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DESIGN ACTIVISM IN EMERGENCY SERVICES: ENGAGING ACTORS FOR SOCIAL CHANGE

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ABSTRACT

This research explores the symbiotic relationship among design activism, actor-network theory (ANT), and design thinking in shaping socio-technical systems. Design activism, driven by political motivations for social, environmental, and economic change through intentional design interventions, collaborates with governments and organizations in public sector innovation. Operating within this context, design activism utilizes design thinking, imagination, and practice to generate positive transformations. The study delves into the application of design activism in emergency services, emphasizing collaboration with various actors. A case study in İzmir, where volunteer designers supported earthquake-affected citizens in Kahramanmaraş, Türkiye, illustrates the practical integration of design thinking within design activism. The volunteer designers improved processes, coordinated stakeholders, and created user-friendly interfaces, showcasing the transformative potential of design activism in emergencies. The research highlights the significance of a socio-technical approach, incorporating design thinking's iterative and collective processes to accommodate both human and non-human actors. Emphasizing collaboration and continuous engagement within networks, the study aligns with ANT's perspective on success in design activism. The findings underscore the potential for design activism to enhance emergency services through collaborative efforts and transformative design methodologies, offering a comprehensive approach to understanding and shaping socio-technical systems for positive societal impact.

Keywords: Design Activism, Actor-Network Theory (ANT), Design Thinking, Emergency Services, Volunteer Design Community.

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ACİL DURUM HİZMETLERİNDE TASARIM AKTİVİZMİ: SOSYAL DEĞİŞİM İÇİN AKTÖRLERİN KATILIMI

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ÖZET

Bu araştırma, sosyo-teknik sistemleri şekillendirmede tasarım aktivizmi, aktör-ağ teorisi (ANT) ve tasarım odaklı düşünme arasındaki simbiyotik ilişkiyi araştırmaktadır. Kasıtlı tasarım müdahaleleri yoluyla sosyal, çevresel ve ekonomik değişim için siyasi motivasyonlarla hareket eden tasarım aktivizmi, kamu sektörü inovasyonunda hükümetler ve kuruluşlarla işbirliği yapmaktadır. Bu bağlamda faaliyet gösteren tasarım aktivizmi, olumlu dönüşümler yaratmak için tasarım odaklı düşünmeyi, hayal gücünü ve pratiğini kullanır. Çalışma, çeşitli aktörlerle işbirliğini vurgulayarak tasarım aktivizminin acil servislerdeki uygulamalarını incelemektedir. Gönüllü tasarımcıların Kahramanmaraş'ta depremden etkilenen vatandaşlara destek verdiği İzmir'deki bir vaka çalışması, tasarım odaklı düşünmenin tasarım aktivizmine pratik entegrasyonunu göstermektedir. Gönüllü tasarımcılar süreçleri iyileştirmiş, paydaşları koordine etmiş ve kullanıcı dostu arayüzler oluşturarak acil durumlarda tasarım aktivizminin dönüştürücü potansiyelini ortaya koymuşlardır. Araştırma hem insan hem de insan olmayan aktörleri barındırmak için tasarım odaklı düşünmenin yinelemeli ve kolektif süreçlerini içeren sosyo-teknik bir yaklaşımın önemini vurgulamaktadır. Ağlar içinde iş birliğini ve sürekli katılımı vurgulayan çalışma, ANT'nin tasarım aktivizminde başarı perspektifiyle uyumludur. Bulgular, tasarım aktivizminin iş birliğine dayalı çabalar ve dönüştürücü tasarım metodolojileri aracılığıyla acil durum hizmetlerini geliştirme potansiyelinin altını çizmekte ve olumlu toplumsal etki için sosyo-teknik sistemleri anlamaya ve şekillendirmeye yönelik kapsamlı bir yaklaşım sunmaktadır.

Anahtar Kelimeler: Tasarım Aktivizmi, Aktör-Ağ Teorisi (ANT), Tasarım Odaklı Düşünme, Acil Durum Hizmetleri, Gönüllü Tasarım Topluluğu.

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1. INTRODUCTION

In the realm of design theory and practice, the interplay between Design Activism, Actor-Network Theory (ANT), and Design Thinking (DT) holds significant implications for addressing complex societal challenges. Design activism, rooted in the use of design for social or environmental change, converges with ANT's emphasis on the agency of both human and non-human actors in shaping networks and solutions. This intersection is further enriched by Design Thinking's human-centered approach to problem-solving, fostering collaborative efforts to navigate wicked problems characterized by their complexity and stakeholder involvement. This paper explores the dynamic relationship among these concepts, highlighting their collective potential to promote interdisciplinary collaboration, stakeholder engagement, and user-centered design in fostering meaningful societal impact.

