Data Siloing as Infrastructural Activism

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The refugee support ecosystem in the U.S.-Mexico Borderplex is resource-scarce, dynamic, and transitional, requiring intensive information work. To address coordination challenges among the cross-sector socio-technical community working at one of the largest ports of entry for asylum seekers, the county government of El Paso, TX, USA, has proposed a centralized information system for use by all refugee-serving organizations on the U.S. side of the border. However, stakeholder responses have varied, with some organizations approving, and others resisting the proposal. This research investigates the nuanced dynamics of information infrastructures among stakeholders from different refugee-serving organizations working in the Borderplex, explaining how they navigate pressures to centralize their information infrastructures amid myriad concerns while considering the costs of not doing so, particularly for the refugees. Through a combination of ethnographic fieldwork, semi-structured interviews, and thematic analysis, we explore why some of the organizations in the Borderplex are choosing to silo their data—in support of financial freedom, mission malleability, and maintaining privacy in a liminal context—as a form of infrastructural activism. Our findings contribute to discussions of non-use and deliberate disconnection, highlighting the complex political and practical dimensions of technology (non-)adoption.

CCS Concepts: • **Human-centered computing → Empirical studies in HCI**.

Additional Key Words and Phrases: Immigration, Database Infrastructures, Migration, Human Service Organizations, Asylum Seekers, Refugees

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1 INTRODUCTION

As the world becomes increasingly data-driven, the pressure to adopt information and communication technologies (ICTs) becomes increasingly significant and, in some cases, increasingly difficult to push back against. It is typically assumed that ICTs will enable humans to be more productive and to make better decisions(e.g. [35]). In some contexts, the pressure to adopt ICTs takes the form of a moral imperative, that technology "would be beneficial if deployed, ought to be adopted, or should be leveraged" [27]. Taken to an extreme, the assumption is that anything, even complex societal problems, can be solved with technology [52]. However, the adoption of new technologies has often created harm—even if unintended—for marginalized populations. For example, the adoption of mental health technologies blossomed during the COVID-19 pandemic, touted as being a great equalizer; however, research indicates that these technologies have actually widened both racial and socioeconomic inequities in access [44, 55]. Similarly, the adoption of new

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algorithmic decision-making tools, whether in child welfare [20], education [43], policing [7], or housing [33] has also exacerbated structural inequalities.

As ICTs are increasingly used to conduct work about and for marginalized communities, it is imperative that we better understand how the pressures to be data-driven and to adopt new technologies are playing out in these communities and when and how, if at all, stakeholders are able to push back. The technosolutionist perspective often assumes that stakeholders who do not adopt technology must lack either the financial or technical ability to do so, and fail to consider that they might have other, more deliberate reasons for opting out, such as resisting repression or enacting a political stance [32].

In this research, we explore the resistance to technology adoption by marginalized organizational stakeholders who are working on behalf of even more marginalized individuals in the Borderplex region encompassing El Paso, Texas, United States and Ciudad Juarez, Chihuahua, Mexico. El Paso serves as the second largest port of entry for refugees seeking asylum in the United States. At the time of writing, the first author has been conducting fieldwork with refugee-serving organizations in the Borderplex region for two years, studying the politics of data in this highly politicized context. In the midst of this fieldwork, in early 2022, a local governmental agency in El Paso county launched an initiative to centralize the information infrastructures of the patchwork of organizations providing housing and human services to refugees passing through. This agency hoped to increase inter-organizational collaboration, improve awareness of available services, and streamline the placement of refugees at sheltering organizations. Yet, the alarm and pushback from many refugee-serving organizations was striking. In this research, then, we ask the following questions:

(1) How and why are refugee-serving human-service organizations in El Paso choosing to collaborate or not collaborate with imperatives to adopt new centralized information infrastructures?
(2) What different rationales motivate these stances? How are these rationales embodied through infrastructural practices?
(3) What are the costs to marginalized stakeholders?

To answer these questions, we conducted an interview study with 13 workers from 10 refugee-serving organizations in El Paso, Texas, all of whom were stakeholders in a county agency's proposal to build a centralized information infrastructure. We first present an overview of HCI research related to technology use by refugee-serving organizations as well as that related to the non-use of ICTs. We then provide additional context about the research site, including the various stakeholders in the information ecosystem and the characteristics of that ecosystem. Then, we present the results of our analysis, which reveals that these refugee-serving organizations are pushing back to varying degrees against data-driven imperatives by maintaining siloed information infrastructures—information systems that are designed to be insular within the organization. We identify and characterize the three affordances of siloed information systems that motivate their pushback to data-driven initiatives: (1) promoting financial freedom and diversity, (2) affording mission malleability, and (3) respecting the liminality of the borderlands for refugees. While these organizations have centered their marginalized clients in their decisions to maintain siloed information systems, we also characterize the costs of siloing for those clients. Finally, we discuss how some of these organizations' refusal to participate in centralized information systems by maintaining their own siloed infrastructures, serves as an exemplar of **infrastructural activism**.

This research builds upon prior CSCW research by investigating the nuanced dynamics of information infrastructure among refugee-serving organizations. We contribute a case study of organizational resistance to centralized systems and highlight the importance of maintaining localized

control, drawing on themes of socio-technical non-use and elaborating on the practical implications of infrastructural activism. Our results highlight the need for flexible computing solutions that respect local autonomy and the specific needs of diverse and marginalized stakeholders.

2 LITERATURE REVIEW

2.1 Information and Communication Technology Use by Refugee-Serving Organizations

While there is a large body of research about the role of ICTs for refugees along their journey—how refugees use ICTs while in refugee camps and other transitional spaces between countries (e.g., [13, 58]) and how they use ICTs to help adjust to life in their final destinations (e.g., [5, 8, 31, 57]—there is significantly less research focusing on ICT use by the myriad institutions that support refugees on their resettlement journeys. The few studies that exist center around questions of how organizational data work practices might be better structured, particularly given the unique context in which these organizations operate—a context of dynamism, liminality, and resource scarcity. Boersma et al. [15], for example, found that when refugee-serving organizations have malleable and adaptive infrastructures and work practices, they can respond better to the dynamic circumstances of refugees, maximizing their potential for resilience. Meier [39] highlights crowdsourced information work as being particularly valuable given the dynamism of this context, enabling volunteers to converge online and assist organizations (e.g., using geographical information systems to help map refugee migration patterns) in times of crisis.

Other research focuses more explicitly on the role that technology can play given the liminality of the refugee context. Brown and Grinter [17], for example, explore what it would mean to design technologies (e.g., translation tools) for refugees and aid workers for 'transient use.' Crucially, they highlight that successful technology use in this context might mean gradual non-use, as stakeholders move through the most tenuous period of liminality to become more settled or culturally independent. Other research contributing design recommendations for improving resettlement information systems includes calls for systems geared to users with low language and technological literacy during their first few months of transition to a new country with a different language [46], and ICTs for information sharing that leverage community-based knowledge of organizational resources for refugees [9].

