEBBER	Aceito
Declaração de Instituição e Infraestrutura	TAI_mobi.pdf	18/02/2022 10:43:10	SUELEN BEBBER	Aceito
Declaração de Instituição e Infraestrutura	TAI_helice.pdf	18/02/2022 10:42:50	SUELEN BEBBER	Aceito
Declaração de Instituição e Infraestrutura	TAI_VISATE.pdf	07/12/2021 09:43:56	SUELEN BEBBER	Aceito
Declaração de Instituição e	TAI_UAB.jpeg	07/12/2021 09:43:42	SUELEN BEBBER	Aceito

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Infraestrutura	TAI_UAB.jpeg	07/12/2021 09:43:42	SUELEN BEBBER	Aceito
Declaração de Instituição e Infraestrutura	TAI_prefeitura.pdf	07/12/2021 09:43:26	SUELEN BEBBER	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	TCLEquanti_.docx	07/12/2021 09:42:58	SUELEN BEBBER	Aceito
Declaração de Pesquisadores	TSC.pdf	01/12/2021 14:56:19	SUELEN BEBBER	Aceito
Outros	Carta_resposta.docx	01/12/2021 14:41:08	SUELEN BEBBER	Aceito
Outros	Roteiro_entrevista_quali.docx	01/12/2021 14:39:06	SUELEN BEBBER	Aceito
Declaração de Instituição e Infraestrutura	TAI.docx	01/12/2021 14:37:29	SUELEN BEBBER	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	TCLEquanti.docx	01/12/2021 14:36:31	SUELEN BEBBER	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	TCLEquali.doc	01/12/2021 14:36:16	SUELEN BEBBER	Aceito
Cronograma	Cronograma.docx	01/12/2021 14:35:16	SUELEN BEBBER	Aceito
Projeto Detalhado / Brochura Investigador	Projetopt.docx	01/12/2021 14:35:01	SUELEN BEBBER	Aceito
Orçamento	Orcamento.docx	01/12/2021 14:25:17	SUELEN BEBBER	Aceito
Folha de Rosto	Folhaassinada2.pdf	27/10/2021 10:02:52	SUELEN BEBBER	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	TCLE.doc	26/10/2021 14:30:01	SUELEN BEBBER	Aceito

Situação do Parecer:
Aprovado

Necessita Apreciação da CONEP:
Não

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CAXIAS DO SUL, 25 de Março de 2022

_____

Assinado por:
Magda Bellini
(Coordenador(a))

APPENDIX C - CEP AMENDMENT PERMISSION

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PARECER CONSUBSTANCIADO DO CEP

DADOS DA EMENDA

Título da Pesquisa: PUBLIC SERVICES VALUE CO-CREATION IN THE KNOWLEDGE SOCIETY
Pesquisador: SUELEN BEBBER
Área Temática:
Versão: 6
CAAE: 52978721.5.0000.5341
Instituição Proponente: Universidade de Caxias do Sul-RS
Patrocinador Principal: Financiamento Próprio

DADOS DO PARECER

Número do Parecer: 5.575.554

Apresentação do Projeto:
Extraído do Resumo de PB_Inhformações_Básicas - Versão 6 de 03/08/2022:

A medida de eficiência das organizações de serviços públicos já não é suficiente para manter a sustentabilidade das organizações e deve ser alcançada a partir do valor público, com foco nos cidadãos. Por esta razão, a crescente necessidade em considerar os usuários ou cidadãos como cocriadores de valor nos sistemas de serviços públicos reforçou a importância de desenvolver conhecimentos que possam ajudar na análise e concepção desses sistemas de serviços. Em uma sociedade do conhecimento, o cidadão é um ator essencial para ajudar a desenvolver soluções baseadas no conhecimento para os problemas sociais, especificamente no que diz respeito aos serviços públicos. Por conseguinte, os cidadãos podem contribuir com os seus recursos de conhecimento e se engajarem na coprodução de serviços públicos, como cocriadores de valor do ecossistema de serviços e, consequentemente, ajudar a melhorar o valor público alcançado para todos os cidadãos, resultando em serviços públicos baseados no conhecimento. Esta pesquisa tem o objetivo de construir, discutir e testar um modelo conceitual de serviços públicos baseados no conhecimento para as cidades inteligentes, a partir do engajamento do conhecimento dos cidadãos na cocriação de valor nos serviços públicos. É proposta uma investigação de método qualitativo composta por entrevista semiestruturada com gestores e profissionais que tenham tido experiência com co-crição de valor em serviços públicos e análise de conteúdo do canal do

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município "Alô Caxias". O Alô Caxias é o canal municipal direto com a comunidade que recebe pedidos de serviços, sugestões, reclamações, e outras exigências. Entre as contribuições esperadas, teoricamente, o estudo pretende contribuir para a teoria da lógica dominante dos serviços, analisando a forma como os cidadãos utilizam os seu conhecimento e experiências para se engajarem na coprodução de serviços, bem como para a cocriação de valor que resulte em valor público. Além disso, a pesquisa pretende trazer mais perspectivas baseadas em evidências sobre teorias que dão suporte a lógica dominante dos serviços, abordando a coprodução e o engajamento. Gerencialmente, as principais contribuições esperadas referem-se ao modelo de coprodução e cocriação de valor nos serviços públicos, que visa apoiar a gestão pública para envolver os cidadãos no processo de planejamento, concepção e prestação de serviços, uma vez que estes são agentes ativos neste processo.

Extraído de PB_Informações_Básicas - versão 6 de 03/08/2022:

Hipótese:
O conhecimento pessoal do cidadão quando mobilizado para o engajamento de prática de coprodução de serviços e cocriação de valor pode impactar no valor público percebido.

Objetivo da Pesquisa:
Extraído de PB_Informações_Básicas - versão 6 de 03/08/2022:

Objetivo Primário:
Esta pesquisa visa propor um modelo conceitual de serviços públicos baseados no conhecimento para cidades inteligentes a partir do envolvimento do conhecimento dos cidadãos na co-criação de valor nos serviços públicos.

Objetivo Secundário:
a) analisar a forma como os cidadãos envolvem os seus conhecimentos e experiência na co-produção de serviços;
b) avaliar a criação de valor público nos serviços públicos como consequência da co-criação de valor;
c) identificar o papel dos cidadãos no processo de desenvolvimento e prestação de serviços públicos;
d) examinar as categorias de práticas de co-criação de valor;

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e) construir um modelo de serviços públicos baseados no conhecimento.

Avaliação dos Riscos e Benefícios:

Extraído do Resumo de PB_Inhformações_Básicas - Versão 6 de 03/08/2022:

Riscos:

Ao participar da pesquisa, há o risco de identificação do respondente ao ser vinculado a instituição/órgão que representa. Para diminuir esse risco a pesquisadora e orientadora da pesquisa assinam um termo de confidencialidade e comprometessem a mascarar a identidade do respondente ao apresentar os dados. Por exemplo, ao invés de informar que o respondente tem o cargo de vice-prefeita da cidade de Caxias do Sul, será informado que tem um cargo de gestão na prefeitura.

Benefícios:

As principais contribuições relativas a este estudo residem na discussão da cocriação de valor nos serviços públicos, em que os cidadãos aplicam os seus conhecimentos nesta interação, resultando em serviços públicos baseados em conhecimento. A partir da análise teórica apresentada, salienta-se que o envolvimento dos cidadãos na prestação de serviços públicos pode ser uma resposta às necessidades sociais (ou seja, falta de qualidade nos serviços públicos, utilização ineficiente do dinheiro público). Os cidadãos de uma sociedade do conhecimento são bens valiosos e possuem um recurso essencial, que é o conhecimento, que quando aplicado na coprodução de serviços públicos e no processo de cocriação de valor, resulta em serviços de valor mais elevado. Um valor público mais elevado beneficia tanto os cidadãos ou utilizadores como os prestadores de serviços, uma vez que os serviços públicos têm impacto na qualidade de vida e no bem-estar das pessoas nas cidades. A reforma das políticas públicas é uma questão de destaque, especialmente nos países em desenvolvimento. Uma sociedade do conhecimento pode ajudar a gestão pública a resolver alguns dos problemas sociais, enquanto agentes ativos nesses processos. Assim, o modelo teórico centra-se no usuário dos serviços, o cidadão, de duas formas. Em primeiro lugar, o usuário ou cidadão como detentor de conhecimento que participa nos processos de coprodução e cocriação de valor e, em segundo lugar, os resultados dos serviços públicos de maior valor aumentam a qualidade de vida e o bem-estar das pessoas, bem como a vida nas cidades. Teoricamente, o estudo pretende contribuir para a teoria da lógica dominante dos serviços, analisando a forma como os cidadãos utilizam o seu conhecimento e experiência para se

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engajarem na coprodução de serviços, bem como cocriar valor que resulte em valor público. Além disso, a investigação pretende trazer mais conhecimento baseado em evidências sobre a teoria em torno da lógica dominante dos serviços, abordando a coprodução e o engajamento. Em última análise, a contribuição teórica visa a construção de um modelo de serviços públicos baseado em conhecimento para o desenvolvimento de serviços públicos. Em termos gerenciais, as principais contribuições esperadas dizem respeito ao modelo de coprodução e cocriação de valor nos serviços públicos, que visa apoiar a gestão pública a fim de envolver os cidadãos no processo de planejamento, concepção e prestação de serviços, uma vez que eles são agentes ativos deste processo. Assim, o modelo servirá de base para as boas práticas de gestão pública e inovações sociais, uma vez que as interações sociais com os cidadãos podem proporcionar conhecimentos valiosos à gestão. Além disso, a inclusão dos cidadãos nos processos iniciais de produção de serviços, bem como o sentimento de participação dos cidadãos, pode proporcionar um maior valor público à comunidade como um todo e diminuir a insatisfação dos cidadãos e os custos dos serviços prestados. Tendo em vista a discussão exposta, este projeto de pesquisa demonstra que, numa sociedade do conhecimento, o cidadão é um ator essencial para ajudar a desenvolver soluções baseadas no conhecimento para os problemas sociais, especificamente no que diz respeito aos serviços públicos. Assim, os cidadãos podem contribuir com o seu recurso de conhecimento e participar na coprodução de serviços públicos, como cocriadores de valor do ecossistema de serviços e, consequentemente, ajudar a melhorar o valor público alcançado para todos os cidadãos, resultando em serviços públicos baseados no conhecimento.

Comentários e Considerações sobre a Pesquisa:
Já mencionado em versões anteriores, verifica-se que a pesquisa é de característica qualitativa, é relevante e a metodologia alterada pela emenda não altera a cientificidade do estudo e pode ser considerada adequada aos objetivos propostos.