This paper aims to explore the impact of voluntary design activism in crisis management through a case study conducted in collaboration with various stakeholders. By examining the contributions made by voluntary design activists in improving processes, designing new solutions, and facilitating effective communication channels, this study sheds light on the critical role of human-centered design in crises. Through a lens informed by Actor-Network Theory (ANT), which emphasizes the interconnectedness of human and non-human actors within a network, we delve into the intricate dynamics that shape the success of design interventions.

2. DESIGN ACTIVISM AND DESIGN THINKING

2.1. Design Activism

Design activism, stemming from historical movements such as design reform and the Italian radical design movement, is a politically charged practice aimed at effecting meaningful change through innovative interventions (Fuad-Luke, 2009; Julier, 2011). Within public sector innovation, design activism emphasizes collaboration with governments and organizations to tackle pressing social issues, utilizing co-design techniques and engaging diverse stakeholders for comprehensive solutions (Julier, 2011; Lenksjold, 2015). This collaborative approach defines design activism and positions it as a dynamic force in societal transformation.

Positioned as a form of contestation against the corporatism of the capitalist world, design activism draws inspiration from historical figures like William Morris and the pioneers of the Italian radical design movement (Julier, 2011). These movements laid the groundwork for a design philosophy actively challenging prevailing norms and envisioning alternative futures (Fox et al., 2020). Contemporary design activism echoes this defiance, manifesting as a deliberate effort to contest established norms.

Additionally, Victor Papanek's influential book, "Design for the Real World," serves as a cornerstone in the design activism narrative, advocating for sustained activism within the profession. Papanek's vision prioritizes social and environmental needs, positioning design as a powerful tool for positive change

(Clarke, 2013). His legacy continues to influence the ethos of design activism, emphasizing the responsibility of designers to contribute meaningfully to societal well-being.

While design activism has gained prominence within developed countries, there is a burgeoning interest in its application within developing nations. The aim is not only to address existing issues but also to empower societies through innovative design-driven solutions (Manzini, 2010). However, acknowledging the political relevance of design activism remains an area of disparity, with limited consideration for its potential impact on local policy-making and collaboration with governmental bodies (Çetin, 2016).

The concept of minor design activism introduces a nuanced perspective, emphasizing its continual engagement with socio-political conditions. This approach thrives on collaborative design interventions that subtly redirect present conditions toward speculative future alternatives (Lenksjold, 2015). By engaging with public institutions and attempting to alter decision-makers' perceptions, minor design activism becomes a dynamic force in shaping incremental, yet meaningful, societal changes.

In navigating the intricate relationship between design cultures, neoliberalism, and activism, scholars like Fuad-Luke, Thorpe, and Markussen expand their understanding of design activism. They frame it as a counternarrative that generates positive change while operating within practical constraints like function, cost, and usability (Fox et al., 2020). This expanded perspective underscores the adaptability of design activism, positioning it as a transformative force that seeks to exploit and reprogram existing conditions for the betterment of society (Julier, 2013).

In essence, design activism unfolds as a multifaceted movement within the larger framework of design cultures and neoliberalism. By combining design thinking with a political impetus, it strives to create a better world, challenging established norms, and engaging with diverse socio-political contexts (Julier, 2013; Fox et al., 2020; Fuad-Luke, 2009; Lees-Maffei, 2012).

In the context of design activism, an important research question to explore is how this practice can effectively support services in emergencies by engaging various actors. Emergencies, such as natural disasters or humanitarian crises, often require immediate and coordinated responses from different stakeholders involved in providing services and aid. Design activism, with its politically motivated impetus and focus on generating social, environmental, and economic change, has the potential to contribute to these efforts.

2.2. Design Thinking

Horst Rittel's framework on design thinking has been acknowledged as a valuable tool for understanding post-disaster decision-making processes and design contexts. Lee (2013) applied Rittel's design methods paradigm to reconstruct and re-evaluate our understanding of disasters based on empirical research conducted after significant events like the Canterbury earthquake, Haiti earthquake, and Hurricane Katrina.

Rittel's concept of 'wicked problems' has been instrumental in addressing complex issues in disaster contexts (Barnett, 2021). The importance of place attachment in post-disaster decision-making has also been highlighted in the literature (Adie, 2019), emphasizing the need to consider emotional and psychological aspects in the design process.

Furthermore, the evolution of design thinking, influenced by Rittel's work, has been discussed in the literature. Incremental advances by theorists like Herbert Simon and Rittel himself have paved the way for the development of design thinking as a problem-solving technique (Ashman et al., 2021).Rittel's emphasis on problem-solving and the consideration of 'wicked problems' has been integrated into various fields, including architecture and urban planning (Engholm and Salamon, 2017).

In post-disaster contexts, the need for a compassionate and dignified design approach has been underscored (Seshadri et al., 2019). This aligns with Rittel's view that design should focus on solving problems while considering the human experience. Additionally, the use of design charrettes as a methodology for participatory reconstruction after disasters has been explored, indicating a practical application of design thinking principles in post-disaster scenarios (Zhang et al., 2015).