Finally, a growing body of research about ICT use by human-service organizations—including but not limited to refugee-serving organizations—emphasizes the scarcity of technical expertise and resources in this organizational context. For example, human service organizations often piece together assemblages of information infrastructures, referred to as "homebrew databases," which undergo constant reconfiguration as human resources turn over and as the data demands of funders evolve over time [56]. The combination of resource scarcity and the data demands of more powerful stakeholders in the human service context also have been found to disempower organizations, which sometimes leads to data drift, undermining the collection and use of longitudinal data, and sometimes leads to mission drift within the organization, itself [16].

In this research, then, we further bolster the disproportionate dearth of research that focuses on the organizational experience of information technology within refugee-serving organizations, particularly given their unique sociotechnical context of dynamism, resource scarcity, and liminality. There is limited research examining the protective strategies of ICT use by refugee-serving organizations in sociotechnical environments marked by political, economic, and social risks and constraints.

2.2 Non-Use of Information and Communication Technologies

Studying the non-use of ICTs is crucial because it challenges the assumption that technological adoption is universally beneficial and highlights the diverse reasons why stakeholders might choose to resist or reject technology. Much of the research centering around the non-use of technology characterizes the motivations underlying non-use (e.g. [11]). Satchell and Dourish [47] emphasize that non-use is not a homogenous phenomenon, and that non-users can include potential users, disenfranchised individuals, ex-users, as well as active resistors; each class of which can have different motivations for non-use.

Studies of potential users have identified numerous factors that delay adoption, including a lack of trust that systems will actually enhance work or support the organizational mission, the perceived complexity of the user experience, and the overhead of adopting new technologies into current work practices [14, 45]. Research focusing on non-use due to disenfranchisement has highlighted structural, linguistic, and legal barriers to use (e.g, [53]). Research focused on why refugees do not use ICTs finds a lack of comfort in adopting new technologies in new languages [30], as well as non-use of search engines or social media due to fear of surveillance and other legal implications [26].

Non-users also include ex-users, those who have stopped using the technology, often because they were 'disenchanted' [47], disliked the loss of online autonomy [6, 19] or the loss of control of personal information [12]. Much of the research focus here is on reasons users left certain ICTs or social media platforms, such as when a technology does not work the way users expect, either via not offering enough control or via offering too much information [25]. Other research indicates that non-use is a way of mitigating risks associated with use, including over-dependence [36], addiction [29, 50], procrastination [50], or a distaste for the culture of vanity that surrounds social media [59]. Other research cites moral stances for individual users to leave a platform as a symbol of resistance (although this is usually not often described as solely a political act by ex-users) [42]. Such research finds that non-users raise concerns around the manipulation involved in the use of commercial networks algorithmically adjusting the visibility of certain content or contributing to the hyper-visibility of powerful stakeholders (e.g. "media giants" and large political accounts) [19]. Several studies of ex-users identify risks associated with users' personal privacy and autonomy. Ex-users of Facebook, for example, report leaving the platform due to potential misuses of data by both the platform and third parties [10].

In biomedical and technoscientific settings, Benjamin has analyzed individuals' rationale for bio-defection, that is, opting out of biotechnologies. She identifies this as "informed refusal" or the right of patients to refuse medical or research interventions after being informed of the risks and benefits, particularly to members of historically marginalized groups. Their refusal to participate in these interventions stems from structural factors that have perpetuated harm on these communities. Benjamin calls for researchers to adopt a justice-oriented approach that prioritizes the epistemological and political significance of refusal when trying to get buy-in for medical and research interventions [12].

Studies of non-users actively resisting technology adoption outline motivations including concerns about the quality of technology and potential loss of autonomy, such as educators' resistance to adopt educational technology due to concerns over pedagogical techniques used in learning management systems and blended learning [41]. A few studies, however, find that active resistance to technology can be due to political reasons—one of *activism*. Kaun and Treré study technology push-back and media refusal across social media and other digital platforms, tools, and services as an explicit political practice. They use a theoretical matrix combining dimensions of power, collectivity and temporality, and define three political reasons for digital disconnection, including (a)

repression, (b) resistance, and (c) performance and life-style politics [32]. Liu studied the (non)-use of ICTs by political activists in Hong Kong in two case studies of social movements. In this research, he contextualized the activists' relationship with technology as a repertoire of contention, "namely the practice and performance of political activism" [37]. Liu describes social media as not having significant local usage to coordinate activism. Instead, activists used end-to-end encrypted messengers and closed-group, private online communities, eventually leaving mainstream platforms for others that privilege privacy more effectively, and/or originate from local and allied developers. Zong and Matias discuss the concept of data refusal, a practice of rejecting the processes, goals, or authority of data collectors. This approach emphasizes autonomy, time, power, and cost as key facets of refusal [60]. They argue that refusal is not merely an act of saying "no" but a generative practice that can lead to the design of new social configurations and technological systems. There is a particular dearth of research surrounding (non)-use of ICTs in workplaces as facilitators of activism, which we focus on in this research.

In considering these forms of resistance and non-use, it is crucial to acknowledge the contributions of decolonial computing, which argues that the framework of "users" and "non-users" itself is rooted in a colonial mindset. This perspective critiques the assumption that technological adoption is inherently beneficial and necessary, and urges us to rethink how we "design and build computing systems" [4, p.7]. Decolonial computing researchers advocate for creating technologies that "undermine… the asymmetry of local-global power relationships" and "decenter… Eurocentric universals" [4], and instead call for finding alternative ways for computing systems to "interoperate, coordinate, and coexist" without necessitating Eurocentric ideals of "central agreements or universal encodings" [23].

In this research, we shift the focus from individual rationales about technology use to organizational rationales. We also work to integrate a more decolonial perspective into the predominantly binary discourse around use and non-use, focusing on the asymmetries of power relationships in the negotiation of technology use. This research focuses on understanding motivations for how and why refugee-serving organizations consider ICTs and collaboration (RQ1), as well as their rationales (RQ2) for such decisions despite costs (RQ3) behind such decisions.

3 RESEARCH CONTEXT

The Borderplex region encompassing El Paso, Texas, United States, Las Cruces, New Mexico, United States and Ciudad Juarez, Chihuahua, Mexico is the second largest port of entry for refugees entering the United States. These refugees are supported by a breadth of governmental and nonprofit organizations, whose information ecosystems are characterized by resource scarcity, extreme dynamism and liminality.

Researchers have noted the limited resources of nonprofit organizations, particularly when it relates to investing in data-driven initiatives [16, 34, 40, 56]. Resources are further constrained in the limited geographic scope of the Borderplex, particularly for nonprofit organizations that serve refugees and unhoused individuals [38, 49, 51]. The Mayor of El Paso has indicated that El Paso is "at a breaking point," with too few resources to support the immigration crisis [24]. Competition for resources is high, as most refugee-serving organizations are often applying for the same government funding and courting the same private donors. In this resource-scarce environment, organizations focus on the creative stewardship of the resources they have.