A metodologia apresentada em PB_Informações_Básicas de 03/08/2022 é:

"Esta pesquisa de tese centra-se explicitamente nos serviços geridos pelo governo municipal ou serviços públicos municipais. O Plano de Mobilidade Urbana é obrigatório para a maioria das cidades brasileiras e deve dar prioridade aos serviços de transporte público coletivo para ajudar a reduzir as emissões de gases. Por conseguinte, o serviço de transporte público da cidade de Caxias do Sul é o objeto deste estudo. A fim de cumprir os objetivos propostos, este estudo caracteriza-se pela sua natureza aplicada e descritiva. Quanto à abordagem, a pesquisa proposta é

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configurada como um método qualitativo. Como técnica de coleta dos dados, será utilizada entrevista semiestruturada, uma vez que esta técnica de coleta de dados é uma opção para temas de pesquisa no qual os entrevistados podem discorrer sobre o tema proposto. A semiestrutura se refere a um conjunto de questões previamente definidas pelo pesquisador, mantendo a liberdade de uma conversa informal. Para a análise das entrevistas, propõe-se utilizar a técnica da análise de conteúdo com o auxílio do Software ATLAS.ti. A análise de conteúdo consiste em um conjunto de técnicas de análise das comunicações que tem como finalidade obter, por meio de procedimentos sistemáticos e objetivos de descrição do conteúdo das mensagens, indicadores que permitam a inferência de conhecimentos relativos às condições de produção destas mensagens. As entrevistas ocorrerão no formato bola de neve, onde cada entrevistado recomenda uma próxima pessoa para a entrevista, até esgotamento teórico. Assim, os pesquisadores irão iniciar as entrevista com gestores públicos, um gestor executivo da VISATE, e outros representantes que possam ser indicados pelos gestores acima citados, como, por exemplo, representante dos presidentes de bairro, representantes de movimentos da sociedade civil, profissional liberal que trabalhe com planos de mobilidade. Portanto, o número final de entrevistados na fase qualitativa não é definido. Além disso, as entrevistas poderão ocorrer presencialmente nos locais indicados pelos respondentes ou de forma online, via Google meet. Em ambos os formatos as entrevistas serão gravadas com o consentimento do entrevistado. Numa segunda fase, será feita a análise de conteúdo de dados secundários originados pelo canal Alô Caxias e direcionados à secretaria municipal de Trânsito, Transporte e Mobilidade. O Alô Caxias é o canal municipal direto com a comunidade que recebe pedidos de serviços, sugestões, reclamações e elogios. Esse contato pode ser feito através de website ou por contato telefônico. Ao todo, há 76 serviços disponíveis para o cidadão. Destes alguns são direcionados à secretaria de Trânsito, Transporte e Mobilidade. A secretaria recebe o conteúdo completo da demanda de cada cidadão e resume em uma tabela Excel cada demanda. Elas são formatadas com informações como, por exemplo: cidadão reclama de atraso no ônibus linha X horário Y. Outro exemplo: cidadão solicita mais uma horário na linha Z. Para cumprir com os objetivos desta tese, serão analisados apenas as informações que tem relação com a concessionária do serviço de transporte público. As informações serão analisadas por ocorrência de assunto (atrasos, solicitação de mais ônibus, reclamações, etc.) por mês e ano. Informações pessoais do reclamante, bem como o texto original que foi submetido ao Alô Caxias não serão fornecidos a pesquisadora. Dessa forma, a anonimidade do cidadão é assegurada bem como o texto que usou para se expressar".

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Considerações sobre os Termos de apresentação obrigatória:

Folha de Rosto: presente desde versão 1. Adequado.

Orçamento: presente desde versão 1. Adequado.

Projeto de Pesquisa Completo e Detalhado: presente e incluindo as correções apontadas nas pendências da emenda. Adequado.

Instrumento de Coleta de Dados Qualitativos: presente desde versões anteriores à emenda.

Cronograma: presente e contendo as alterações apontadas pelas pendências à emenda.

TCLE: presente e adequado desde versões anteriores à emenda.

Termo de Sigilo e Confidencialidade: presente desde versõe4s anteriores à emenda. Adequado.

TAI: das instituições que não são afetadas pela emenda está presente e adequado. O TAI solicitado por pendência na emenda está apresentado adequadamente.

Cronograma: presente e atualizado como resposta à pendência da emenda.

Metodologia: foi adequadamente explicada por efeito de alteração via emenda e que foi um dos motivos de pendência.

Justificativa para emenda: presente.

Carta resposta às pendências da emenda: presente.

Conclusões ou Pendências e Lista de Inadequações:

Extraído da carta resposta da pesquisadora em resposta às pendências apontadas na emenda:

Pendência 1 - Metodologia:

Relator: Ao alterar a metodologia pela utilização de dados secundários que estão numa base de dados da prefeitura, mas que não é pública, faz-se necessário dar mais detalhes sobre como funciona o Alô Caxias, como são feitos os registros dos que utilizam esse canal e que tipo de dados do Alô Caxias serão utilizados e como serão utilizados e para quais finalidades.

Resposta da pesquisadora à pendência: As alterações referentes ao método podem ser verificadas nas páginas 11 e 12 do projeto detalhado. Além disso, foi atualizado nas informações básicas o método proposto.

Extraído das páginas 11 e 12 do Projeto Detalhado:

"...... Numa segunda fase, será feita a análise de conteúdo de dados secundários originados pelo canal Alô Caxias e direcionados à secretaria municipal de Trânsito, Transporte e Mobilidade. O Alô Caxias é o canal municipal direto com a comunidade que recebe pedidos de serviços, sugestões,

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Endereço: Rua Francisco Getúlio Vargas, nº 1130, Petrópolis, Campus-sede, Bloco M, sala 305
Bairro: PETROPOLIS   CEP: 95.070-560
UF: RS   Município: CAXIAS DO SUL
Telefone: (54)3218-2829   E-mail: cep-ucs@ucs.br

UNIVERSIDADE DE CAXIAS DO SUL - RS

Continuação do Parecer: 5.575.554

reclamações e elogios. Esse contato pode ser feito através de website ou por contato telefônico. Ao todo, há 76 serviços disponíveis para o cidadão. Destes alguns são direcionados à secretaria de Trânsito, Transporte e Mobilidade. A secretaria recebe o conteúdo completo da demanda de cada cidadão e resume em uma tabela Excel cada demanda. Elas são formatadas com informações como, por exemplo: cidadão reclama de atraso no ônibus linha X horário Y. Outro exemplo: cidadão solicita mais uma horário na linha Z. Para cumprir com os objetivos desta tese, serão analisados apenas as informações que tem relação com a concessionária do serviço de transporte público. As informações serão analisadas por ocorrência de assunto (atrasos, solicitação de mais ônibus, reclamações, etc.) por mês e ano. Informações pessoais do reclamante, bem como o texto original que foi submetido ao Alô Caxias não serão fornecidos a pesquisadora. Dessa forma, a anonimidade do cidadão é assegurada bem como o texto que usou para se expressar".

Parecer do Relator: Evidencia-se o mesmo texto acima, referente à complementação da metodologia modificada, em PB_Informações_Básicas. PENDÊNCIA ATENDIDA.

Pendência 2 - Cronograma:
Relator: As datas de início e de término, correspondentes à Análise dos Dados Secundários, que é o motivo desta emenda, encontram-se defasadas no Cronograma postado na plataforma, no Cronograma em Plataforma Brasil Informações Básicas e no Cronograma no Projeto Detalhado. Segundo a Resolução 510/16, nenhum projeto ou atividade específica como esta, incluída por emenda, pode ser iniciada antes da aprovação pelo Comitê de Ética. Corrigir a data de início e de término. Chama-se a atenção, ainda no Cronograma, para o período da atividade intitulada Aprovação de Emenda pelo CEP, que tem sua data de início em 29/06 e término em 31/07. Ao encaminhar a versão para solução da pendência, a data de término deverá também ficar defasada.

Resposta da pesquisadora: Foram atualizadas as datas mencionadas no cronograma de execução e no projeto detalhado.

Parecer do Relator: Foi evidenciado que o Cronograma está atualizado em documento anexo à plataforma, em Projeto Detalhado e em PB_Informações_Básicas. PENDÊNCIA ATENDIDA.

Pendência 3 - TAI:

UNIVERSIDADE DE CAXIAS DO SUL - RS

Plataforma Brasil

Continuação do Parecer: 5.575.554

Relator: O Termo de Anuência Institucional fornecido pela Prefeitura de Caxias do Sul é datado quando da submissão do projeto de pesquisa, com base em metodologia anterior à emenda. Ele não é específico para realizar consulta, utilização e análise das respostas dos cidadãos no Canal Alô Caxias. É necessário fornecer um TAI específico para esse novo tipo de abordagem e uso de dados, no qual deverá estar enfatizada a anonimização dos cidadãos, usuários desse canal.

Resposta da pesquisadora: A TAI solicitada foi incluída na proposta.

Parecer do Relator: O TAI está devidamente apresentado e assinado pelo Secretário de Trânsito, Transporte e Mobilidade, referindo-se especificamente à utilização dos registros do Canal Alô Caxias. PENDÊNCIA ATENDIDA.

Todas as pendências à emenda foram adequadamente atendidas.

Considerações Finais a critério do CEP:

Diante do exposto, o Comitê de Ética em Pesquisa da Universidade de Caxias do Sul aprova a emenda. De acordo com a Resolução CNS 466/2012, inciso XI.2., e com a Resolução CNS 510/2016, artigo 28, incisos III, IV e V, cabe ao pesquisador:

- Elaborar e apresentar os relatórios parciais e final;
- Apresentar no relatório final que o projeto foi desenvolvido conforme delineado, justificando, quando ocorridas, a sua mudança ou interrupção;
- Apresentar dados solicitados pelo CEP ou pela CONEP a qualquer momento;
- Manter os dados da pesquisa em arquivo, físico ou digital, sob sua guarda e responsabilidade, por um período de 5 anos após o término da pesquisa;
- Encaminhar os resultados da pesquisa para publicação, com os devidos créditos aos pesquisadores associados e ao pessoal técnico integrante do projeto; e
- Justificar fundamentadamente, perante o CEP ou a CONEP, interrupção do projeto ou a não publicação dos resultados.