Horst Rittel's framework on design thinking offers a valuable lens through which to understand and address the complexities of post-disaster decision-making processes and design challenges. By incorporating elements such as place attachment, problem-solving, and participatory approaches, Rittel's concepts can guide effective and empathetic design interventions in the aftermath of disasters.

Design Activism and Design Thinking are closely linked approaches within the design realm, each contributing unique perspectives to address societal challenges. While design activism challenges norms for social and environmental justice through innovative design, design thinking focuses on human-centered problem-solving. Both share a user-centric ethos, with design activism harnessing design's power for social transformation and design thinking evolving toward a more empathetic approach. Together, they offer a robust framework for designers to tackle societal issues, promote change, and create inclusive solutions for a better world. In conclusion, design activism represents a dynamic and influential movement that seeks to harness the power of design thinking for political and social transformation, playing a crucial role in shaping a more equitable and sustainable world.

3. THEORETICAL BACKGROUND

3.1. Actor-Network Theory (ANT)

Actor-Network Theory (ANT) stands as a unique approach to understanding the intricacies of complex systems involving both human and non-human elements. Originating from the works of scholars such as Bruno Latour, John Law, and Michel Callon, ANT challenges traditional dichotomies of agency, structure, and the human versus non-human divide. Instead of viewing social phenomena as solely human-driven or structure-imposed, ANT illuminates how networks emerge through the interplay of diverse actors and their associations (Latour, 1996; Julier, 2013).

Within the expansive scope of ANT, the concept of "actants" plays a crucial role. Actants are entities, whether human or non-human, that have the capacity to influence and shape the network. This inclusive perspective underscores the dynamic and heterogeneous nature of the actors involved, challenging the rigid distinctions often made in traditional analyses (Latour, 1996; Wessels, 2007).

At its core, ANT's premise revolves around networks, where both human and non-human actors are considered pivotal agents within these configurations. It emphasizes that actors, irrespective of their nature, gain significance through the number and quality of connections they forge. This approach does away with the typical separation of human and non-human entities, acknowledging their shared roles and the constant circulation and transformation of attributes, connections, and distributions within networks (Latour, 1996; Wessels, 2007).

Central to ANT is the notion of "translation," signifying how actors—human or non-human—interact and align their interests to form networks. ANT sees these networks as constantly evolving and being shaped by various actors, such as federal agencies, community activists, design professionals, or technological artifacts (Whittle & Spicer, 2008; Ekomadyo & Riyadi, 2020).

Furthermore, ANT's application extends to domains like information and communication technologies (ICT) and social movements. It elucidates how ICT influences collective actions, altering communication patterns, shaping narratives, and empowering youth engagement within social movements (Baron & Gomez, 2016).

The theory highlights the agency of non-human elements, challenging conventional views of power dynamics within networks. It emphasizes that stability within networks depends on the fidelity of all actors—human and non-human—to the network. ANT also introduces the concept of mediation, stressing how non-humans, such as technologies, play crucial roles in shaping interactions and outcomes among different actors (Whittle & Spicer, 2008; Baron & Gomez, 2016).

This perspective extends into diverse fields, including design culture, where ANT underscores the socio-technical nature of design processes. It emphasizes the role of non-human actors (artifacts, physical spaces) in shaping common understandings and practices. Design, in this view, becomes a collaborative process shaped by human and non-human interactions (Ekomadyo & Riyadi, 2020).

In essence, ANT offers a framework that challenges conventional views on agency, power, and the human-non-human relationship. It reframes analyses of social phenomena, emphasizing the continuous generation of associations and the intricate interplay between human and non-human actors in shaping complex networks and social dynamics (Latour, 2005; Law, 2009).

3.2. Actor-Network Theory (ANT) and Design Thinking

Integrating Rittel's concept of "wicked problems" with Actor-Network Theory (ANT) and Design Thinking provides a robust framework for addressing complex design challenges. Wicked problems, as defined by Rittel, are characterized by their complexity and the involvement of multiple stakeholders with conflicting perspectives (Zellner & Campbell, 2015; Johnston, 2016). This aligns with the holistic approach of ANT and the user-centric focus of Design Thinking.

By incorporating Rittel's notion of wicked problems into the ANT and Design Thinking framework, a deeper understanding of the challenges inherent in design processes emerges. Wicked problems emphasize the interconnectedness of various elements and the need for collaborative problem-solving approaches that consider diverse viewpoints (Johnston, 2016; Fischer et al., 2020). This perspective resonates with ANT's emphasis on the dynamic interactions between human and non-human actors in shaping networks and design solutions.

Furthermore, Rittel's advocacy for systematic documentation of design rationale complements Design Thinking's iterative and user-centered methods, highlighting the importance of capturing and analyzing the reasoning behind design decisions (Togay et al., 2016; Zellner & Campbell, 2015). This integration encourages a more transparent and reflective design process, where the influences of different actors and the complexities of wicked problems are carefully considered.