The number of refugees crossing the border and needing shelter, transportation, and other supporting services fluctuates significantly. This highly dynamic influx of *people* is paralleled by a highly dynamic influx of *information*—most data collection is initiated by DHS agents, who conduct detailed interviews and background checks, which become the basis of the paperwork issued to refugees. The amount of data work then multiplies at each service organization that the refugee

relies on for support. There are also numerous social media groups (e.g., on WhatsApp) used to share informal information among refugees about what organizations have what resources to offer. The number of refugee-serving organizations also fluctuates dynamically, with both pop-up shelters and additional transportation resources being marshaled by various governmental and nonprofit stakeholders as the number of refugees increases.

The refugee experience is inherently liminal, as is their journey through the Borderplex region. While refugees' DHS data follows them to their inland destinations, the usefulness of their data footprint in dissipates quickly as they leave the border. There is also significant tenuousness in the information ecosystems used by service organizations. This research spanned a period of time during which Title 42—a policy that allowed DHS to expel refugees from the country on the grounds of a public health crisis (COVID-19)—was lifted [2]. For the refugee-serving organizations, the end of Title 42 meant more unpredictable numbers of refugees needing shelter. Numerous stakeholders contribute to the Borderplex's information ecosystem, many with notably different levels of power over both the experience and fate of refugees and their data:

- **Refugee.** We use the word refugee to refer to any individual who is fleeing from another country and who crosses the border into the United States. Refugees include verified and approved cases of individuals who have fled their country and are unable to return because of a well-founded fear of being persecuted and are granted documentation, rights, and permission to live and work in the US. Refugees also include asylum seekers, who are seeking international protection and have been issued some form of paperwork documenting permission to be in the US while their claims are being decided on, as well as individuals who have crossed the border undetected and who lack such paperwork. Not every asylum seeker will ultimately be recognised as a refugee by the US government, but we use the term here to affirm their goals of fleeing to find safety crossing the border.
- **U.S. Department of Homeland Security (DHS).** In the US, the Department of Homeland Security is a federal agency broadly responsible for public safety and security. DHS includes agencies such as: Customs and Border Protection (CBP), which oversees the entry of people and goods in the country; Immigration and Customs Enforcement (ICE), which enforces immigration laws and oversees deportation proceedings of some refugees; US Citizenship and Immigration Services (USCIS), which handles most immigration into the US; and The Federal Emergency Management Agency (FEMA), which responds to and manages public crises. DHS plays a critical role in managing the arrival of refugees, either at border crossings, through various ports of entry, or near border wall gates. DHS agencies continually shift policies, procedures, and sociotechnical systems, making information work highly dynamic. At the time of these interviews, DHS entities were ramping up a mobile application portal, CBP One, which features refugee interview appointment requests and I-94 arrival records for travelers [1]. DHS conducts thorough background checks and initial interviews to determine the level of surveillance necessary for each refugee, such as detention measures, ankle monitors, mobile phones, and facial recognition applications. Based on DHS background checks and interviews, they generate numerous permutations of paperwork for each refugee to carry with them as they move inland. Each set of paperwork is indicative of different legal statuses and asylum processes [3]. Additionally, FEMA partially reimburses the majority of refugee-serving organizations in the Borderplex that provide shelter and facilitate travel.
- **Human Service Organizations Providing Shelter and/or Transportation.** Refugee-serving organizations in the Borderplex region are nonprofits that primarily welcome refugees from DHS entities, offer shelter, and help arrange transportation to their families or sponsors inland. These organizations reference refugees' DHS paperwork to conduct their own intake

paperwork, collecting refugee identification numbers generated by DHS ("Alien numbers"), demographic information (e.g. country of origin, date of birth, gender), and length of stay in order to report to their funders.

- **Human Service Organizations and Local Government Agencies Providing Wrap-Around Services.** Additional human service organizations and agencies support refugees by providing complementary services (e.g. legal assistance, advocacy, medical care) and occasionally step in to fill gaps in staff and/or resources at the organizations providing shelter and transportation and occasionally open and operate pop-up shelters. These organizations also refer to refugees' DHS paperwork in order to determine eligibility for receiving services. Data work by these organizations usually involves aggregate counts of what services they provide to what demographics of clients. Some organizational funders require more specific information in order to reimburse services (e.g. Alien numbers, date of birth, and country of origin).
- **Lawmakers (local, county, state, federal, international).** Elected officials (and a few political appointees) are responsible for frequently changing border policies that affect the type of funding and resources available to refugee-serving organizations, the number and type of refugees allowed to legally enter the US, as well as how and what data are collected about refugees. In their data work, these stakeholders prioritize temporality, ensuring that policies are adaptable to the changing dynamics at the border and give adequate flexibility to law enforcement and service providers as the number of people crossing and their unique needs shift across time.

4 METHODS

The first author has been conducting IRB-approved ethnographic fieldwork in the Borderplex for the past two years, including participant observation at three refugee-serving organizations and interviews with employees and volunteers at those organizations. With the invitation of organizational leadership, she has also been attending and taking field notes at various intra- and inter- organizational meetings. In the midst of this fieldwork, a county government agency initiated a proposal for a centralized information infrastructure for refugee-serving organizations. Following this proposal, the first author conducted 13 interviews with individuals who work with refugee-serving organizations, including five directors, five managers, two long-term volunteer staff, and a policy analyst (Table 1). Interviews focused on how various organizational stakeholders were considering and then responding to the county's initiative. In the research that follows, we draw from that subset of 13 interviews and inductively analyze motivations for and responses to this proposal for a centralized information infrastructure.

These 13 informants work for 10 different organizations in the Borderplex information ecosystem. Seven informants work for the six 501c(3) charitable organizations that provide shelter and coordinate transportation. Two informants work for a local government agency and two for a government staffing contractor. Two informants work for other organizations that collaborate with both networks to provide supportive services (e.g. advocacy materials, explanation of emerging policies, and logistical support).

Informants have worked in their roles at these organizations from one to five years. Nine informants identified as male, two identified as female, and two identified as non-binary. To protect informants' privacy, we will be referring to them using gender-inclusive terminology (they/them) in the remainder of the paper. We did not speak directly to refugees. As such, the cost and benefits to refugees that are identified in this research are those that have been noticed by the workers. Future research will invite the voices of and explore the experiences of refugees as they transition through the Borderplex region.

