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Rede Refugia: mutuality and collaboration for the integration of different stakeholders in the refugee crisis

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Abstract

The Rede Refugia is a collaborative service that proposes facilitating the reception, protection and integration of refugees, asylum seekers and stateless persons (hereafter only called refugees). The service is based on mutuality and collaboration among refugees, humanitarian organisations, private entities and other stakeholders operating in the humanitarian ecosystem. The paper aims to discuss how Service Design facilitates the process of co-creation and co-design of a refugee integration ecosystem with different stakeholders. As for the methodology, the research considers Design Science Research (DSR), focusing on the demonstration and evaluation steps. This research contributes with the description of the co-creation and co-design process among different stakeholders in the context of the humanitarian refugee crisis based on mutuality and collaboration, materialising the idea in the Rede Refugia. More precisely, the results indicate the ease in understanding the service objectives, positive expectations of the Rede Refugia service, and some points that must be adjusted. The research also reinforced the importance of the usability test as a fundamental moment for co-design with potential users of services. Future research might consider investigating other tools that can contribute to co-design and co-creation and its contribution to fostering the relational and socio-environmental impacts of collaborative services.

Keywords: Collaborative Service; Mutuality; Co-creation; Co-design; Refugee crisis.

Introduction

In 2022 the world exceeded the mark of 100 million people in forced displacement, motivated by human rights violations, armed conflicts, climate crises, food shortages, among other reasons (UNHCR, 2022). For instance, the Brazilian government registered 29,107 requests for recognition of refugee status in 2021, reaching a total of 297,712 requests since 2011 (Junger et al., 2022, p. 10).

Considering this scenario and based on the social innovation processes described by Jégou & Manzini (2008), the Rede Refugia is idealised to stimulate the existing collaboration process between the refugees and also public authorities, private entities, humanitarian organisations and other stakeholders working in the humanitarian ecosystem (Leite et al., 2021). The platform is under development based on the Design Science Research method according to the Peffers et al. (2007) approach, with an expected launch later this year. More precisely, the platform is under evaluation of its usability for validation purposes and is still open to improvements under co-creation and co-design perspectives, which is an essential perspective of the Service Design approach as indicated by Joly et al. (2019).

Thus, the paper aims to discuss how Service Design can facilitate the process of co-creation and co-design of a refugee integration ecosystem with different stakeholders. This work covers some parts of the Design Science Research (DSR), the method adopted in developing the Rede Refugia that is embedded in a Service Design approach.

After the introduction, the paper presents the theoretical background of service design, design tools, social innovation and collaborative services. The third section offers the Rede Refugia service. The fourth section presents how DSR are adopted in the Rede Refugia development, focusing on the specific steps covered in this research. The fifth section presents the results of the co-creation and co-design processes. The sixth section presents the analysis of the results. The last section brings the conclusion and future research agenda.

Theoretical background

Service design is an interdisciplinary approach that addresses the interactions and journeys of the stakeholders involved in service architecture (Stickdorn et al., 2018).

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Moreover, this approach is centred on the user experience and is often related to service innovation (Meroni & Sangiorgi, 2016).

The literature argues that design tools are fundamental to understanding the complexity of the service process and contribute to value-creating interaction processes (Stefan, 2005; Karpen, Gemser & Calabretta, 2017; Joly et al., 2019). In this sense, Sanders and Stappers (2008) describe co-design as a product and service development process that uses collective design creativity with people who are not trained in design.

Social innovation is a process of change emerging from the creative re-combination of existing assets (Manzini, 2014, p.57). The change in how communities solve their problems and produce new opportunities is driven mainly by behavioural changes and not necessarily technological or market changes (Jégou & Manzini, 2008). In addition, service design related to social innovations requires new service architecture conformations, especially those based on solid interpersonal interactions, focusing on facilitating the quality of interpersonal relationships (Cipolla & Manzini, 2009).

In this sense, collaborative services are characterised by the deep involvement of the user, where the boundaries between producer and user blur, being able to act simultaneously as co-designer and as producers of services (Jégou & Manzini, 2008).