Incorporating Rittel's design thinking perspective into the ANT and Design Thinking framework also underscores the importance of addressing social issues and organizational dilemmas through innovative and collaborative approaches (Becker, 2002). By recognizing the intricate nature of wicked problems and the need for adaptive and flexible solutions, this combined framework promotes a more inclusive and effective way of tackling complex design challenges across various domains.

Overall, the integration of Rittel's design thinking perspective with ANT and Design Thinking enriches the understanding of design processes by emphasizing the interconnectedness of actors, the complexity of wicked problems, and the iterative nature of problem-solving. This combined framework offers a robust approach to addressing contemporary design challenges, encouraging interdisciplinary collaboration and innovative solutions that consider the diverse perspectives and influences at play.

4. METHODOLOGY

Design activism, actor-network theory (ANT), and design thinking form a symbiotic relationship that recognises the influence of both human and non-human actors in shaping socio-technical systems. Design activism seeks social change through intentional design interventions that align with the user-centered principles of design thinking. ANT provides a theoretical framework for analyzing the complex networks within these systems.

The socio-technical approach at the center of design activism and ANT involves the iterative and collective process of design thinking that is crucial to accommodate non-human actors. ANT guides the understanding of the role of design in shaping sociality, while design thinking offers actionable methodologies. According to ANT, success in design activism depends not only on tangible results, but also on sustained participation and collaboration within the network, reflecting the collaborative and iterative nature of design thinking. Together, these approaches offer a comprehensive method for understanding, shaping and transforming socio-technical systems.

Following the devastating earthquake in Kahramanmaraş on 6 February 2023, which caused loss of life and internal displacement, 70 volunteers from different disciplines in Izmir, mostly designers, came together voluntarily to help the citizens who were affected by the disaster and settled in Izmir, and collaborated with Izmir Metropolitan Municipality and other institutions. The volunteer design activism demonstrated in this case study with Izmir Metropolitan Municipality exemplifies the practical application of design thinking in addressing emergencies from a human-centered perspective.

4.1. Kahramanmaraş Earthquake and Izmir Metropolitan Municipality

On 6 February 2023, while international aid was pouring into the region following the Kahramanmaraş earthquake, both national and local governments in Türkiye collaborated in the disaster area. Izmir emerged as a hub for multifaceted support, with the Metropolitan Municipality actively sending aid, enhancing infrastructure, and facilitating the safe transport of collected donations to the affected region. The city also launched campaigns providing shelter, food, hygiene supplies, and financial assistance to earthquake victims arriving in Izmir. To streamline aid efforts, digital infrastructures were developed and publicized for citizen support, while coordination meetings with Civil Society Organizations (CSOs) were held to synchronize their contributions.

The earthquake impacted 11 out of 81 provinces in Türkiye, prompting other metropolitan municipalities to engage and assist affected cities. However, the prolonged effects of such a disaster led to a 30% decline in local municipal services. As a result, collaborative efforts and innovative service development became pivotal in extending aid to earthquake victims nationwide. Coordination and planning became crucial in addressing the evolving needs of the disaster zone and those arriving in Izmir, emphasizing the accurate identification of requirements, sufficient preparation of aid, ensuring proper distribution, and ongoing monitoring.

As a local government organization, Izmir Metropolitan Municipality aims to design and implement the best services together with civil and academic organizations. It aims to build collaboration on trust, co-production, inclusiveness, and accountability. The Izmir Metropolitan Municipality initiated contact with various CSOs, seeking their assistance to bolster municipal support and address urgent needs during disaster relief. They also sought insights into the expectations and contributions of these organizations toward the collaborative effort. Aligning themes such as Education, Health, Law, Economy, Culture, and Migration with municipal services, the focus remains on specific target groups: Children, Youth, Adults, Women, and Special Groups.

The emphasis lies on coordinated planning and cooperation among stakeholders to effectively address the dynamic needs arising from the earthquake's aftermath, ensuring comprehensive support and sustainable assistance to those affected. In this context, Izmir Metropolitan Municipality benefited from the support and process facilitation of the volunteer design community.

4.2. Volunteer Design Community and Design Thinking Process

During the process, volunteer designers have been in contact with Izmir Metropolitan Municipality, analyzing the aid collection and distribution processes, and the digital interfaces used (Figure 1), and participating in coordination meetings. In this framework, the volunteer designers came together through routine online meetings and worked on the design of new processes and improvements to the ongoing aid work in the light of stakeholder capabilities and existing work, focusing on the target audience with a Design Thinking approach. In the process with the Design Thinking approach, the designers ensured that the information is visualized and associated with understanding, design and application studies. In the process, volunteer designers were divided into four groups: Research, Process Design, Visual Design, and Interface Design.

Figure 1. Stakeholders & Digital Platforms (Authors).