Table 1. Informants and Organizations in this Research

Informant		Organization			
Informant #	**Job Title**	**Org #**	**Org Type**	**Services Provided**	**Network**
P1	Year-long Volunteer	1	Refugee Shelter	shelter, travel coordination	A
P2	Shelter Coordinator	2	Refugee Shelter	shelter, travel coordination	A
P3	Migrant Shelter Director	3	(Refugee) Shelter	shelter, travel coordination	B
P4	Program Manager	4	Local Government	funding, information, facilitates pop-up sheltering (e.g. hotels)	B
P5	Operations Manager				
P6	Manager	5	Gov't Contractor (for profit) day center	travel coordination ONLY	B
P7	Manager / Unification Specialist				
P8	Policy Analyst	6	Advocacy Organization	information	—
P9	Travel Manager	7	Refugee Shelter	shelter, travel coordination	A
P10	Executive Director				
P11	Executive Director	8	Gap Filler	wrap around services	—
P12	Director	9	(Refugee) Shelter	shelter, travel coordination	B
P13	Director	10	Refugee Shelter	shelter, travel coordination, shuts down based on need	A

4.1 Recruitment

The first author conducted all interviews between May and August of 2023, during times between surges of people crossing the border, when we felt the interviews would be less disruptive and the workers would have more capacity to reflect. We recruited primarily through professional networks established through the first author's fieldwork (she has volunteered at three of the organizations included in the sample) and subsequently through snowball sampling.

4.2 Data Collection

The first author conducted semi-structured interviews [21, 48] to understand existing information work practices and infrastructures at each organization, the nature of the existing inter-organizational collaborative work, and information sharing within each organization, within each network, and across the two networks. We then discussed the county's proposal for a centralized information infrastructure, asking for reactions to this proposal, informants' organizational stances (decisions to participate or not) that were emerging, and the rationale for these stances. We adapted specific questions for each interview, based on our evolving understanding of how data are used by refugee-serving organizations as well as the unique context of each organization in the Borderplex information ecosystem. We recorded all interviews except for that with P13, who did not consent to being recorded; we took notes about this interview, instead. When informants were able to share, we additionally collected sample forms and photos of other distributed forms of data (e.g., bulletin boards) to better understand current information infrastructures. We continued conducting interviews until we reached theoretical saturation across the breadth of experiences shared by the diversity of informants that we recruited.

4.3 Data Analysis

We transcribed audio from the interviews and conducted iterative and inductive analysis of the transcripts and interview notes from P13 using open coding and thematic analysis [21]. The two first authors met weekly to review their open-coding and discuss the emergent inductive analysis of interview findings related to the county's centralized data initiative. Researchers' initial codes included features of current information infrastructures, characteristics of the work environment that centered in decisions about information infrastructures, the various costs and benefits of (non)-collaboration, and observations about the ways that current and proposed information infrastructures have been or might be likely to affect clients. During axial coding, we found that key characteristics of the work context were related to particular affordances of siloed infrastructures and particular costs to clients: (1) Siloed Information Infrastructures Afford Financial Freedom in a Resource Scarce Context, (2) Siloed Information Infrastructures Afford Mission Malleability in a Highly Dynamic Context, and (3) Siloed Information Systems Supports Privacy in a Liminal Context. We organize our results around these three themes, offering additional characterization of the organizational information practices as preceding context. Our analysis further highlights the intentionality and power dynamics underlying these decisions, suggesting that some organizations are siloing their infrastructures as a form of activism or resistance, a theme that we turn to in our discussion.

5 FINDINGS

In what follows, we first characterize the existing information practices of refugee-serving organizations and describe interorganizational information sharing, where it occurs. Then, we turn to characterizing the range of motivations for participating (or not) in the county's proposed centralized information infrastructure, highlighting three affordances for maintaining siloed data: supporting financial freedom, organizational malleability, and privacy.

5.1 Overview of Organizational Information Practices

Federal policies serve as top-down mandates, with significant influence over the Borderplex's information ecosystem:

> *It's not a partnership. The government decides.... [DHS's] primary function is not to serve us, it's just to process those numbers [of refugees] through and then accomplish what they need to accomplish on their end, which can leave things a little bit messy for us.* (P9)

Shifting federal policies, law enforcement practices, as well as international migration patterns affect how refugee-service providers on the ground provide aid. Organizations often need to adapt their data work and general organizational practices to accommodate these shifts in policies, practices, and migration patterns, and are rarely given warning about these adjustments or their implications.

Most typically, however, this top-down information dissemination manifests via DHS sending text messages to sheltering organizations with minimal advance warning about how many people will arrive, their approximate time of arrival, and which DHS facility is releasing them. To complement this coarse information, organizations have created their own grassroots forms of information sharing via listservs and Whatsapp groups. P11 reports widespread interorganizational involvement in these grassroots efforts: *"we have just our own little WhatsApp group with every shelter"* (P11). These groups are used for coordinating donations and supplies (P11) as well as to schedule meetings and share updates about potential opportunities, scams, and other changes organizations are experiencing (P4, P7, P10). Occasionally, they are used to locate refugees separated from their families.

The refugee-serving organizations in the Borderplex region have also self-organized into two networks, each network composed of organizations with similar organizational practices, that function independently from each other (Figure**??**). Sheltering organizations in Network A are generally most established (e.g., one organization has been in service for 50 years) and provide hospitality services exclusively to refugees, often accommodating families. These organizations receive refugees directly from DHS entities after a network point person decides who should go where; refugees stay at that shelter until they are taken to a transportation hub to travel to their inland destinations. The director of the oldest organization in Network A serves as the point person between DHS and sheltering organizations:

> *At this point, every night we send [a senior director in Network A] a text that says, this is how many people we received today. These are their outline of demographics just so he can kind of have a good sense of what's going on. This is how many people we can receive tomorrow. And then the next day he lets us know this many people are going to this place, this many are going to that. It's not always perfect. It's not totally where we'd love it to be… the current practice exists because of history and the system and the whole deal. And to be honest, [the senior director] held this together for a super long amount of time with, like, tape and glue.* (P10)