Rede Refugia: a mutual collaborations service

The idea of the collaborative service emerged in the scope of the Service Design course offered by the Graduate Program in Production Engineering at the Federal University of Rio de Janeiro and observation of social innovation processes, as described by Jégou and Manzini (2008). According to Cipolla and Manzini (2009), stimulating sharing and collaboration among users through intense interpersonal relationships establishes learning processes and social innovation. In this sense, the Rede Refugia values and encourages encounters and the establishment of solidary communities.

Therefore, the service provided by Rede Refugia (Figure 1), is proposed to consider the people who can collaborate with each other, either by exchanging information, food, housing, employment, and other categories of needs for socio-economic insertion. In addition, the Rede Refugia is conceived as an ecosystem of services for

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the humanitarian refugee crisis, as it can integrate the services provided by other stakeholders, such as humanitarian organisations, public agencies and private organisations. The Rede Refugia's contact point is the web and mobile platform (https://rede-refugia.web.app/), where the participants access the service, see offers and requests for help registered by other participants, which can also be filtered by categories and displayed according to the proximity of the participant. The service intends to encourage mutuality and collaboration through reciprocity networks where the exchange of services is established. In this way, in addition to asking for help, participants are encouraged to indicate what support they can offer, according to their social, cultural and economic reality, to the other people or organisations. For example, a refugee who is already established in the country and is familiar with Portuguese and the territory can offer help to the new refugees that arrive in the country and is assisted by an organisation, either during the documentation process or even to understand which would be the best place to establish housing; in exchange, the organisation can help this first refugee to find a new job. Mutual collaboration service presupposes the exchange, not necessarily simultaneous, and can take place among refugees, among refugees and people from the host country, among refugees and organisations, or among one or more organisations. These encounters are motivated by identifying common interests between those who offer and those who demand help. In a general sense, the users co-create value as they are responsible for the service offerings.

Figure 1. Rede Refugia home page in Portuguese

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Research method

This research considers the DSR method, which involves six steps as defined by Peffers et al. (2007): problem identification and motivation; define the objectives for a solution; design and development; demonstration; evaluation; and communication.

The first step, "problem identification and motivation" is how can we develop, co-create and validate a collaborative service for the refugee crisis in Brazil?

The second step, "defining objectives for a solution", is based on a systematic literature review on refugees, disasters and entrepreneurship/marketing, and a field study with refugees and representatives of organisations presented in Leite (2022). During this stage, we conducted interviews with 10 refugees from the Democratic Republic of Congo and Venezuela, in addition to 11 representatives of organisations that work in the humanitarian crisis in Brazil, namely: Caritas, Cruz Vermelha Brasileira, NGO Refúgio 343, Mawon, Toti Diversidade, Viva Rio, Rio de Janeiro State Secretary of Social Assistance and Human Rights, Instituto Human, as well as representatives of UNHCR, the National Committee for Refugees and Operation Acolhida. This step contributed to the awareness of the problem and the definition of the artefact proposal.

The third stage, "design and development", is carried out through co-creation processes to propose solutions together with a multidisciplinary team. It considers various tools such as brainstorming, insight cards, affinity diagrams, persona and blueprint for the ideation, analysis, synthesis and prototyping process, as Vianna et al. (2012) suggested. The canvas tool, proposed by Osterwalder and Pigneur (2011), is also considered to model the solution. The platform development is performed through the graphic design software Figma, version 88.1.0, and programmed in JavaScript language with the React Native framework. It is worth mentioning that the immersion process, ideation, prototyping and development are not presented in this article.

The fourth stage is the "demonstration", which refers to the discussion on the artefact usage by simulating internal usability tests with the Minimum Viable Product (MVP) of the Rede Refugia platform available for use in a closed environment.

The fifth stage, "evaluation", is the second stage of co-creation and co-design with potential users. These processes take place during what we call here usability testing. In this stage, three refugees participate, two from Venezuela and one from the Democratic Republic of Congo, three representatives of organisations (National

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Committee for Refugees, Cruz Vermelha Brasileira and Human Institute) and a software development specialist. In the first part, users receive a script with some scenarios that stimulate them to use some functionalities. In the second part, the users answer the System Usability Scale (SUS) questionnaire that Brooke (1995) created to evaluate the interfaces. In the third part, the users make the main observations about the improvement opportunities and contribute with new ideas, such as new modules and new ways of organising the information, considering the main challenges refugees face during reception, protection and integration.

The last stage, "communication", is characterised by discussing the results in this paper with the ServDes community.