The research team compiled existing international and national studies and prepared in-depth research content in line with the needs. The purpose of this study is to bring together the dispersed information in the process and to create a resource pool. The result of the research showed that this information disorganization and miscommunication across the country have led to the emergence of many applications serving the same purpose and the dispersion of data. The research team ensured the collection of information by sharing the "Earthquake Information Sources" table with the community in the digital environment as an open source in the process and categorized the existing studies (open data and mapping, shelter, legal support, transportation, psychological support, financial support, loss, food, health, education, professional support, animal rights, etc.) and shared them with the municipality by bringing the data together so that the right information source could be reached.

Following the disaster, shelter, nutrition, health, and humanitarian support needs of earthquake victims arose both in the disaster area and Izmir. A survey was prepared by the research team in order to compile the beneficiary groups and the areas where Civil Society Organisations (CSOs) operating in Izmir can support them in meeting the short, medium, and long term needs of earthquake victims, and to determine the expectations and contributions in the cooperation model to be developed. With the survey, which consists of three main headings: general information about the organization, expectations from the collaboration model and contributions to the model, and information on all CSOs that want to support in the short, medium, and long term has been compiled (Figure 2).

Figure 2. CSO Survey Results (Authors).

As a result of their analyses, the research team prepared an easily accessible map of CSOs' organizational structures, beneficiary groups, and the support services they can provide (Figure 3). This map was prepared on Graph Commons, a collaborative platform for mapping, analyzing, and sharing data networks, and shared with the municipality. To sum up, actant information was collected independently from each CSOs, but the links between them were established by volunteer designers and a network was created. In this way, CSOs were able to see with whom they could cooperate through organizational structure, support service, and beneficiary group.

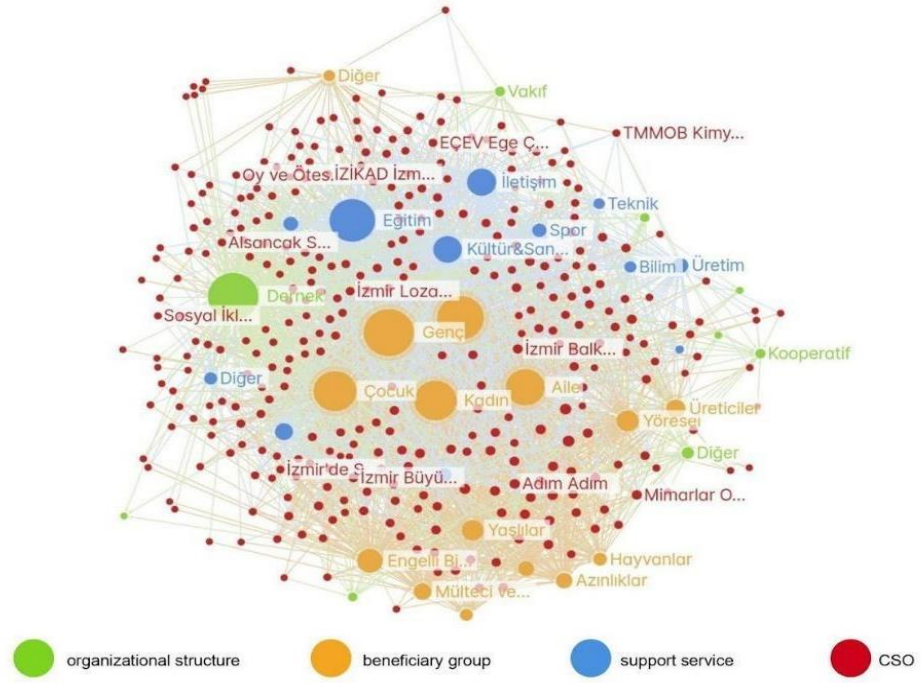

Figure 3. Civil Society Organizations Study, Community Map made in Graph Commons (Authors).

The visual design team created a common visual language for the efficient delivery of services to the end-user and developed 2D digital visual design content in coordination with the Municipality's design team (Figure 4). These contents as non-human actors were produced through networks of artifacts, people and institutions.

Figure 4. Visual Design for digital communication of İzmir Metropolitan Municipality (Authors).

The Interface Design team analyzed the digital platforms that are birkirabiryuva.com (a solidarity campaign initiated by Izmir Metropolitan Municipality and İhtiyaç Haritası (Needs Map) to bring together citizens who lost their homes after the 6 February 2023 Kahramanmaraş earthquake with citizens who want to provide rental support or make their vacant homes available for use. This campaign is built on the experience gained during the 30 October Izmir earthquake and the computer software created.), umuthareketi.com (Earthquake aid campaign including support packages consisting of emergency needs such as food, tents, sleeping bags, blankets, hygiene packages, boots and coats) and bizizmir.com (A digital platform that includes Izmir residents in the municipal administration and provides access to many municipal services) used by the Municipality in aid campaigns. In contact with the relevant directorates of the municipality, they suggested interface design improvements for easier use by users (Figure 5).