UNIVERSIDADE DE CAXIAS DO SUL - RS

Plataforma Brasil

Continuação do Parecer: 5.575.554

Este parecer foi elaborado baseado nos documentos abaixo relacionados:

Tipo Documento	Arquivo	Postagem	Autor	Situação
Informações Básicas do Projeto	PB_INFORMAÇOES_BASICAS_197531 0_E1.pdf	03/08/2022 15:13:25		Aceito
Declaração de Instituição e Infraestrutura	TAIsecretaria.pdf	03/08/2022 15:12:46	SUELEN BEBBER	Aceito
Projeto Detalhado / Brochura Investigador	Projeto_v6.docx	03/08/2022 15:12:27	SUELEN BEBBER	Aceito
Cronograma	Cronograma_v6.docx	03/08/2022 15:12:03	SUELEN BEBBER	Aceito
Outros	Carta_resposta.docx	27/07/2022 21:07:05	SUELEN BEBBER	Aceito
Outros	Justificativa.docx	04/07/2022 09:12:51	SUELEN BEBBER	Aceito
Projeto Detalhado / Brochura Investigador	Projeto_v5.docx	29/06/2022 17:12:13	SUELEN BEBBER	Aceito
Cronograma	Cronograma_v5.docx	29/06/2022 17:11:46	SUELEN BEBBER	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	TCLEquali_presencial_v3.doc	20/02/2022 11:36:29	SUELEN BEBBER	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	TCLEquali_meet_v3.pdf	20/02/2022 11:36:17	SUELEN BEBBER	Aceito
Declaração de Instituição e Infraestrutura	TAI_mobi.pdf	18/02/2022 10:43:10	SUELEN BEBBER	Aceito
Declaração de Instituição e Infraestrutura	TAI_helice.pdf	18/02/2022 10:42:50	SUELEN BEBBER	Aceito
Declaração de Instituição e Infraestrutura	TAI_VISATE.pdf	07/12/2021 09:43:56	SUELEN BEBBER	Aceito
Declaração de Instituição e Infraestrutura	TAI_UAB.jpeg	07/12/2021 09:43:42	SUELEN BEBBER	Aceito
Declaração de Instituição e Infraestrutura	TAI_prefeitura.pdf	07/12/2021 09:43:26	SUELEN BEBBER	Aceito
Declaração de Pesquisadores	TSC.pdf	01/12/2021 14:56:19	SUELEN BEBBER	Aceito

UNIVERSIDADE DE CAXIAS
DO SUL - RS

Continuação do Parecer: 5.575.554

Outros	Roteiro_entrevista_quali.docx	01/12/2021 14:39:06	SUELEN BEBBER	Aceito
Orçamento	Orcamento.docx	01/12/2021 14:25:17	SUELEN BEBBER	Aceito
Folha de Rosto	Folhaassinada2.pdf	27/10/2021 10:02:52	SUELEN BEBBER	Aceito

Situação do Parecer:
Aprovado
Necessita Apreciação da CONEP:
Não

CAXIAS DO SUL, 10 de Agosto de 2022

Assinado por:
Magda Bellini
(Coordenador(a))

APPENDIX D - ONLINE TCLE

TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO

O Sr. (a) está sendo convidado (a) como voluntário (a) a participar da pesquisa "**CO-CRIAÇÃO DE VALOR DOS SERVIÇOS PÚBLICOS NA SOCIEDADE DO CONHECIMENTO**". Nesta pesquisa pretendemos "**construir, discutir e testar um modelo conceitual de serviços públicos baseados no conhecimento para cidades inteligentes a partir do envolvimento do conhecimento dos cidadãos na co-criação de valor nos serviços públicos**". Para esta pesquisa, você participará de uma entrevista com perguntas pré-estabelecidas e poderá responder livremente as questões pensando no serviço público em Caxias do Sul. Ao responder a pesquisa, há risco de identificação do respondente ao ser vinculado a instituição/órgão que representa. Para diminuir esse risco a pesquisadora e orientadora da pesquisa assinam um termo de confidencialidade e comprometessem a mascarar a identidade do respondente ao apresentar os dados. A pesquisa contribuirá para apoiar a gestão pública a fim de envolver os cidadãos no processo de planejamento, concepção e prestação de serviços, uma vez que eles são agentes ativos deste processo.

Para participar deste estudo o Sr. (a) não terá nenhum custo, nem receberá qualquer vantagem financeira e sua participação é voluntária. Uma vez agendada, o link de acesso à entrevista será enviado por e-mail juntamente com este termo, que deve ser assinado pelo Sr.(a) e retornado ao pesquisador. A entrevista será gravada utilizando a plataforma digital Google Meet O participante poderá ter acesso aos resultados da pesquisa. Este termo de consentimento após assinado será impresso e arquivado pelo pesquisador responsável, no "**Programa de Pós-Graduação em Administração da Universidade de Caxias do Sul**", e a outra será fornecida ao Sr. (a). Os dados utilizados na pesquisa ficarão arquivados com o pesquisador responsável por um período de 5 (cinco) anos na sala 403ª, bloco F, da Universidade de Caxias do Sul e após esse tempo serão destruídos. Os pesquisadores tratarão a sua identidade com padrões profissionais de sigilo, atendendo a legislação brasileira (Resolução 510/16), utilizando as informações somente para fins acadêmicos e científicos.

Eu, _____, fui informado (a) dos objetivos, métodos e benefícios da pesquisa "**CO-CRIAÇÃO DE VALOR DOS SERVIÇOS PÚBLICOS NA SOCIEDADE DO CONHECIMENTO**", de maneira clara e detalhada e esclareci minhas dúvidas. Sei que a qualquer momento poderei solicitar novas informações e modificar minha decisão de participar se assim o desejar.

Rubrica do pesquisador: _____SB_____

Rubrica do participante: _____

Declaro que concordo em participar desta pesquisa. Recebi uma via original deste termo de consentimento livre e esclarecido assinado por mim e pelo pesquisador, que me deu a oportunidade de ler e esclarecer todas as minhas dúvidas.

Nome completo do participante	Data

Assinatura do participante

Nome completo do Pesquisador: Suélen Bebber
Endereço: Rua Garibaldi, 557, apto 34
CEP: 95270-000 / Flores da Cunha – RS
Telefone: (54) 99173.2166
E-mail: bebber.suelen@gmail.com

Suélen Bebber
Suélen Bebber

O Comitê de Ética em Pesquisa com Seres Humanos da UCS (CEP/UCS) é um colegiado criado para defender os interesses dos participantes da pesquisa em sua integridade e dignidade e para contribuir para o desenvolvimento da pesquisa dentro de padrões éticos. Dados do CEP/UCS: Rua Francisco Getúlio Vargas, nº 926, Bloco M, Sala 306, Campus-sede da UCS, Caxias do Sul, RS. Telefone: 3218-2829. Horário: das 8h às 11h30 e das 13h30 às 18h. E-mail: cep-ucs@ucs.br.

Em caso de dúvidas, com respeito aos aspectos éticos desta pesquisa, você poderá consultar:
CEP-UCS - Comitê de Ética em Pesquisa da Universidade de Caxias do Sul
Av. Campus-sede, Bloco M, sala 306, Caxias do Sul/RS – Brasil. E-mail: cep-ucs@ucs.br, (54) 3218-2829.

APPENDIX E - PRESENTIAL TCLE

TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO

O Sr. (a) está sendo convidado (a) como voluntário (a) a participar da pesquisa "**CO-CRIAÇÃO DE VALOR DOS SERVIÇOS PÚBLICOS NA SOCIEDADE DO CONHECIMENTO**". Nesta pesquisa pretendemos "**construir, discutir e testar um modelo conceitual de serviços públicos baseados no conhecimento para cidades inteligentes a partir do envolvimento do conhecimento dos cidadãos na co-criação de valor nos serviços públicos**". Para esta pesquisa, você participará de uma entrevista com perguntas pré-estabelecidas e poderá responder livremente as questões pensando no serviço público em Caxias do Sul. Ao responder a pesquisa, há risco de identificação do respondente ao ser vinculado a instituição/órgão que representa. Para diminuir esse risco a pesquisadora e orientadora da pesquisa assinam um termo de confidencialidade e comprometessem a mascarar a identidade do respondente ao apresentar os dados. A pesquisa contribuirá para apoiar a gestão pública a fim de envolver os cidadãos no processo de planejamento, concepção e prestação de serviços, uma vez que eles são agentes ativos deste processo.

Para participar deste estudo o Sr. (a) não terá nenhum custo, nem receberá qualquer vantagem financeira e sua participação é voluntária. O participante poderá ter acesso aos resultados da pesquisa. Este termo de consentimento encontra-se impresso em duas vias originais, sendo que uma será arquivada pelo pesquisador responsável, no "**Programa de Pós-Graduação em Administração da Universidade de Caxias do Sul**", e a outra será fornecida ao Sr. (a). Os dados utilizados na pesquisa ficarão arquivados com o pesquisador responsável por um período de 5 (cinco) anos na sala 403ª, bloco F, da Universidade de Caxias do Sul e após esse tempo serão destruídos. Os pesquisadores tratarão a sua identidade com padrões profissionais de sigilo, atendendo a legislação brasileira (Resolução 510/16), utilizando as informações somente para fins acadêmicos e científicos.
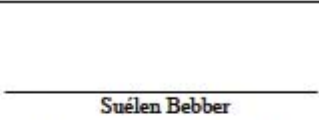
Atendendo os protocolos de cuidados ao COVID-19, no momento da entrevista, a pesquisadora e o entrevistado deverão usar máscara, álcool em gel e garantir distanciamento mínimo de 1,5 metros.

Eu, _____, fui informado (a) dos objetivos, métodos e benefícios da pesquisa "**CO-CRIAÇÃO DE VALOR DOS SERVIÇOS PÚBLICOS NA SOCIEDADE DO CONHECIMENTO**", de maneira clara e detalhada e esclareci minhas dúvidas. Sei que a qualquer momento poderei solicitar novas informações e modificar minha decisão de participar se assim o desejar.

Rubrica do pesquisador: _____

Rubrica do participante: _____

Declaro que concordo em participar desta pesquisa. Recebi uma via original deste termo de consentimento livre e esclarecido assinado por mim e pelo pesquisador, que me deu a oportunidade de ler e esclarecer todas as minhas dúvidas.

Nome completo do participante	Data

Assinatura do participante

Nome completo do Pesquisador: Suélen Bebber
Endereço: Rua Garibaldi, 557, apto 34
CEP: 95270-000 / Flores da Cunha – RS
Telefone: (54) 99173.2166
E-mail: bebber.suelen@gmail.com

_____
Suélen Bebber

O Comitê de Ética em Pesquisa com Seres Humanos da UCS (CEP/UCS) é um colegiado criado para defender os interesses dos participantes da pesquisa em sua integridade e dignidade e para contribuir para o desenvolvimento da pesquisa dentro de padrões éticos. Dados do CEP/UCS: Rua Francisco Getúlio Vargas, n° 926, Bloco M, Sala 306, Campus-sede da UCS, Caxias do Sul, RS. Telefone: 3218-2829. Horário: das 8h às 11h30 e das 13h30 às 18h. E-mail: cep-ucs@ucs.br.