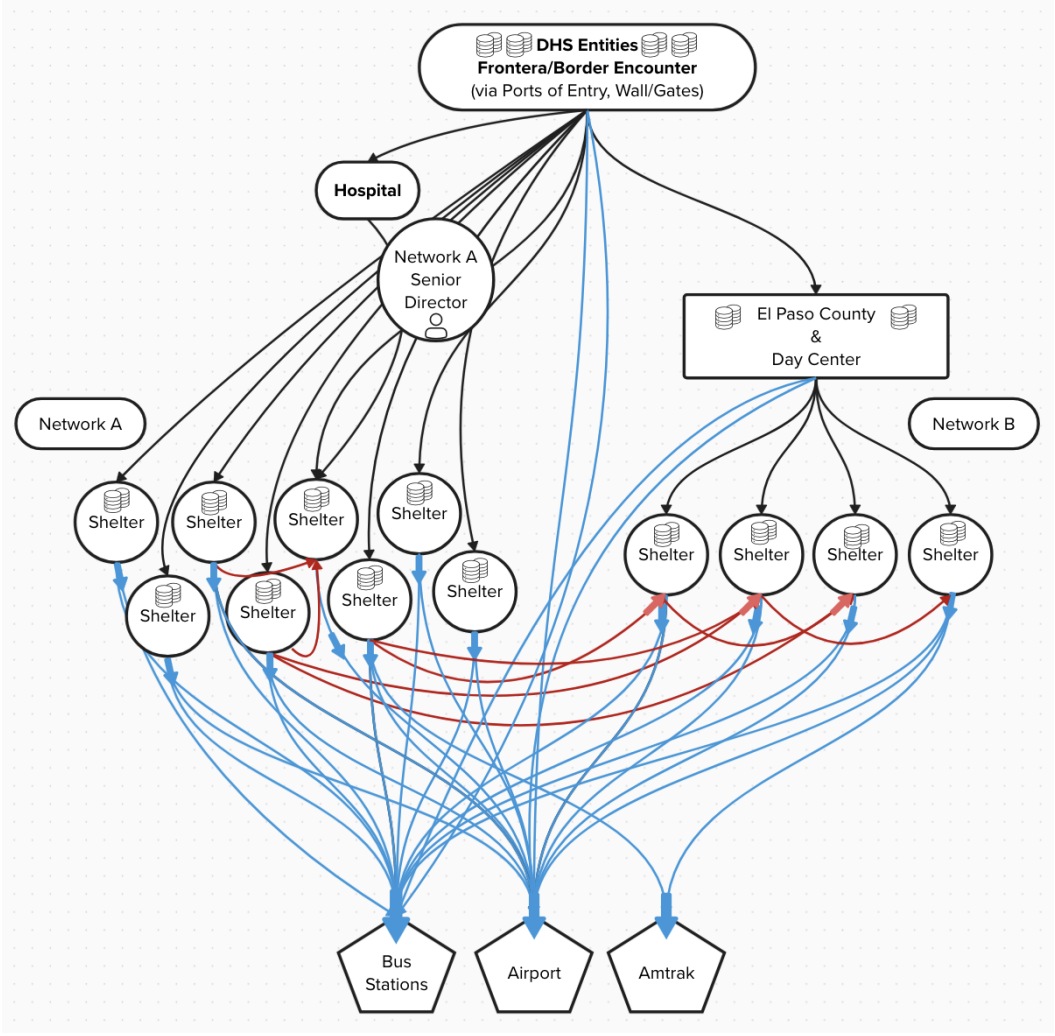
Most of the organizations in Network A are either directly reimbursed after reporting their efforts to FEMA and/or are funded by a religious organization.

Network B is composed of sheltering organizations whose primary missions are focused on addressing homelessness. Their refugee sheltering work is incentivized through FEMA funding that is distributed by the local government. DHS primarily sends families to Network A organizations, and single adults to a transportation coordination "Day Center," which is funded by the county government and is primarily responsible for coordinating travel and placing refugees in Network B shelters if travel accommodations cannot be made. Refugees may move between Network B shelters (e.g., either as mandated by "time-outs" at shelters whose funding sources place limits on the duration of a refugee's stay or through referrals to organizations with more appropriate services) until transportation can be arranged by the Day Center.

Following calls from local sheltering organizations for increased assistance from city and county governments, in 2020, El Paso County sent employees to visit a number of cities along the border in order to understand local government border operations. Based on their research, El Paso County ultimately put forth a proposal to follow the process used in Brownsville, TX, where all refugees released by DHS entities are brought to one local-government run 'triaging' facility dedicated to travel and shelter coordination (see Figure 2). Importantly, Brownsville, TX only had one shelter when El Paso County officials visited. Before coordinating transportation and shelter for refugees, the county facility would first collect all refugees' DHS paperwork, and share relevant refugee data when coordinating with sheltering organizations. Figure 1 depicts the current flow of refugees and their data, whereas Figure 2 demonstrates the proposed flow of refugees and their data.

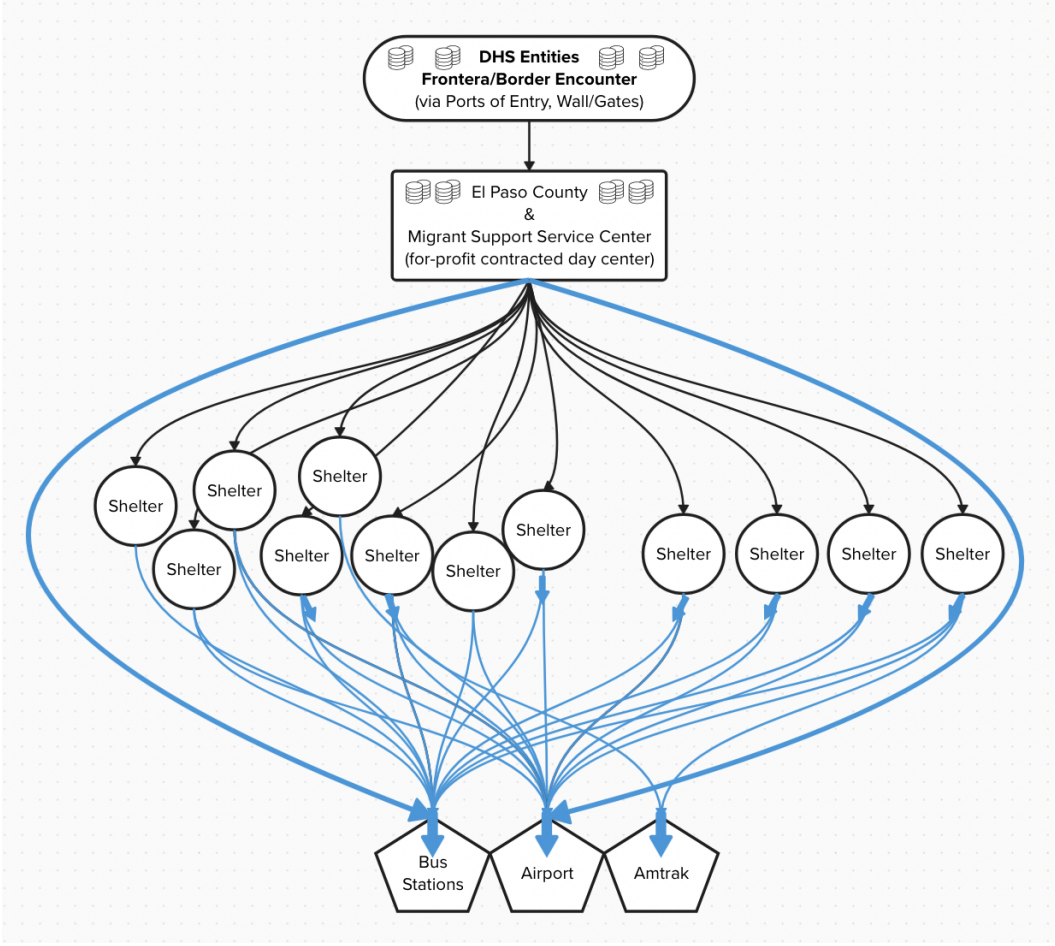
As the county's proposal for a centralized information infrastructure has garnered support from Network B organizational stakeholders, stakeholders from organizations across Network A have expressed concerns and formed a united front to push back against the proposal. Due to their positioning downstream in the information ecosystem, all informants from Network B organizations were interested in receiving information via a centralized system that included data from Network A organizations. Most of the informants from Network B organizations were also amenable to sharing data through a shared information infrastructure, although P3 specifically raised concerns about potentially having to adopt practices or data systems that made their work more inconvenient.