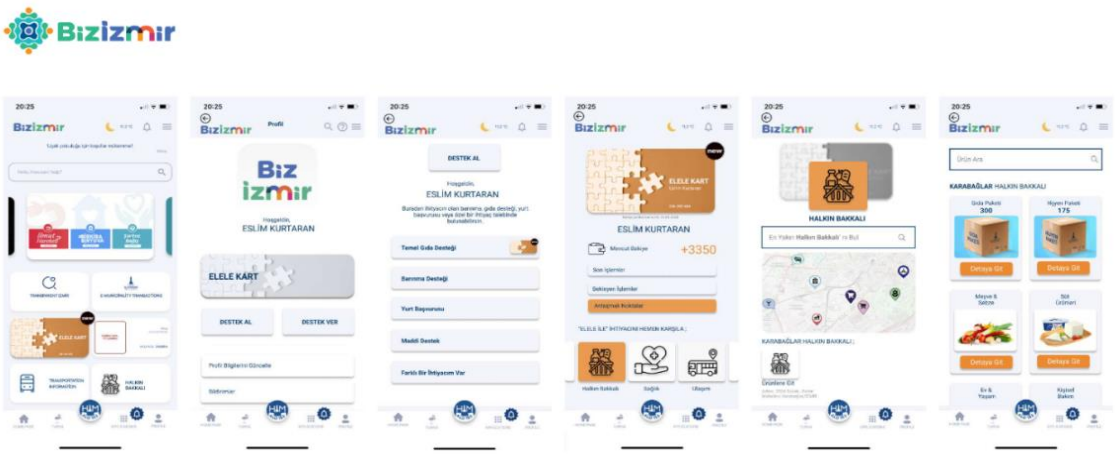

Figure 5. Bizizmir Interface Design Suggestions by Volunteer Interface Design Team (Authors)

The process design team analyzed the support processes of the Municipality and other local stakeholders and suggested improvements. They conducted a process study on pre-, during, and post-disaster support. Within the scope of post-disaster support, they analyzed the work of different warehouses established in Izmir for the needs of earthquake victims in the disaster zone and Izmir and identified problems such as space utilization, orientation, lack of volunteers, packaging, and communication. They made suggestions to centralize the dispersed information in the support collection process, to improve the process in the warehouses and to ensure that the aid reaches the right places, and carried out collaborative studies with CSOs on warehouse stock tracking management. The volunteer design community, led by the process design team, also proposed a system design that puts the citizen at the center and includes a model of collaboration between stakeholders, thematic working groups, public service design, and data relationships between interfaces (Figure 6). In this system, which is an example of effective and empathetic design intervention after a disaster by combining elements such as place attachment, problem-solving and participatory approaches, the citizen in the centre represents the earthquake victim who settled in Izmir within the scope of the case.

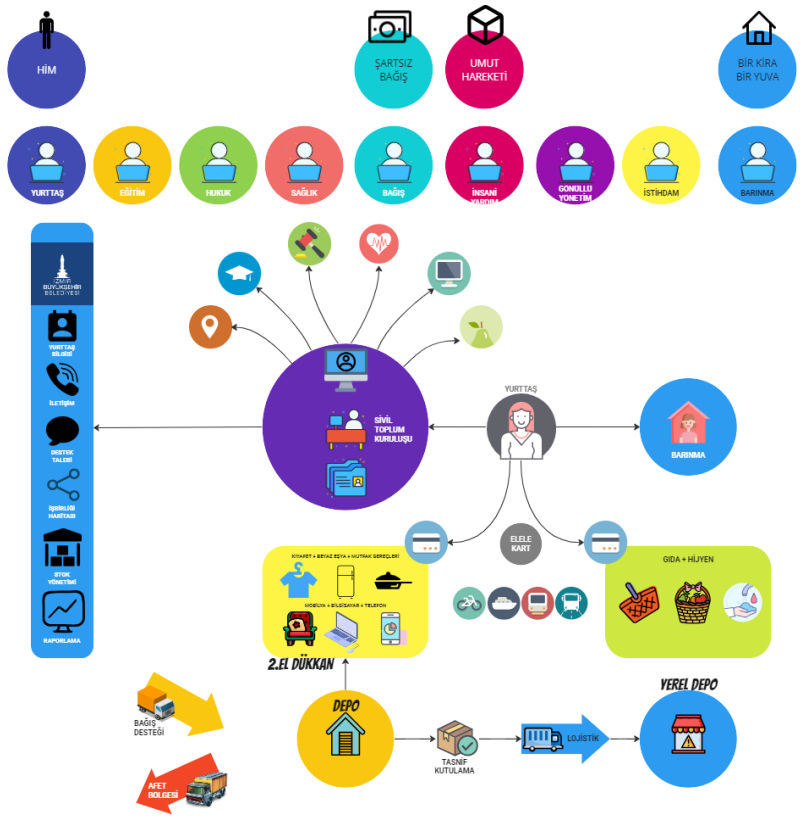

Figure 6. System Design for İzmir Metropolitan Municipality created by Volunteer Design Team (Authors).