Results

This section describes the results of the co-creation and co-design process and discusses how immersion with potential users contributed to the ideation of the collaborative service, as well as how the participants contributed to the changes on the Rede Refugia platform during its evaluation stage.

Social innovation and co-creation in the refugee humanitarian crisis

During the immersion stage, the interviewees, described in the methodology section, indicated the main challenges refugees face upon arriving in Brazil. Representatives of organisations, public, private and the third sector, pointed out their main challenges and the level of relationship between organisations and other stakeholders, according to the 3PR model (Fontainha, 2017), which organises stakeholders in government, private sector and people, giving centrality to the beneficiaries. The main challenges faced by refugees included cultural barriers, including the Portuguese Language, difficulties in entering the labour market, xenophobia and racism, and issues related to access to public services and knowledge about the territories. For the organisations, funding and government support are the main challenges. The primary evidence was organised and unfolded in the collaboration categories defined in the Rede Refugia. We highlight the proposal of the collaborative service based on the observation of cases of social innovation of how refugees found ways of survival during the challenges encountered in the new country. In this way, value co-creation processes are created, where users

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are not only beneficiaries of humanitarian services but also add and deliver value through offering and exchanging services.

Co-design with the potential users

Based on Sanders and Stappers (2008) definition of co-design, the participants are invited to contribute to the service design process by pointing out aspects not yet contemplated in the Rede Refugia platform and possible improvements and changes.

In this sense, all participants understood the Rede Refugia proposal and considered the service intuitive. They also affirmed the importance of the idea and highlighted its novelty in allowing an integration/interaction of the stakeholders in the humanitarian ecosystem from a digital perspective.

However, participants also indicated that adjustments are still needed. Refugees provided evidence that they are satisfied but still concerned about information security. Among the organisation representatives, two are satisfied with the platform but are also concerned about security, another one demonstrates dissatisfaction with the initial registration, and the last one is neutral.

The main recommendations for changes in the Rede Refugia platform are: inclusion of categories related to education and events; translation of screens into other languages; inclusion of interactions through chats and forums; inclusion of a photo in the users' profile; inclusion of a professional resume database; inclusion of alerts; inclusion of more visual features.

We highlight suggestions related to accessibility, such as the translation tool, information security and reliability in the veracity of offers, reinforcing trust as a fundamental aspect of mutual collaboration service.

Analysis of the user experience of Rede Refugia

The results obtained with this research contribute to the literature discussing Service Design in the context of disaster, as in the humanitarian crisis of refugees and forced displaced persons. It is worth noting that the Rede Refugia service emerges from a tradition of research on social innovation and Service Design, particularly aligned with the definition of collaborative services presented by Jégou e Manzini (2008). It

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also contributes to research on relational services (Cipolla, 2009) as it proposes that interpersonal relationships among users could be strengthened through mutuality and collaboration.

In practical terms, this research contributes to the validation and identification of the prototype of a collaborative service (i.e., Rede Refugia) that can generate a positive socio-environmental impact in the reception, protection and integration process of people in the flow of forced displacement in Brazil. Furthermore, evaluating the user experience provided insights into the platform improvement and enabled moments for co-creation with potential users, reinforcing the concept of human-centeredness, as described by Stickdorn et al. (2018).

For the Service Design community, this paper brings an example of co-creation, co-design and mediation of the interests of different stakeholders through mutuality and collaboration. In addition to relying on service design and social innovation to design and materialise an ecosystem of humanitarian services, supported and enhanced by digital, as is the case of the Rede Refugia.

Conclusions and future research

The research reaffirms that observing and understanding how refugees create mechanisms to alleviate the suffering of forced displaced persons are fundamental for designing social innovation in the humanitarian context. This is achieved through the development of the Rede Refugia, an ecosystem of humanitarian services that integrates the needs and capacities of different stakeholders through mutuality and collaboration.

In this sense, the usability analysis of the Rede Refugia service allowed the evaluation of the prototype of the Rede Refugia. Such usability analysis represents an opportunity to add the Service Design approach in the platform development as it allows the co-creation among the various stakeholders, understanding that refugees are not only beneficiaries but can also generate value for other stakeholders. Future research might consider investigating other tools that can contribute to co-design and co-creation and its contribution to fostering the relational and socio-environmental impacts of collaborative services.

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