Fig. 1. Flow of Refugees and Refugee Data Among Organizations



One of the primary distinctions between the work practices of the two networks—and one of the primary motivators for organizations in Network B to participate in the centralized information infrastructure—is the lack of consistency about how long refugees are able to stay at different shelters. Network B organizations are reluctantly situated downstream in the sociotechnical ecosystem, needing to accommodate refugees that have "timed out" of Network A organizations. Each organization in Network A determines how long refugees are allowed to stay in their shelters (called "time-outs"), varying from 48 hours to as long as is needed to find transportation inland. Most organizations allow for refugees to stay between five and seven days. At the time of these interviews, if refugees time-out from Network A shelters, they are released to local bus stations, with or without a means to travel. With the exception of occasional inter-organizational transfers, refugees who time-out from Network A shelters are not allowed back into any Network A shelters

Fig. 2. County Proposal for the Distribution of Refugees and Refugee Data Among Organizations



which means that they end up either on the streets or at a Network B shelter. In contrast, refugees may stay at any Network B shelter for 7 days. When they time-out of a Network B shelter, they can move to another network B shelter, until they run out of shelters and end up sleeping on the streets. Informants from Network B have expressed frustration about the lack of coordination by Network A to inform them about the number of refugees who will be timing out and need shelter:

> *We're getting a lot of random uncoordinated releases from the shelters, and we need to know at least the heads up. And because everybody was timing out people and they were sending them to [another organization]. We [...] have an agreement with [that organization] in case we cannot move somebody out the same day and they need shelter. Then we send them to [that same organization], but it was not so bad to a point where we didn't even have access to that resource, because they were at capacity from all the time-outs.* (P4)

Existing coordination efforts between Network A and Network B organizations are often informal (via texts or phone calls) and are not always consistent and not explicitly formalized.

The many different sheltering organizations have minimal inter-organizational data sharing practices thus far, as each organization uses different information systems and has different reporting requirements for different constellations of funders (Table **??**). Informants described their organizational infrastructure as, *"Siloed. Highly. All of El Paso… highly siloed. There is no integrated system of care. There's no integrated system of communication. I don't think one would work, necessarily"* (P3). P3 went on to describe how they sometimes obtain more information about the current needs of refugees by observing what is happening at the border and in the streets of El Paso rather than from communication from other stakeholders. For example, they knew to expand their organization's operations when they saw an influx of people sleeping on the streets, rather than learning about the need from other organizations, local government, DHS officials, or the news.

In the following subsections, we describe three affordances of siloing information infrastructures: they allow for financial freedom in a resource scarce context, allow for mission malleability in a highly dynamic context, and supports privacy in a liminal context. We also report the costs of siloing on both the organizations and their clients.

5.2 Affordances of Siloed Information Infrastructures

5.2.1 Siloed Information Infrastructures Afford Financial Freedom in a Resource Scarce Context. Most organizations across both networks piece together funding from multiple sources. This often means that each organization has to collect different constellations of data and conduct different data work to comply with their respective funders' demands for data: *"My system is appropriate for what it is that I'm doing, and somebody else's system is appropriate for what they're doing. If they get grant funding from somebody else, they get documentation and they get requirements"* (P3). The different funder-driven patchwork of data needs makes the design of interorganizational data infrastructures challenging. Further, the infrastructural needs of each organization fluctuate as different funding sources expire and new funders are brought on board with new data demands.

One strategy for bringing in additional funding while avoiding continual competition over the same pools of funding is for organizations to provide distinct services, fundable from different sources. One informant, for example, shared how they created a women's shelter for refugees who had experienced domestic abuse or sexual assault, *"because that was something that didn't exist before and we had to build it out, and made it into a sustainable program that we basically renew each year at this point."* This differentiation in services also means more differentiation in data demands from funders and more incompatibility in information infrastructures.

While siloed data affords organizations the ability to customize and adapt their information infrastructures to the evolving data demands from any given constellation of funders, it also results in organizations having uneven distribution of resources with the ability to offer inconsistent standards of care for refugees. More established organizations often have access to more information and resources, and are thus more likely to be able to provide better services, hospitality, or care for refugees.

> *There's a whole lot of places hosting that aren't officially recommended or endorsed. And there's a pretty high level of frustration among the smaller shelters because they're not getting hardly any support whatsoever, but they're having overlaid expectations. And it's not that the expectations are bad. Like, for instance, one of them, they had decided as a group, one group of the shelters, that they would collectively start doing this, charging [a small fee] a week for people to stay there because they couldn't pay electric bills, they couldn't pay water bills, they couldn't do anything, and there wasn't help for it regularly.*

> *So it's sort of interesting because it did seem like, okay, if the expectation is that no one charges rent or whatever, then maybe provide some assistance in paying the bill so they don't have to.* (P11)

This variation in access to resources has left some organizations struggling, particularly short-term sheltering organizations that pop-up during surges in the number of refugees crossing as well as organizations on the Mexican side of the border.

5.2.2 Siloed Information Infrastructures Afford Mission Malleability in a Highly Dynamic Context. The constantly shifting numbers and types of refugees crossing the border along with the frequent changes in immigration policy, whether federal or local, means that organizations are constantly shifting their work practices, and thus, their data practices, as well. Siloed information infrastructures support the kind of extraordinary operational malleability required in this context, which informants describe as being highly dynamic and even *"chaotic."* Informants in management positions valued their ability to customize and control their own data systems to best serve their operational constraints.

> *This is really controlled chaos. You have a lot of people going, coming through here and leaving here, and it's very hard just to contain the whole process. Every day there's all kinds of crazy stuff happening. The data is a part that allows you a modicum of control. So you kind of get attached to that because it really helps you control everything…I think that everybody does feel attached to it.* (P12)

Maintaining independent, decentralized data systems serves as a way of ensuring essential flexibility in operational data work and is one of the main ways that informants exert control over the highly dynamic and chaotic circumstances in which they work.