During the process, the Volunteer Design Community has coordinated and carried out their work through different digital tools. The designers provided instant communication and coordination between the community and subgroups via WhatsApp, organized weekly routine meetings with the Zoom interface, created a collaborative and easily accessible workspace with the common Miro board interface (Figure 7), and produced joint content with Google Drive and Figma interfaces.

Figure 7. Miro collaborative board used by volunteer design community (Authors).

5. DISCUSSIONS AND CONCLUSION

In conclusion, the symbiotic relationship between design activism, Actor-Network Theory (ANT), and Design Thinking underscores the transformative potential of interdisciplinary collaboration in addressing complex societal challenges. Design activism, with its focus on utilizing design for social or environmental change, aligns with the core principles of both ANT and Design Thinking, emphasizing the inclusive nature of design processes and the recognition of the agency of both human and non-human actors (Becker, 2002; Buchanan, 2016).

ANT's emphasis on the interactions among diverse actors resonates with the collaborative approach of design activism, where designers work alongside stakeholders to address wicked problems (Murro & Beuren, 2016; Johnston, 2016). Additionally, Design Thinking's human-centered and iterative problem-solving approach complements ANT by prioritizing user needs and fostering innovation (Knight et al., 2019; Elsbach & Stigliani, 2018).

This convergence of design activism, ANT, and Design Thinking fosters a holistic understanding of design processes, where the integration of diverse perspectives and the engagement of stakeholders are central to creating meaningful impact (Fischer et al., 2020; Togay et al., 2016). By acknowledging the

interconnectedness of actors and the dynamic nature of networks, designers can navigate wicked problems more effectively and promote social innovation (Skuse et al., 2020; Zellner & Campbell, 2015).

In essence, the collaborative relationship between design activism, ANT, and Design Thinking highlights the importance of interdisciplinary approaches in addressing complex societal challenges. By integrating these frameworks, designers can develop innovative solutions that address the needs of diverse stakeholders and create positive social change (McCune et al., 2021; Li & Kou, 2022). This holistic perspective not only enhances the effectiveness of design interventions but also contributes to the advancement of knowledge and practice in the field of design.

Through volunteer design activities, they made concrete contributions to the improvement of processes and the design of new processes in the work carried out by Izmir Metropolitan Municipality and other institutions for citizens affected by the earthquake, suggested the right communication methods and processes for stakeholders to work in coordination, and supported the effective collection of aid by developing easy-to-use interfaces with a human-centered perspective. Through this case study, we can say that voluntary design activism prevented mistakes that may occur in an emergency and contributed to the correct use of resources with concrete suggestions. In this contribution, we can say that all human actors in the process create a chain of influence by affecting each other and the communities they are connected to, as well as non-human actors such as organizations, technology, service designs, and visible outputs that are designed to find fast solutions to complex problems.

Moreover, according to the ANT approach, the success of voluntary design work hinges not solely upon the design outcome itself but equally on the integration and involvement of pertinent actors within the network expansion throughout and following the design project. ANT's emphasis on the continuous engagement and interplay among actors underscores the significance of sustained collaboration and network development for the enduring impact of design interventions.

This study aims to develop a model of collaboration among local stakeholders and set an example for other places in Türkiye and the world to deal with these crises from a public service perspective. These studies carried out by the Voluntary Design Community on the basis of Design Thinking in collaboration with Izmir Metropolitan Municipality and CSOs have formed the basis for further studies. In this context, collaborations with different local, national, and international communities and CSOs continue and projects are carried out on the solidarity culture in Izmir.

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REFERENCES

Ashman, R., Patterson, A., & Kozinets, R. (2021). Netnography and design thinking: development and illustration in the vegan food industry. *European Journal of Marketing, 55*(9), 2491-2514. https://doi.org/10.1108/ejm-02-2020-0155

Baron, L. F., & Gomez, R. (2016). The Associations between Technologies and Societies: The Utility of Actor-Network Theory. *Science, Technology and Society, 21*(2), 129–148. https://doi.org/10.1177/0971721816640615

Becker, F. (2002). Organisational dilemmas and workplace solutions. *Journal of Corporate Real Estate, 4*(2), 129-149. https://doi.org/10.1108/jcre.2002.4.2.129

Birkirabiryuva.org. (n.d.). https://birkirabiryuva.org/

Bizizmir.com. (n.d.). https://www.bizizmir.com/

Cetin, O. D. (2016). Design activism from the past to present: A critical analysis of the discourse. *In The 10th Conference of the International Committee for Design History & Design Studies, Blucher Design Proceedings, Volume 8, 2016,* 388-393. ISSN 2318-6968. http://dx.doi.org/10.1016/despro-icdhs2016-04_016

Clarke, A. J. (2013). Actions Speak Louder. *Design and Culture, 5*(2), 151-168. https://doi.org/10.2752/175470813X13638640370698

Dilnot, C. (1982). Design as a socially significant activity: an introduction. *Design Studies, 3*(3), 139-146.