Em caso de dúvidas, com respeito aos aspectos éticos desta pesquisa, você poderá consultar:
CEP-UCS - Comitê de Ética em Pesquisa da Universidade de Caxias do Sul
Av. Campus-sede, Bloco M, sala 306, Caxias do Sul/RS – Brasil. E-mail: cep-ucs@ucs.br, (54) 3218-2829.

APPENDIX F - AUTHORIZATION LETTER CITY HALL

Município de Caxias do Sul
Gabinete do Prefeito

TERMO DE ANUÊNCIA INSTITUCIONAL – TAI

Eu, Paula Cristina Ioris de Oliveira, vice-prefeita do Município de Caxias do Sul, responsável pela Prefeitura Municipal de Caxias do Sul estou ciente, de acordo e autorizo a execução da pesquisa intitulada "**CO-CRIAÇÃO DE VELOR DOS SERVIÇOS PÚBLICOS NA SOCIEDADE DO CONHECIMENTO**", orientada pela Prof. Dra. Ana Cristina Fachinelli e desenvolvido pela aluna Suélen Bebber do Programa da Pós-Graduação em Administração, da Universidade de Caxias do Sul.

Afirmo o compromisso institucional de apoiar o desenvolvimento deste estudo; e sinalizo que esta instituição está ciente de suas responsabilidades, de seu compromisso no resguardo da segurança/bem-estar dos sujeitos da pesquisa nela recrutados, dispondo de infraestrutura necessária para a garantia de tais condições.

Caxias do Sul, 02 de dezembro de 2021

Paula Ioris
Vice-prefeita de Caxias do Sul

APPENDIX G - AUTHORIZATION LETTER VISATE

TERMO DE ANUÊNCIA INSTITUCIONAL – TAI

Eu, Gustavo Marques dos Santos, responsável pelo (a) Viação Santa Tereza – Visate, estou ciente, de acordo e autorizo a execução da pesquisa intitulada "CO-CRIAÇÃO DE VALOR DOS SERVIÇOS PÚBLICOS NA SOCIEDADE DO CONHECIMENTO", orientada pela Prof. Dra. Ana Cristina Fachinelli e desenvolvido pela aluna Suélen Bebher do Programa da Pós Graduação em Administração, da Universidade de Caxias do Sul.

Afirmo o compromisso institucional de apoiar o desenvolvimento deste estudo; e sinalizo que esta instituição está ciente de suas responsabilidades, de seu compromisso no resguardo da segurança/bem-estar dos sujeitos da pesquisa nela recrutados, dispondo de infraestrutura necessária para a garantia de tais condições.
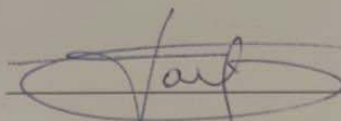
Caxias do Sul, 02 de 12 de 2021

Gustavo Marques dos Santos
Diretor Executivo

APPENDIX H - AUTHORIZATION LETTER UAB

TERMO DE ANUÊNCIA INSTITUCIONAL – TAI

Eu, Valdir Walter responsável pela União das Associações de Bairros de Caxias do Sul estou ciente, de acordo e autorizo a execução da pesquisa intitulada "CO-CRIAÇÃO DE VALOR DOS SERVIÇOS PÚBLICOS NA SOCIEDADE DO CONHECIMENTO", orientada pela Prof. Dra. Ana Cristina Fachinelli e desenvolvido pela aluna Suélen Bebber do Programa da Pós Graduação em Administração, da Universidade de Caxias do Sul.

Afirmo o compromisso institucional de apoiar o desenvolvimento deste estudo; e sinalizo que esta instituição está ciente de suas responsabilidades, de seu compromisso no resguardo da segurança/bem-estar dos sujeitos da pesquisa nela recrutados, dispondo de infraestrutura necessária para a garantia de tais condições.

Caxias do Sul, 07 de dezembro de 2021

UAB - UNIÃO DAS ASSOCIAÇÕES DE BAIRROS
DE CAXIAS DO SUL
Rua Luis Antunes, n° 80 - Fone: (54) 3219 428
- Bairro Panazzolo
CEP 95080-000 Caxias de Sul - RS

Valdir Walter
Presidente

APPENDIX I - AUTHORIZATION LETTER MOBI

TERMO DE ANUÊNCIA INSTITUCIONAL – TAI

Eu, Rodrigo Postglione, responsável pela Mobilização Por Caxias Do Sul (MOBICAXIAS) com escritório sede na Universidade de Caxias do Sul (UCS) estou ciente, de acordo e autorizo a execução da pesquisa intitulada "CO-CRIAÇÃO DE VALOR DOS SERVIÇOS PÚBLICOS NA SOCIEDADE DO CONHECIMENTO", orientada pela Prof. Dra. Ana Cristina Fachinelli e desenvolvido pela aluna Suélen Bebber do Programa da Pós Graduação em Administração, da Universidade de Caxias do Sul.

Afirmo o compromisso institucional de apoiar o desenvolvimento deste estudo; e sinalizo que esta instituição está ciente de suas responsabilidades, de seu compromisso no resguardo da segurança/bem-estar dos sujeitos da pesquisa nela recrutados, dispondo de infraestrutura necessária para a garantia de tais condições.

Caxias do Sul, 11 de Janeiro de 2022;

Rodrigo Postiglione
Presidente

Associação Mobilização por Caxias - MobiCaxias
Rua Francisco Getúlio Vargas 1130, Centro de Convivência da UCS, sala 1
Fone: 54 3218 2897 // CEP 95060 560 // Caxias do Sul/RS
e-mail: mobicaxias@gmail.com // Facebook @mobicaxias

APPENDIX J - AUTHORIZATION LETTER INTITUTO HÉLICE

HÉLICE

TERMO DE ANUÊNCIA INSTITUCIONAL – TAI

Eu, THOMAS JOB ANTUNES, responsável pelo INSTITUTO HÉLICE estou ciente, de acordo e autorizo a execução da pesquisa intitulada "CO-CRIAÇÃO DE VALOR DOS SERVIÇOS PÚBLICOS NA SOCIEDADE DO CONHECIMENTO", orientada pela Prof. Dra. Ana Cristina Fachinelli e desenvolvido pela aluna Suélen Bebber do Programa da Pós Graduação em Administração, da Universidade de Caxias do Sul.

Afirmo o compromisso institucional de apoiar o desenvolvimento deste estudo; e sinalizo que esta instituição está ciente de suas responsabilidades, de seu compromisso no resguardo da segurança/bem-estar dos sujeitos da pesquisa nela recrutados, dispondo de infraestrutura necessária para a garantia de tais condições.

Caxias do Sul, 13 de dezembro de 2021

Thomas Job Antunes
Diretor Executivo

APPENDIX K - AUTHORIZATION LETTER SMTTM

ESTADO DO RIO GRANDE DO SUL
MUNICÍPIO DE CAXIAS DO SUL
SECRETARIA MUNICIPAL DE TRÂNSITO,
TRANSPORTES E MOBILIDADE

TERMO DE ANUÊNCIA INSTITUCIONAL – TAI

Eu, Alfonso Junior Willenbring, responsável pela Secretaria Municipal de Trânsito, Transporte e Mobilidade de Caxias do Sul, estou ciente, de acordo e autorizo a execução da pesquisa intitulada "**CO-CRIAÇÃO DE VALOR DOS SERVIÇOS PÚBLICOS NA SOCIEDADE DO CONHECIMENTO**", orientada pela Prof. Dra. Ana Cristina Fachinelli e desenvolvido pela aluna Suélen Bebber do Programa da Pós Graduação em Administração, da Universidade de Caxias do Sul.

Afirmo o compromisso institucional de apoiar o desenvolvimento deste estudo com a disponibilização do conteúdo de demandas dos cidadãos direcionadas à secretaria em questão através do canal Alô Caxias. Tal conteúdo foi previamente analisado e modificado pela secretaria, não sendo disponibilizado o texto original do cidadão.