Most frequently, informants described shifting their operational data work with the fluctuating numbers of refugees crossing the border: *"Un día recibimos [one day we receive] ten the next day could be a hundred, and then it will drop to 20 and then 80"* (P4). The constant fluctuation makes it difficult to maintain a single, large shelter site (in terms of both staffing and space/utilities): *"Sometimes we don't know [the number of refugees] until after the buses show up… migration patterns are changing, release patterns are changing"* (P10). Most organizations, then, opt for minimalist data intake forms with room for notes to fill out in case there is time or emerging need.

Dynamic variations in the demographics of refugees crossing the border also affects information infrastructures, for example:

> *Everything is so dynamic and changes quickly [first, it was a] predominantly men's shelter and [then we] had to throw 60 men out and we got 90 family members because there was a lot of families. And then, we're back to [both] men and families. I mean it, just, it changes and you have to be organic and dynamic and change with the requirements of the job as it walks that day.* (P3)

Organizational information systems need to be malleable enough to change along with the shifting demographics. For example, P3's organization shifted from housing single individuals to housing families, which in turn led them to create 'family unit numbers' and linked entries in their database.

As different funders sometimes only fund different legal classifications of refugees (based on their DHS paperwork), organizations have to track and input different information into multiple client databases, one per funder. And so the specific data work required on any given day varies based on the demographics of refugees crossing the border. Records about refugees who do not have DHS-generated paperwork are collected differently (i.e. one organization does not collect country of origin to protect client privacy) and manages alternate data infrastructures to be presented to alternate funders. Additionally, since both the immigration policies and the services available shift

rapidly, the type of information that each organization shares with refugees varies. P9, for example, has information packets outlining legal procedures and services available for the primary types of DHS legal classifications. Since the time of these interviews, two shelters have begun curating their operations towards guests who are immediately eligible to apply for work authorization, and make sure they understand the steps ahead of them. As individual organizations tailor their services to dynamic changes in refugee demographics, siloed information infrastructures enable more efficiency in making the changes in data work required to accommodate the refugees and better serve their needs.

The informants across refugee-serving organizations have shown great resilience and flexibility to external circumstances. They have developed their own data and operational processes for responding to the shifting number of refugees, policies, and services to best support the largest number of refugees. Siloed information infrastructures allow organizations to respond to needs as they identify them. Coordination of this many changes would require more work, time, and resources, which is beyond the capacity of most organizations.

5.2.3 Affordances: Siloed Information Systems Supports Privacy in a Liminal Context. The Borderplex is a liminal space, both for refugees and for the organizations that serve them. Most of the refugees crossing through El Paso are meant to be there for less than a week while en route to their final, inland destinations. The organizations operate within liminal contexts as well, navigating high staff turnover rates and dealing with constantly fluctuating policies and protocols.

Siloed systems allow organizations to better protect their data from external surveillance and misuse. The various organizations each have different standards of privacy and different stances about what refugee data they would be willing to share with whom and what constitutes appropriate use of those data. For example, one of the proposed uses for a centralized information infrastructure is to inform inland cities about daily arrivals of refugees, something that stakeholders from Network A organizations staunchly oppose.

> *We are not super excited about just saying, 'Hey, x amount of people are coming to your city.' That just seems kind of problematic. People show up in new cities every single day. And to make it this high alert—'You're going to be getting 20 migrants today that are coming to your city,' seems more of an emergency response than anything else… There's a difference between people showing up and not necessarily having resources and needing city support and people who show up for which that's not the case.* (P10)

Informants who raise concerns about the county's proposal primarily took issue with the assumption that they would share all data about all of the refugees they served. However, there was widespread recognition that there are certain instances in which data sharing could be helpful, particularly in cases where refugees will need assistance from organizations local to their final, inland destination.

For example, P10 noted that single-parent families with young children or those with a disabled family member might be more likely to need additional assistance upon arrival, but has found that most refugees have sponsors inland who can provide housing, in which case their organization did not see the point in sharing all of their data in a networked database.

Because refugees move through so quickly onto their final destinations and because their legal status is often tenuous, many informants raised questions about whether the risks of collaborative data work outweigh the potential benefits. Refugees often flee from persecution and may have experienced trauma from various government authorities, and endure having tenuous legal status. Ensuring that their data is not easily accessible protects them from potential surveillance by both their home countries and the host country's authorities. Many informants described feeling a sense of responsibility to ensure that refugees' information not be used against them in ways that

could jeopardize their asylum claims or lead to deportation. Privacy in data handling ensures that sensitive information is not inadvertently shared with entities that might misuse it. P8 shared concerns about what the governance of a centralized infrastructure would look like, particularly if operations were to shift so that the county first receives individuals and distributes them to shelters across both networks.

> *I think if we're doing this [proposed] model of government to county to shelter, and you're having this information here collected into some sort of space to coordinate and then like final destination, whatever. If you're having all this information collected… Who has access? How do you maintain privacy? Who is deemed worthy to have access and who's not? What accountabilities are now on shelters? You're working within a government system, right? Are there certain policies and procedures that are now going to be held over shelters?* (P8)

Many organizations, especially those in Network A, and including one informant from Network B, are reluctant to use centralized infrastructures as they have not had a voice in deciding how their data would be used and have not been able to come to agreement on how the data would be used and governed, especially given the differing standards that each organization has about acceptable data work.

5.3 The Cost of Siloed Information Infrastructures for Refugees

While siloing their own information offers a way for organizations to ensure financial freedom, to remain malleable in the face of extreme dynamism, and to respect the liminality of the Borderplex region, informants acknowledge that this infrastructural decision has costs for refugees. These costs include: (1) variations in the standard of care provided to refugees and (2) an increase in misinformation.

The many El Paso-based organizations and government entities serving refugees each have different standards of privacy and ethics governing their data work, making negotiations on how data and information should flow within and between each network difficult. Maintaining siloed databases affords organizations the power to control who has access to what data and to determine appropriate uses of those data. Siloed systems additionally protect refugees, making it more difficult to find and access information about a given person.

Organizations in Network B, especially, promote the concept of a 'standard' of care, working to promote consistent levels of hospitality across numerous service organizations.

> *I believe that the people that we are serving deserve the same kind of space and the same level of expertise, no matter who they get released to. That the medical care is consistent, that the legal offerings are consistent, that the access to alternative options for sponsors if that's needed, the consistency of making sure that trafficking information is available, whatever that might be*(P10).

Although organizational missions are deliberately curated to minimize overlap in services (Table 2), the funding sources that enable that diversification also come with constraints (e.g., some funders only allow organizations to buy cots or mats to sleep on instead of beds and mattresses). The informants felt the inequities in standards of care deeply: *"I wish we could provide a consistent level of care"* (P3). In addition, there is little communication of these differences in services to refugees or allowances for them to choose the sheltering organization that also offers the constellation of services they might need (refugees are simply assigned a shelter based on availability). Refugees who need more time at the border to coordinate and secure travel plans, or those who need other special services, often need the help of numerous shelters who have a more appropriate match of services or accommodations.