Dym, C., Agogino, A., Eriş, Ö., Frey, D., & Leifer, L. (2005). Engineering design thinking, teaching, and learning. *Journal of Engineering Education, 94*(1), 103-120. https://doi.org/10.1002/j.2168-9830.2005.tb00832.x

Ekomadyo, A. S., & Riyadi, A. (2020). Design in socio-technical perspective: An actor-Network theory reflection on community project "Kampung Kreatif" in Bandung. *Archives of Design Research, 33*(2), 19–36. https://doi.org/10.15187/adr.2020.05.33.2.19

Elsbach, K. and Stigliani, I. (2018). Design thinking and organizational culture: a review and framework for future research. *Journal of Management, 44*(6), 2274-2306. https://doi.org/10.1177/0149206317744252

Fischer, G., Lemke, A., McCall, R., & Mørch, A. (2020). *Making argumentation serve design.*, 267-293. https://doi.org/10.1201/9781003064053-12

Fox, S., Lim, C., Hirsch, T., & Rosner, D. K. (2020). Accounting for design activism: On the positionality and politics of designerly intervention. *Design Issues, 36*(1), 5–18. https://doi.org/10.1162/desi_a_00571

Fuad-Luke, A. (2009). *Design activism beautiful strangeness for a sustainable world.* Earthscan.

Johnston, J. (2016). Australian naplan testing: in what ways is this a 'wicked' problem?. *Improving Schools, 20*(1), 18-34. https://doi.org/10.1177/1365480216673170

Julier, G. (2011). Political economies of design activism and the Public Sector. *Nordes 2011: Making Design Matter.* https://doi.org/10.21606/nordes.2011.005

Julier, G. (2013). From Design Culture to Design Activism. *Design and Culture, 5*(2), 215-236. https://doi.org/10.2752/175470813X13638640370814

Latour, B. (1996). On actor-network theory: A few clarifications. *Soziale Welt, 47*(4), 369–381. http://www.jstor.org/stable/40878163

Latour, B. (2005). *Reassembling the social: an introduction to actor-network theory.* Oxford University Press.

Lee, A. (2013). Casting an architectural lens on disaster reconstruction. *Disaster Prevention and Management an International Journal, 22*(5), 480-490. https://doi.org/10.1108/dpm-10-2013-0178

Lees-Maffei, G. (2012). Reflections on Design Activism and Social Change: Design History Society Annual Conference, September 7-10, 2011, Barcelona. *Design Issues, 28* (2): 90–92. https://doi.org/10.1162/DESI_r_00147

Lenksjold, T. U., Olander, S., & Halse, J. (2015). Minor design activism: Prompting change from within. *Design Issues, 31*(4), 67–78. https://doi.org/10.1162/desi_a_00352

Manzini, E. (2010). Small, local, open and connected, design for social innovation and sustainability. *The Journal of Design Strategies, 4*(1), 8-11.

Seshadri, P., Joslyn, C., Hynes, M., & Reid, T. (2019). Compassionate design: considerations that impact the users' dignity, empowerment and sense of security. *Design Science, 5*. https://doi.org/10.1017/dsj.2019.18

Storni, S. (2015). Notes on ANT for designers: ontological, methodological and epistemological turn in collaborative design. *CoDesign: International Journal of CoCreation in Design and the Arts, 11*(3-4), 166-178. https://doi.org/10.1080/15710882.2015.1081242

Togay, A., Coşkun, M., Güneş, S., & Güneş, Ç. (2016). Computer aided design in education and its interpretation through design thinking. *New Trends and Issues Proceedings on Humanities and Social Sciences, 2*(1), 328-337. https://doi.org/10.18844/prosoc.v2i1.315

Umuthareketi.izmir.bel.tr. (n.d.). https://umuthareketi.izmir.bel.tr/

Wessells, A. T. (2007). Reassembling the Social: An Introduction to Actor-Network-Theory by Bruno Latour. *International Public Management Journal, 10*(3), 351-356. https://doi.org/10.1080/10967490701515606

Whittle, A., & Spicer, A. (2008). Is actor network theory critique?. *Organization Studies, 29*(4), 611–629. https://doi.org/10.1177/0170840607082223

Zellner, M. and Campbell, S. (2015). Planning for deep-rooted problems: what can we learn from aligning complex systems and wicked problems?. *Planning Theory & Practice, 16*(4), 457-478. https://doi.org/10.1080/14649357.2015.1084360

Zhang, H., Z, M., & Zhang, W. (2015). Design charrette as methodology for post-disaster participatory reconstruction: observations from a case study in fukushima, japan. *Sustainability, 7*(6), 6593-6609. https://doi.org/10.3390/su7066593