Caxias do Sul, 03 de agosto de 2022

Alfonso Junior Willenbring
Secretário de Trânsito, Transporte e Mobilidade

ADDENDUM A - WORD CLOUD

ADDENDUM B - ORIGINAL SPEECHES

Page	Speech
79	Em dois níveis: o primeiro é legal, depois da Constituição de 88, da regulamentação dos artigos 182 e 183 do estatuto da cidade e de outras legislações, passou a ser obrigatório a busca desses dois artigos que é o direito à cidade. No direito à cidade, é obrigatório, no processo de elaboração de qualquer plano, a participação da comunidade. Somado a isso, tem a notoriedade do usuário, porque se tu não entende que o usuário é uma autoridade da mesma forma que tu és, cada um com seu nível de importância, não há como a tua construção ser uma construção correta, o teu projeto ele não vai ser completo, a tua proposta não vai ser fundamentada, a tua construção, ela não vai ser sustentável ao longo do processo (I09). Mostrar né, tem que mostrar que o ambiente fica melhor, tu tem que apresentar isso, tem que ofertar para a pessoa entender que pode ser melhor do que ela tem, do que ela vive, e isso é essencial. (...) Mas a gente tem que ofertar e quando se oferta um ambiente melhor, quando no caso desse segundo que eu te falei, você até mesmo na área da segurança pública, você chega numa determinada via que ela está movimentada, que tem ali famílias, que tem ali pessoas ocupando o espaço você se sente mais seguro. Tem que apresentar isso sabe, e apresentando isso, claro, é uma questão cultural né, é um hábito de vida que tem que mudar e as pessoas vão gradativamente evoluindo com isso (I02).
80	Eu acho que existe um ciclo aí. Tu nunca vai se mobilizar para algo que tu não vê valor né, ou não percebe como valoroso, ou não percebe como importante. Então tu dificilmente vai se mobilizar, então antes de mobilizar eu acho que tu tem que perceber, tu tem que…"opa, peraí! Não tem luz aqui na frente... é tá começando ficar perigoso a minha casa." Tá, percebi que a ausência de iluminação é um problema de segurança para a casa. E aí, o que geralmente acontece depois, não é o engajamento, é a cobrança, é a reclamação, é.... sei lá... a resignação de falar, "ah, mas não adianta, olha só como tá aqui". (...) E a gente tá tentando em toda ação que a gente faz, mostrar que esse problema pode ser gerenciado e resolvido pelo cidadão, porque a prefeitura não consegue mais (I06). Geralmente as entidades respondem. Claro, isso a gente vai questionar ainda. Amanhã nós vamos ter reunião do conselho de transporte, que é aonde tá incumbida dessa questão da Júlio de Castilhos, e a gente vai questionar que esse questionário aí vai ter que abrir para as comunidades, vamos ter que fazer audiência pública, tudo isso nós vamos ter que participar, a comunidade vai ter que participar. Não pode colocar uma coisa lá, eu quero fazer isso e eu pegar e vou fazer. Não! Portanto, nós moramos em Caxias do Sul, e Caxias do Sul é uma comunidade e essa comunidade têm que participar. Se é para melhorar Caxias tem que melhorar, ah se é para piorar, a comunidade também tem que ter aquela parcela dela que também vai piorar a cidade. Então sempre tem que ter discussão (I05).
81	Indo no bairro tu verificas várias coisas: "Pô, aqui nós podíamos fazer isso melhorar, poderia fazer extensão de rede, a extensão de pavimentação de via, melhoria disso, melhoria daquilo". Lista, projeta, vê se nós temos recursos para fazer e chama os moradores; reunião no bairro: "Estamos com ideia de fazer isso, isso, isso, isso..." E aí eles vão dizer: "Olha... aprovamos, não aprovamos, isso aqui quem sabe melhora, faz desse jeito..."Então a participação de todos do bairro é... hoje eu diria assim, praticamente não se faz nada sem consultar os moradores (I03). Até o início da pandemia a gente tava fazendo grupos focais. Trazia grupos de usuários aqui dentro da empresa, tinha uma consultoria especializada nisso, porque não adianta, o pessoal é muito envergonhado. Então a gente contratou uma consultoria e ficava…avisava eles, e nós ficávamos observando numa outra sala, com câmera e vidro. Bah, a gente conseguiu pegar muita coisa. Então a gente pegou idosos, estudante, pegamos pessoal da cidade e a gente conseguiu melhorar muito… muitas coisas com isso aí. Depois da pandemia não tem mais como reunir, agora que a gente vai retomar, mas a gente passou quase três anos fazendo esses grupos focais ai (I04).

81	A gente tem as entrevistas focais, tem a questão dos grupos de WhatsApp, SAC, quando a gente deu agilidade, isso ai fervilhou. Tinha muito menos acesso entendeu, isso aí abriu porque eles se sentem valorizados no sentido de ter uma resposta mais rápido, da sugestão dele ser aceita. A questão de trazer o motorista e o cobrador pra essas reuniões gerenciais nossas aqui também, vem muita coisa, vem muita coisa bacana. Participação ativa junto com os presidentes de bairro, qualquer reunião que tem que se fazer, ou eu ou outro gerente vai, isso aí também é muito importante, reuniões na secretaria junto com esse público, de presidente de bairro (I04). Como eu tive experiência no legislativo, eu sempre reconheci que a maioria das ideias que foram construídas, por projetos de lei ou por iniciativas que eu apresentei, vieram de conversas informais e vieram de iniciativas de eleitores e de amigos, de conhecidos. Entre eles, um exemplo prático: hoje tu vai pra uma festa de criança, hoje tem diversas normas de festas de crianças, tu tem um lugar habilitado de festa de criança, antigamente não existia isso, qualquer lugar era… era realizado festa de criança e inúmeros acidentes aconteciam com as crianças, inúmeros acidentes, foi um período de muitos problemas na cidade e nós fizemos uma legislação pra regrar isso tá, um exemplo prático não veio de mim. Outro exemplo… outro exemplo foi em relação a retirada ou a reestruturação do centro da cidade através do uso da publicidade visual. Essa foi uma discussão que surgiu também não da minha cabeça, mas foi amadurecida por outras pessoas que vieram ao meu encontro e viram em mim um representante né. A própria proposta da região metropolitana da Serra Gaúcha, eu na condição de deputado né, foi um processo de amadurecimento técnico meu, porém houve uma discussão técnica… acadêmica em cima disso tá, então, não posso dizer que eu sou o autor, eu sou autor como legislador, mas a ideia não é só minha. Em tese, eu sou co-autor tá, porque eu acabei virando uma ferramenta, instrumento desse processo. Sobre o transporte público coletivo, eu me lembro de alterações de linhas de ônibus, de alterações de itinerários, de atualizações de rotas, que surgiram de iniciativas da comunidade pra melhor atendê-los e por consequência racionalizar o sistema né, então foram pontos específicos, isolados que acabam contribuindo (I09).
82	O Vivacidade é chamado toda semana. A gente às vezes fala "Olha, essa bandeira a gente não consegue ajudar, ou esse projeto a gente não consegue se envolver, a gente tá sem braço" Então, até a gente participou de um podcast um tempo atrás e o Fulano, que é um jornalista, fez uma pergunta que ele perguntou assim "Tá, mas você não acha que em relação a passarela lá do bairro Planalto o Vivacidade poderia ter se envolvido mais?" Eu falei: "Bah, Fulano, eu vou ser muito sincero contigo, eu nem sabia do problema da passarela. E outra, eu nem tenho como chegar lá." Tu tem que contextualizar um pouco as coisas. Porque às vezes, tá eu preciso de alguma coisa: chama Viva, chama o Ciclano, chama não sei o que. Não dá, entendeu? Tu tem que descentralizar, tem que olhar qual é o problema. Lá no Planalto tem um problema de passarela, olha o ecossistema no entorno do Planalto, quem tá lá? Tem a empresa X, tem a entidade X e tem um monte de gente morando lá, tem um líder comunitário, tem o… cara chama essas pessoas. E essas pessoas se envolvem com o problema e resolvem o problema, porque o problema é delas né. Ah, o problema é do poder público, o problema é delas! O poder público tá ali na prefeitura, na Alfredo Chaves, tá ali. O máximo que vai acontecer é ele não se reeleger. Então o problema real, físico, em primeira pessoa é da comunidade que vive no entorno desse problema. Então eu acho que deveria ser um pouquinho mais rápido e um pouquinho mais aberto, um pouquinho mais amplo. E aí para isso passa ser mais convidativo, comunicação, sistematizado, tem outros desafios aí para gente conseguir fazer isso de uma escala maior e mais veloz (I06). Sim, existe esse esforço, sim, existe essa agenda. A experiência que eu tenho, é uma agenda diária, é uma agenda… toda semana nós paravamos pra fazer esse alinhamento de oferta, de demanda. Prova disso que na nossa época nós tiramos todos os terminais de ônibus da Bento, nós criamos o corredor da Bento pra desafogar o da Sinimbu. Tudo isso foram processos coletivos permanentes que saíam, algumas iniciativas da comunidade, algumas iniciativas de técnicos, outras da secretaria, outras da empresa prestadora, a concessionária de serviços, o próprio… com ajuda da tecnologia né. Porque a medida que tu tem dados que vem da tecnologia tu acaba entendendo qual é o perfil dos usuários para poder melhor atendê-los tá, então existe esse esforço (I09).

83	Nós não temos outra magia a não ser a gente dialogar e os governantes escutarem a comunidade, só assim a gente consegue fazer uma cidade melhor (I05). Eu acho que em parte sim, eu acho que isso, é meio geracional assim né, tu absorve isso né. Porque tu cresceu dentro de uma casa onde tu viu o teu pai, tua mãe, ou quem te criou, reclamando do poder público ou cobrando o poder público. A não ser que tu desperte através do conhecimento, de vivências né, e falar: "opa, pera aí! Existem casos de ações, de associações, de movimentos que começaram a resolver problemas públicos, deixa eu estudar mais isso". Aí tu vê que é possível. Se tu não faz isso, tu vai replicar um comportamento que tu absorveu na tua criação, é natural isso para tantos outros tipos de comportamento. Eu acho que sim, a gente tem um comportamento passivo e dois, a gente muitas vezes desconhece os caminhos para fazer a mudança (I06). Eu vejo assim, que o cidadão, e essa é a minha crítica, não só aos modelos tradicionais, mas os novos que estão surgindo (...) mas o elo, o principal fato é aquilo que você falasse agora, é o cidadão. O cidadão entender e o cidadão se sentir motivado ou preparado para fazer. O modelo que a gente tem, o modelo tradicional leva só o usuário, cidadão a criticar, né, e a levantar os problemas, mas a solucionar não. De novo, é um posicionamento pessoal (...). Mas simplesmente cobrar, cobrar do Poder Executivo, cobrar do Poder Legislativo, mas não contribuir. "Ah não, esse é o papel da prefeitura". Não, né. Ah tem lá um espaço, numa audiência pública da Câmara de Vereadores e eu vou lá pra criticar, mas eu não levo a solução, eu não levo a sugestão, e o pior eu não participo. Então, essa é a falha, eu acho que precisamos sim, desenvolver (I08).
84	Primeiro o interesse, algum tipo de interesse tem ou pessoal ou coletivo que é legítimo. Eu posso ir participar numa audiência pública ou mudar uma legislação por que eu quero que no meu terreno seja construído 10 pavimentos ao invés de 4. É um modo de participação? É. É legítimo? É. É legal? É. Para defender o teu interesse? O teu interesse. Mas como também tem pessoas, que pelo nível de formação, acabam entendendo que, de alguma forma precisam se envolver com a cidade, quer seja por uma comissão pública, ou por um Conselho Municipal, ou indiretamente através de entidades e instituições que representam a sua formação, a sua instituição, ou através das empresas, CNPJ ou pessoa física, "eu quero melhorar o meu bairro". Eu vou lá, vou procurar a comunidade, vou procurar o vereador, vou procurar a prefeitura, então eu tenho interesse em melhorar tá. Mas todos exigem um nível mínimo de consciência e antes da consciência ela tá… na habilidade de tu… ou melhor habilidade vem depois. A habilidade, depois a consciência e antes disso eu… eu acredito que tá na iniciativa (I09). O cidadão tem que entender que aquele serviço é essencial para ele e ele é essencial para toda a sociedade. Se não fosse o transporte público nós não conseguiríamos mais nos locomover se todos estivessem em automóvel por exemplo. Então a gente tem sim que promover esse entendimento social de que é essencial, não só para aquela pessoa que não tem condições que paga mais barato pra andar de ônibus, o fato dela, de qualquer pessoa estar usando veículo coletivo ela está desonerando a capacidade de tráfego da cidade (I02). Então, eu não sei muito bem o que me motiva mas é… é eu ver uma cidade onde que… sei lá, sabe, eu acho que eu poder andar numa cidade que eu olho para os lados assim e fale: "Puts, que cidade legal sabe". (...) Aquele sentimento de cara, eu tô num lugar que faz bem para mim. Eu acho que é se reconhecer como um indivíduo, e isso é diferente de um egoísta, mas eu sou um indivíduo que certamente é influenciado pelo meio em que vive. Então se eu vivo em um meio que me estimula positivamente, eu sei que isso vai me tornar um indivíduo melhor. Porque essa lógica contrária também funciona. Quando eu tô num lugar que me desestimula, eu também me torno um indivíduo um pouquinho pior (...) Então eu acho que no fundo, o que me motiva e o que me empolga assim, em termos de cidade, enquanto cidadão, é eu saber que eu tô num lugar e num ecossistema que eu, enquanto uma celulazinha pequena, vou me desenvolver, dentro desse espaço. Porque no fundo, no fundo, no fundo é o que todo mundo deveria querer fazer né, sair dessa caminhada melhor do que entrou. Então o auto-desenvolvimento também é importante que tu esteja num ecossistema que te provoque a isso pelo menos né.(...) Então é uma coisa que eu

	digo lá, que eu disse para ti antes né, acho que tem uma predisposição do indivíduo, de falar: "Cara, eu vou dar um jeito nesse troço aqui que ta no meu entorno pelo menos né, vou ver o que que eu posso fazer para ficar um pouquinho melhor" (I06).
85	O cidadão, ele vive lá naquela comunidade dele, naquele bairro dele. Ele é que sente toda a necessidade que tem o bairro. Claro, a prefeitura tem equipe de planejamento, ela planeja sistema viário, transporte, a expansão dos bairros, aquela coisa toda, melhorias, mas o cidadão tá lá. E ele vem à prefeitura, geralmente quando eles vêm é para reivindicar alguma coisa para beneficiar o bairro. (...) Eles são importantes para o desenvolvimento daquele bairro, para a expansão do bairro. Então, a gente sempre recebe eles, porque eles é que moram lá. Nós, claro, a gente passa uma vez a cada seis meses no bairro. A gente não tá o dia-dia lá no bairro (I03).
	O conhecimento sem dúvida nenhuma porque é ele que dá a consistência, abre a cabeça, mas a atitude também é muito importante. Então, o conhecimento é muito importante, mas aí a gente precisa pensar como vir para fora em termos de prática (I01).
86	As demandas surgem das pessoas, horário de ônibus surge das pessoas, essas melhorias que teve nas ruas, a acessibilidade, também surgiu através das pessoas que as pessoas pediam para que a gente fizesse esse contato com a prefeitura pra que melhorasse cada vez mais a situação da mobilidade de Caxias. (...) E hoje a gente sabe que já melhorou bastante essa questão da mobilidade, hoje tu vê mais cadeirantes nas ruas porque antigamente tu não via esses cadeirantes porque não tinha como tu se locomover. Como é que tu ia subir, tipo no calçadão que não tinha rampa, em outros locais que não tinha rampa, então isso tudo foi obra das comunidades, dos deficientes que pediram (I05).
	Esse elo foi uma coisa que mudou muito nos últimos tempos, antes não tinha essa proximidade com o usuário. Tu tinha só proximidade com o presidente do bairro, com o vereador, entendeu, e não com o usuário (I04).
	Então tudo que a gente vê lá no bairro, que nós temos a visão técnica, coisa que às vezes eles não têm. Eles têm o dia-dia, a sensibilidade do negócio, e nós temos a orientação técnica (I03).
	Acho que é olhar o teu conhecimento técnico, teu conhecimento de causa, com o de vivência. Tem uma vivência ali. Tá bom, vem cá meu amiguinho, eu tenho conhecimento técnico que pode te ajudar, mas eu preciso ter conhecimento de vivência. Vamos bater uma bola junto aqui, me explica essa dinâmica urbana, como é que vocês vivem, como é que… acho que esse é o barato né, quase como um programa de necessidades (I06).
	Isso te exige um nível de humildade permanente e a convergência entre o raciocínio técnico com o raciocínio comunitário. Eu tenho a visão sistêmica do problema, mas eu não conheço determinada rua e determinado bairro como usuário diário, ele tem mais autoridade de expressar a sua opinião aonde ele vive em relação a eu que não moro que tenho uma visão sistêmica da cidade. Eu tenho que entender que ele é autoridade e ele precisa entender que aquilo que ele deseja deve estar, vou te dar uma palavra forte, umbilicalmente ligado com as estratégias e as visões da cidade (I09).
87	Eu vou te dizer um exemplo agora, que me surgiu, que foi bem bacana. Caiu no nosso colo, na licitação, a questão das linhas do interior, de Vila Oliva, São Sebastião do Caí, Fazenda Souza. E eu peguei e fui com a turma aqui, a gente tem uma turma de engenharia só, olhar a linha né. Vamos olhar a linha. Para em algum lugar, bate papo com o pessoal, eu sei que a gente demorou dois dias pra fazer as três linhas. E o que que a gente identificou: a maior dificuldade do pessoal é quando eles recebem o salário deles. Eles vem pra cá e compram mantimentos pra levar pra lá e carregar tudo dentro de um ônibus sem ter porta-mala. "Bom, vamos botar uns ônibus com porta-mala". Foi um sucesso né, porque o pessoal carrega televisor… é tudo que tinha que carregar no colo né, e o ônibus tem porta-mala né, tu pode comprar um ônibus com porta-mala, e a gente botou, foi uma felicidade. Outra coisa que a gente identificou: no inverno extremamente frio, colocamos ônibus com calefação. Porque o ônibus…a linha lá sai 5:30, 6:00

	horas da manhã, e é muito frio aquela região de Santa Lúcia e Vila Oliva. Então essas coisas a gente é muito atento sabe, muito ligado nesse sentido que tudo aquilo que a gente faz, facilita pro usuário. Claro, a gente tá lidando com transporte coletivo, então não pode ser uma necessidade individual, tem que olhar o todo, no momento de tomar uma decisão (I4).
88	Eu vou dar um exemplo recente que é calçadas, fiscalização de calçadas. Pra mim esse é um dos problemas mais malucos assim que a gente tem, porque a responsabilidade é do proprietário e a fiscalização é da prefeitura. Nenhum, nem outro faz o seu papel. Nem o proprietário cuida da sua calçada de forma digamos assim geral, claro que tem exceções, mas o proprietário muitas vezes não percebe que a calçada é responsabilidade dele, e a prefeitura também não tá na rua o tempo todo para fiscalizar se a calçada no lugar X tem um buraco ou não tem. Quando teve o dia mundial do pedestre, a gente fez uma ação do Vivacidade que era colar uns band-aids em algumas calçadas com buracos e a gente tirou fotos e isso acabou indo para o Pioneiro e outros (...) Resumindo o Fulano do urbanismo me chamou no WhatsApp e falou: "Onde é que são esses lugares?" E eu falei: "Cara, tá no site do Pioneiro a lista de todos os lugares". Vão querer matar o cara do Vivacidade depois, porque vamos notificar os proprietários. Enfim, só que tinha muitos lugares que era da prefeitura. A prefeitura foi lá, arrumou os delas, notificou os proprietários e nos passou o relatório: "a gente fez o nosso papel, para dez adesivos colocados". E aí, numa outra reunião que a gente foi ter com o Conselho Municipal de Mobilidade Urbana, o Ciclano que tava ali presidindo o conselho junto aos demais que estavam presentes, informou que a partir daquele momento a fiscalização das calçadas iria sair da pasta do urbanismo e iria passar pra pasta de mobilidade, o que depois que é dito tu pensa: sim, é óbvio né? Mobilidade, topo da pirâmide ser humano, por que que o urbanismo que tá cuidando disso né? E aí fica mais fácil de o amarelinho, o fiscal de trânsito que tá andando na rua, se isso entrar dentro de um processo, de falar agora vocês vão ter mais um trabalhinho que é mapear os locais da cidade onde as calçadas estão ruins e gerar um relatório. Aquilo que é público a prefeitura vai ter que arrumar e aquilo que é privado a prefeitura vai ter que notificar. Então se criou um novo processo dentro da pasta de mobilidade que ela vai ter que controlar agora também (I06). Durante a tua fala o que eu fiquei pensando que é uma coisa muito delicada da participação pública é quem faz essa facilitação de co-criação, né? Tem essa pessoa, que se for o poder público ele é a parte interessada. E aí pode ter um desvio de viés, desvio de interesse. Se for o cidadão de igual forma. Então, acho que é importante ter um ente neutro, ainda que a democracia não existe a neutralidade absoluta né, eu acho que é importante ter pelo menos essa intermediação entre os cidadãos e o poder público. Pode ser uma entidade da sociedade civil, pode ser um profissional, pode ser a Universidade talvez, não tenho certeza absoluta, acho que sim. Mas é importante saber quem faz essa facilitação, né? Que nem o cidadão nem o poder público, eles são extremos assim, eu acho que eles não podem ser o condutor principal (I10).
89	É muito importante a figura das associações de moradores (...) Em outros casos a figura da associação de moradores, ela é muito forte, porque ela exige iniciativa e relacionamento permanente com a comunidade no processo de serviço. Essa relação de cumplicidade ou essa necessidade de construção entre a comunidade e o poder público, ela só é dada pelo grau de carência. Então essa representação passa a ser uma liderança e passa a ser, inclusive, um elo de ligação primordial do poder público (I09). A gente sempre diz que Caxias do Sul ela é o que é hoje graças ao movimento comunitário. Porque? Porque a prefeitura não tem pernas para fazer todo o trabalho que tem em Caxias do Sul. "Ah, queimou a lâmpada lá na frente da minha casa". A prefeitura nem sonha que queimou a lâmpada lá na frente da minha casa. Aí o presidente do bairro, às vezes também o morador liga pro Alô Caxias ou mesmo o presidente faz um ofício pedindo o conserto dessa lâmpada. "Ah, lá estourou uma boca de lobo e essa boca de lobo lá tá aberta". A prefeitura também não tem esse conhecimento. Quem é que faz esse pedido? É o presidente de bairro. "Ah, lá precisa de uma pintura, lá num cruzamento, uma placa". Tudo é através do presidente de bairro. E muitas vezes também a comunidade solicita pro presidente, e o presidente também não tem pernas para cuidar às vezes de um bairro inteiro, tem uns bairros pequenos, mas temos bairros muito grande. Então a comunidade ajuda o presidente e o presidente sempre solicita o conserto através, ou de um ofício ou através do Alô Caxias (I05).

90	Geralmente tem um problema lá no… na região sul, lá no aeroporto, por exemplo, no loteamento, aeroporto. Tem um problema que o presidente liga para gente. Marca uma reunião com a comunidade e a gente vai lá e conversa com o pessoal, ver o que que pode ser feito. Às vezes a gente já leva um secretário e se precisar levar o prefeito a gente já marca uma audiência e leva junto o prefeito. Então, essa é a comunidade que a gente se refere, cada loteamento, cada bairro que existe tem uma associação, e essa associação a partir do momento em que ela tem problema a gente pede uma reunião e vamos lá, vamos tentar solucionar o problema (I05). Existem algumas comunidades que são super engajadas né, que é por exemplo o Colina Sorriso ou tantas outras aí. Mas o Colina eu lembro foi um *case* onde eles organizaram a segurança, onde ele se auto-organizaram, criaram uma associação lá e começaram a fazer uma autogestão do bairro né. Mas alguém puxou né. Tinha lá um líder, ele que organizou e foi presidente dessa associação (I06). Quando o presidente de bairro, ele se pré-dispõe a gratuitamente ser líder da comunidade, de ter todo um desgaste de se incomodar no sábado, no domingo, de dia, de noite, de manhã... São pessoas que têm um esclarecimento um pouco maior e querem ver a melhoria do bairro. Então eles têm uma visão já um pouco diferente da maioria dos moradores. Então eles te ajudam, no conhecimento deles, na experiência deles, no dia-a-dia (I03). Eu sempre tenho isso como característica, eu quero ter um contato muito franco com a sociedade. Então tenho contato muito próximo com a UAB (união das associações de bairro) através do presidente Fulano, mas também através de todos os presidentes de bairro. E o que a gente costuma fazer? Sempre que há uma alteração, uma mexida em algum itinerário a gente chama o presidente do bairro para ter essa conversa com ele, pra que ele leve essa informação lá pro bairro porque a gente pode estar gerando transtorno pra alguém. Então, essas reuniões, só para complementar essa parte, desde o ano passado quase assim que, duas ou três por semana quando muito, ou uma por semana, eu promovo, a gente promove essas reuniões na secretaria, com a área técnica da secretaria, da concessionária e as pessoas envolvidas em determinadas regiões (I02).
91	Eu acho que não dá para generalizar que esse sentimento é comum a todos gestor público né, mas dá para perceber quando algum gestor público tem sentimento genuíno de falar: vamos melhorar para a cidade. São pessoas que estão na política pela política digamos social né. "Eu vou colocar a minha capacidade, a minha inteligência e meu tempo em prol da cidade" (...) Então acho que algumas pessoas que estão hoje em cargos de liderança pública têm esse sentimento. E se elas estiverem em posição de "poder" digamos assim, em termos de hierarquia, dá para fazer muita coisa legal mesmo que seja por pouco tempo sabe, mesmo que seja por quatro anos ou oito enfim. O poder que uma pessoa bem intencionada tem e que tem o poder na mão né, que eu costumo dizer, é o capitão do barco, de fazer mudanças significativas, ou pelo menos estartar mudanças significativas que passam também por política pública, é muito grande. A gente não pode nunca subestimar isso né (I06). O que a gente tem como diretriz é aumentar a participação do cidadão através de uma participação consciente né. Nós temos uma coisa, acho bem importante, de coparticipação são os conselhos. Que nós temos o conselho super atuantes, o Conselho de Mobilidade, Trânsito e Transporte ele se reúne quinzenalmente aqui e participa de todas as decisões e tal. (...) Então, tudo ligado a mobilidade passa pelo conselho. O conselho é uma representatividade da sociedade (...) Existem mais de trinta Conselhos que é uma representatividade oficial entre poder público e privado né. Então, bem importante assim, vejo que é uma forma de trabalhar com cocriação, passa necessariamente, pelos conselhos (I01). Nós temos o Conselho Municipal de Mobilidade. Ali nós temos obviamente as instituições, os membros da prefeitura, mas também os membros da comunidade civil e ali eu entendo que é um momento que a gente tem discussões. Eu não tenho a menor dúvida de dizer que é o conselho que mais produz no município. A gente já fechou esse ano vinte e duas reuniões com temas diversos. O ano passado a gente terminou o ano com vinte e quatro reuniões, a gente produz muito. Aquela ali é uma oportunidade que eu tenho de verificar que é uma produção muito forte (I02).

91	O conselho está ali para avisar o prefeito se a coisa está indo para um lado que não deveria estar indo. Eles são a força da cidade concentrada em um ponto para cuidar do desenvolvimento da cidade para os próximos 10 anos, 20 anos, 30 anos. Então, esse núcleo do conselho é o órgão pensador que auxilia o prefeito nas decisões. O prefeito não cuida só da pavimentação da rua, o prefeito tem todo o macro da cidade na cabeça dele e às vezes ele: "pô, eu estou em dúvida nisso, naquilo..."; o que ele faz? Ele manda para o conselho e pede orientação. Aí o conselho se senta para estudar aquele assunto e entregar para o prefeito uma solução que a comunidade acha que é a mais correta e orienta o prefeito a tomar a decisão mais certa. Então, os conselhos estão aí para auxiliar o município a tomar as decisões certas, a orientar o prefeito, a orientar os gestores a tomar a decisão correta e não perder tempo em fazer e desfazer. Eu acho que conselho deveria existir em praticamente todas as áreas (I03).
92	Nós fomos buscar ajuda na academia para a gente ter mais braços em todos sentidos, para a gente fazer mais projetos de PPCI nas escolas, de atendimento preventivo nas UBSs utilizando toda parte de curricularização, a parte prática até mesmo da pesquisa, pra a gente poder resolver toda a demanda (I01).
93	Toda e qualquer demanda que entra na secretaria mesmo que nós não consigamos atender eu quero que seja respondida, entende. E hoje eu centralizo um pouco a entrada mas eu despacho tudo. Eu quero que entrem em contato com aquele cidadão e que se explique para ele porque não pode ou por que que não temos condições, não temos recursos para fazer lá, colocar o semáforo de pedestre que ele pediu na frente da casa dele, ao lado da escola do bairro dele. Ou então tem alguma dificuldade técnica que impeça que isso aconteça. Mas mesmo quando a gente não consegue atender eu faço questão de responder para esse cidadão. Então, esse contato, nós estávamos falando antes, essa interação com a sociedade, hoje a secretaria de trânsito tem muito. Fiscal de trânsito não fazia isso nunca, não era atribuição. Hoje eu tenho um diretor de trânsito, um gerente de trânsito que são fiscais e eu coloco eles permanentemente em busca do cidadão. O cidadão pediu lá, às vezes eles fazem as ações protocoladas e escritas a mão sabe, e a gente tem até uma dificuldade de interpretar ou ler o que tá escrito ali, aí não tem problema. A gente pega uma viatura, vai lá na casa dele, identifica o endereço e o telefone e conversa com a pessoa e vê exatamente o que ela precisa (I02).

É saber quem buscar né. E eu percebo que a maioria das pessoas não sabe. A grande maioria das pessoas não sabe. "Ah, preciso podar uma árvore aqui na frente da minha casa vou ligar pra SEMA". Primeiro que as pessoas ligam pra prefeitura né. Ah, então vou ligar pra SEMA, mas não é pra SEMA também, tem que ligar para RGE. Então entendo que existe hoje muita… uma visão de que a prefeitura é centralizadora de todos os serviços urbanos e não percebe que existem subdivisões né. A SEMA, entre outras, e não percebe que muitas vezes são outras empresas subcontratadas, por exemplo, a CODECA que não é a prefeitura né, ou a própria RGE, que vai executar aquele serviço (I06). |
| 94 | Não é que o povo é desinformado, a informação não chegou no povo né. Eu acredito nisso, assim, porque todo mundo sabe onde tem que ir no posto de saúde, todo mundo sabe onde é que tu vai ir para depositar dinheiro ou sacar dinheiro. Então, alguns serviços fazem o seu papel de comunicar e informar o que que eles fazem. Pra mim é o poder público. Teria que ser muito mais óbvio, campanha de conscientização, campanha de informação, acho que teria que ter um maior investimento em relação a isso, uma maior atenção em relação a isso. (...) Acho que tu encurtaria o processo se tu sabe exatamente onde procurar a solução daquele problema que tu tem (I06).

Então fica esse ciclo de perceber quem tá na defesa do interesse público né. Então, essa percepção poderia se dar talvez nos veículos e nos pontos de parada que é onde os usuários têm contato, no site do município, mas deixando claro que é o agente fiscalizador e não diretamente a empresa (I07). |

95	A própria questão da pandemia né, a gente tava no início lá, "bah o que que vai dar?" Eu lembro assim como foi importante pro poder público quando as grandes empresas deram férias coletivas pros funcionários. Sabe que deu um tempo pra se organizar: "vamos planejar aqui, o que vai ser, nós vamos parar tudo, não vamos parar". Aí as empresas ofereceram máscaras sabe. Quando participa, quando a gente usa né, a gente tem oportunidade de ver a complexidade né. E assim, quando tu tava falando, me lembrei de gente que ficou assim, me escreveu, várias pessoas "parabéns pela vacina, fui super bem atendido". Então, pessoas que não têm e não usam o SUS e pensam que eles, que seriam mal atendidas no SUS. Eu recebi muitos depoimentos de pessoas que fizeram questão de me ligar pra dizer como foram bem atendidos, se surpreenderam né (I01). Hoje em dia não se faz nada dentro de uma comunidade, quando eu digo a comunidade, é o bairro..., não se faz nada dentro do bairro sem ouvir o cidadão porque tudo que for sair lá, são eles que vão viver, eles que vão participar. Então as obras que vão acontecer no bairro, as modificações de sistema viário, ou alguma melhoria em praça, alguma coisa, tem que ter a participação deles, porque eles também ajudam a conservar e manter aquilo. Então isso é muito importante... eu sempre participei com os presidentes de bairro, me acostumei com eles a vida inteira. Tanto é que a facilidade de a gente se comunicar com eles era interessante, e realmente são eles que vivem lá, eles que sabem aonde que está apertando o sapato, e que se a gente tem a possibilidade de melhorar as condições deles, ótimo. A prefeitura tá aí para isso (I03).
96	As secretarias, elas têm os controles internos de produção e qualidade da prestação de serviço, isso é uma coisa interna. Mas a parte mais viva disso tudo, dessa prestação de serviço é o morador, é o público quando ele te diz: "que serviço bem feito", "o serviço que vocês fizeram resolveu", "nunca mais vamos ter esse problema", "obrigado". Então essa satisfação da comunidade é que te dá o índice de como tu estás prestando o serviço. Isso é a tua relação, porque não tem como medir de outra forma (I03). Nem sempre a solução de um problema é a satisfação da pessoa, porque eu posso resolver um problema para ti mas você não sair satisfeito (...). No serviço público, de modo geral, não existe uma métrica para ti comparar a concessão A com a concessão B para ti poder criar uma referência de satisfação, se aquela prestação de serviço é melhor que a outra. Então, do modo geral, eu acredito que ela cumpre com o seu papel, pelo qual ela foi ofertada pelos seus usuários. Mas a satisfação ela tem no meu entendimento 3 valores, 2 ou 3 valores, vamos ver se eu consigo construir esses dois a três valores. O valor do usuário e o valor do público. O valor do público é mais amplo, mais dinâmico, eu diria que é uma satisfação com viés sustentável, uma satisfação com viés inclusivo e sobre o ponto de vista do usuário, é uma satisfação econômica e uma satisfação de tempo. Econômica porque tu quer ir da tua origem ao teu destino com o menor preço e o mais rápido possível. E e sob o ponto de vista do poder público, inclusivo porque toda prestação de serviço tem que acabar incluindo as pessoas e eu não falo só dos PCDs, pessoas com necessidades, a prestação de serviço como processo de inclusão social; e sustentável porque, outrora, o transporte não tinha esse viés, não tinha essa preocupação e acabou gerando novas preocupações, entre elas, essa (I09).
97	Uma cidade, é a tua cidade, é onde tu tens teus filhos que eles vão ser educados. Então tu queres sempre o melhor para tua cidade. Esse espírito de comunidade, ou pelo menos, que tem na nossa região aqui de todo mundo querer a rua limpa, a lâmpada funcionando, os ônibus limpos, tudo funcionando, é o espírito de paixão pela cidade. É tu ter aquele amor pela terra que tu nasceu e transmitir para teus filhos e é onde eles vão ter conhecimento, onde eles vão se formar, onde eles vão fazer família. Então tu participar disso, eu acho que é uma questão de obrigação. Todo o cidadão tinha que participar, independente do nível de escolaridade que tu tens, de participar e dar a tua opinião. Isso é o mais importante para uma cidade se manter viva, ativa (I03). É um dever cívico assim, é a percepção de que a gente, que o mundo, que estamos todos no mesmo barco. Então o que faz as pessoas terem uma participação mais colaborativa, construtiva, de construção no caso, é esse dever cívico. Assim, percebendo que ela faz parte da sociedade. Porque a formação é importante, mas às vezes tem pessoas mesmo com bom nível de formação que tem um papel somente crítico assim né de, às vezes até de destruir e não de construir. Então,

	eu vejo que é a formação moral da pessoa, a formação de responsabilidade né, de que eu faço parte desse universo, que eu também sou responsável por isso (I01).
98	O ponto um que eu acho, é que existe uma predisposição a cuidar do entorno, a fazer as coisas sabe. Eu acho que existe uma predisposição que ela pode ser natural, pode ser induzida, pode ser os dois tá. Eu acho que chega um ponto da vida que a pessoa não muda mais ou muda muito pouco. Então, ou ela nasceu com isso e foi moldada para isso, ou vai ser difícil mudar algumas pessoas né. Por isso que a gente sempre fala que a gente tem que se conectar com poucos, mas que fazem e depois acreditar que isso a longo prazo vai mudar. E essas pessoas poucas, mas que tem uma predisposição a se envolver, na minha percepção, elas só vão ter o senso de pertencimento, e quem tem o senso de pertencimento logo tem o senso de cuidado, na minha visão, se elas participarem do senso de criação. Ou seja, eu participei da criação de algo, então logo eu pertenço a esse algo e se eu pertenço desse algo, eu cuido desse algo. Então eu acho que querer pular alguma barreira dessa do tipo assim, a prefeitura veio aqui entregou uma praça para comunidade. Tá bom, o que a comunidade fez? Nada, ficou três meses a praça fechada, a prefeitura veio aqui montou, tirou os tapume tava a praça zerada, nova. Hmmm, não sei, não sei se é por aí o caminho que eu acredito. Agora, se a prefeitura vem aqui ou alguém vem aqui e fala, cara, vamos organizar essa praça juntos aqui? Chama todo mundo pra participar, leva tinta, material, pega os técnicos para orientar, mas faz a comunidade se envolver. Não vai vir todo mundo, vai vir meia dúzia, mas essa meia dúzia vai participar e essa meia dúzia vai se sentir parte daquilo porque ela vai ter orgulho de falar: eu ajudei a fazer isso. E se ela tem senso de pertencimento que é originado através de um senso de participação, eu acredito, que fecha o ciclo do cuidado. Porque daí tu participou, tu pertence, tu cuida e tu retro alimenta isso. Tu querer que as pessoas só cuidem sem se sentirem pertencentes, porque afinal elas não participaram, é tipo meio doido isso né? (I06). Eu percebo muito essa deficiência de formação, porque depois de adulto, para eu conscientizar fulano ou ciclano a trabalhar pra cidade em algo que eu não aprendi na minha formação educacional é muito mais difícil (I09).
99	A mobilidade hoje, ela não depende só da concessionária. A concessionária é um elosinho da engrenagem né. O que pesa mais hoje, em termos de mobilidade, daí eu acho que tá muito ligado com a área, é a questão de infraestrutura né, e isso se confunde muito pro usuário (...). A velocidade também do poder público com a concessionária é diferente, porque a concessionária é uma empresa privada né, o poder público é um serviço público no que se diz. Vou te dar um exemplo. Às vezes tu tá identificando um ponto crítico que está atrasando a viagem de milhares de pessoas e tu não consegue, por mais que tu consiga acionar a prefeitura, ela também tem alguns limites, corredores de ônibus. Então, hoje tu deixa teu serviço muito a desejar em virtude de não ter uma infraestrutura adequada né (I04). Eu acho assim, que uma olhada pra questão das escolas sabe. Porque, se os usuários, as crianças bem especificamente, elas tiverem um bom serviço desde pequenas, naturalmente elas já vão criando um senso crítico em relação às infraestruturas, né. Porque os adultos, os pais, por exemplo, que já vem de uma situação que já se perdura a anos, que não está bem resolvida e tal, às vezes, o pessoal não sabe aonde buscar ajuda ou não percebe que poderia ser melhor. Mas quando isso já vem da rede de ensino, das crianças, do adolescentes, que já sabem escolher melhor, já viram outros modelos, acho que eles conseguem… conseguiriam, essa nova geração poderia ajudar mais sabe. Um novo olhar sobre isso. Então, por exemplo, a gente tem aqui, na prefeitura de Caxias, a escolinha de trânsito, por exemplo. Mas aí, porque não incluir essa questão da estrutura, do planejamento urbano também, para ter um olhar crítico sobre o sistema como um todo, e sobre a qualidade dos equipamentos enfim, produtos de boa qualidade, uma parada de ônibus que realmente acolhe. E também, assim, e trazer, talvez, as infraestruturas para junto de espaços naturais. Então, junto de uma praça e não tão longe dessas áreas ambientalmente mais agradáveis. Acho que assim, por exemplo, se a gente pode pensar que uma pessoa se acostuma a pegar o ônibus, vamos colocar ali o exemplo da praça da bandeira né, ela… os usuários ficam… no momento de embarque e de espera ali é junto de uma praça. Então é um ambiente que já ventila bem, então, a pessoa já tem uma sensação melhor. Quando ela passa a utilizar o sistema

	de transporte num ponto de ônibus que é inverso a isso, essa diferença é percebida. Então aí ela consegue… aí a pessoa consegue começar a ter um discernimento de que as coisas podem ser melhores, né. Mas se a situação é sempre ruim, então dentro de várias alternativas ruins, como é que ela vai escolher? A questão não é escolher pelo menos pior, é que não deve ser assim, eu acho que tem que ser baseado "eu sei que pode ser melhor" e se querer aquilo né, o que é melhor. Um ambiente melhor, mais ventilado, mais claro, com as informações acessíveis, a informação do nome do ônibus, dos horários e itinerários, a iluminação dos pontos de ônibus à noite principalmente. Então todas essas questões que qualificam o ambiente, naquele momento de embarque e de espera (I07).
102	Sabe que… eu acho que até de forma no início inconsciente e a partir do momento que a gente se deu conta disso passou a ser uma premissa do Viva, mas se eu olhar para trás hoje e ver todas as ações que a gente fez, sempre foi tentando mostrar para o cidadão que a responsabilidade é dele. (...) Quando a gente faz esse tipo de provocação que, de novo né, é bem simples, é pontual, é até, às vezes assim, uma cutucada. Do tipo assim," ah vamos botar uns adesivos, cada um tira do bolso, quanto é? Ah, bota 20 pila cada um, manda fazer adesivo e tal..." é para jogar primeiro luz sobre o problema. A gente entende que, se existe um problema, e que a gente identificou o problema, não significa que todo mundo enxerga como tal, porque se todo mundo enxergasse como um problema ele não existiria mais né. É só ver quanto que tem na cidade de estrada de chão, não tem. Porque as pessoas entenderam que isso era um problema, então vamos calçar, vamos asfaltar, vamos organizar o trânsito e ok, deixou de ser um problema. Agora se nós olharmos para as calçadas é um problema. Só que as pessoas talvez não percebam como um problema, então sempre a gente quer jogar luz sobre o problema (I06). Ele é o termômetro. Eu acredito que ele é o termômetro, acredito que ele… que ele é… vou fazer uma analogia com Santo Agostinho no livro da Cidade de Deus. Santo Agostinho diz o seguinte: Olha a relação de um cidadão com a sua cidade é tão próxima como de uma letra pra uma palavra, ou seja, não tem como desassociar. Então, em analogia a isso, a relação de um cidadão com a prestação de serviço é tão próximo como de uma palavra para uma letra, não tem como desassociar (I09).

ADDENDUM C - WORD FREQUENCY

Palavra	Frequência
linha	1398
horário	1227
visate	1198
horários	826
descumprimento	542
problemas	438
mudança	428
motorista	417
ônibus	350
reclamação	348
queima	296
coletivo	258
atuação	196
EPI	171
retorno	169
parada	140
transporte	138
covid	131
relata	127
coronavírus	125
bairro	119
centro	104
superlotação	102
rua	101
reclama	99
solicita	96
lotação	89
atendimento	72
voltas	61
atraso	56