Table 2. Distribution of Services Available to Refugees at Different Borderplex Shelters

	Network A org (4 organizations)	Network B orgs (3 organizations)
Services offered		
Connect with Legal Services	2	0
Onsite Medical	2	2
Play Area	2	1
Know-Your Rights / Human Trafficking Assessments	1	1
Expectation of Chores	1	0
Standards of Care		
Unrestricted Access to Food	1	1
Private Spaces	2	1
Semi-Flexible Timeouts	1	0
Unrestricted Access to other Basic Needs (i.e. showers)	3	2
Overnight Stay	4	2

> *We don't want people jumping around like pingpongs. And it's already happened, it's happening. I know we don't want it, but it's happened. We see it as an unnecessary movement of individuals and it adds stress as a migrant. You come in, You're thinking, 'I'm here. I have a shelter', and then to be told you have to go somewhere else.* (P4)

Other than referring injured refugees to shelters that are ADA accessible, there is no mechanism to match refugees with the shelters that best fit their needs. Generally, families are sent to Network A shelters and single adults are taken to Network B shelters.

When siloed information infrastructures result in a lack of official information sharing, they create information vacuums that are filled with other, informal information sharing (e.g., via group messaging, phone conversations, and social media), particularly second- and third- hand recounting of experiences, which are typically outdated or not necessarily applicable to all situations. For example, many refugees arrive believing that they will be provided with free transportation to their final destinations. The actual situation is more nuanced. Each state, county, and local government provides different services. During the time of these interviews, the state of Texas was offering semi-regular free bussing to New York City, NY; Denver, CO; and Chicago, IL. El Paso county was coordinating free buses to Houston, TX once every other week. Occasionally, some organizations can aid to partially fund transportation for large family units that have high need. One informant described being contracted to hold money for such cases of high need. While siloing

data allows many shelters to respond quickly to the changing conditions in the Borderlands, there are consequences to the refugees who are going through the system.

In an attempt to control some of the misinformation or outdated information, when refugees arrive at Network B's Day Center, the county plays a video to explain the rights and obligations of all refugee clients who have entered. *"We were having to dispel a lot of misinformation. A LOT of disinformation. This video is created to address that"* (P4). Most informants posit that misinformation is caused by (a) families sharing their past experiences with newly arrived refugees and (b) social media content that explains what to expect throughout the entire migration journey with either false, outdated, or partially true information.

> *And they know. I've known somebody that's like, 'my family on WhatsApp told me to do this one thing to go to [local shelter]'. And they're like, 'well, you know, other shelters aren't going to take you right?' There's just a whole misinformation camp. Sometimes that happens. And we don't blame people for trusting their family and people they've vetted than us who they just met [...] so you are kind of being the bearer of bad news in some ways at this point of what that actually is going to look like for them and kind of being given that truth serum of like, here's the realities of what you're facing.* (P9)

The refugee information networks are there in large part because of the information vacuum. For example, the lack of information about the rationale for why some people receive assistance and others do not adds to the confusion. When clients don't get the services they need or need to change shelters multiple times, already overworked organizations are even more overworked because refugees are more likely to approach multiple organizations searching for help when they do not know where to go.

The siloed information systems in the Borderplex result in refugees sometimes being sent to organizations that cannot accommodate their specific needs. Constraints imposed by funding sources result in discrepancies in the resources and services available to refugees, leading to inequities in care. The lack of official information sharing creates vacuums filled by informal and often inaccurate sources, where refugees rely on secondhand information from social media or personal networks, which can lead to misunderstandings about the services available to them. This misinformation can exacerbate the difficulties refugees face, causing confusion and frustration as they navigate the support system. While data siloing affords financial flexibility, mission malleability, and privacy for organizations, it poses significant challenges to providing consistent care and accurate information to refugees, ultimately impacting their well-being and trust in the support system.

6 DISCUSSION

Organizations across sectors face intense pressure to adopt data-driven work practices [16], with many scholars advocating for "smarter" systems (e.g. [35, 54]) fueled by extensive quantified data [18]. Many of our informants raise concerns about how these information infrastructures may place undue or even problematic pressure on organizations and their beneficiaries. In response to this concern, many organizational stakeholders in the Borderplex are refusing to participate in a proposed initiative for a centralized information infrastructure.

6.1 Strategic Refusal as Infrastructural Activism

Harrison et al. argues that the non-use and refusal of technology can be quite "strategic," serving as a form of empowerment for often marginalized stakeholders [28]. Our research highlights such a case of strategic non-use as resistance against the adoption of a centralized information infrastructure. We characterize this resistance as infrastructural activism, when organizations or individuals use

or manipulate their information infrastructures to resist the influence of other (typically more powerful) stakeholders. In the case of the Borderplex, stakeholders, particularly from Network A organizations, enact infrastructural activism by maintaining siloed data infrastructures and resisting the county's initiative to centralize the information infrastructures of all refugee-serving organizations.

Zong and Matias studied individuals' refusal to engage in data work and identified four facets of refusal: autonomy, time, power, and cost [60]. Similarly, in their study of resistance to technology as an explicit political practice, Kaun and Treré propose a theoretical matrix with axes of power, collectivity and temporality [32]. Because there are two networks of organizations in the Borderplex responding to the county proposal in different ways, we have a unique opportunity to reflect on the nature of the infrastructural activism with respect to two networks, operating in the same location but with different origins, values, and situated differently in the local power hierarchy. In this research, stakeholders from Network A organizations are more well-established and have more established funding sources; this makes them a more powerful stakeholder among organizations. Yet, they are opting to silo their information systems and exercising a form of resistance that primarily operates "from below" with respect to local political authorities and power structures, mustering a grassroots-driven, bottom-up refusal. Stakeholders from Network B are starting from an even more marginalized position with respect to other organizations in this ecosystem. They are more willing to participate in the initiatives of the local political authorities in order to achieve parity of resources and power with the organizations in Network A. Refusal is not simply about pushing back against power from above; it is enabled by one's relative power, as well.

This resistance we see from Network A stakeholders is marked by its "slowness" in implementation and evolution; the resistance Network A organizations enact and the changes these organizations seek will not occur abruptly. Instead, their strategic refusal reflects a deliberate, considered approach to adaptation and opposition, allowing for careful navigation through the complex socio-technical landscape and avoiding hasty commitments to potentially problematic systems. Network B stakeholders, instead, are eager to make the process "faster" through buy-in to the county proposal. This comes from an ethos of addressing the 'crisis' at the border and in an attempt to maintain control.

Most uniquely, the resistance we see in this research has moved in two stages from individual to collective. All prior research about non-use has studied the refusal of individuals and informal groups of individuals. Here, we see organizations standing up for their clients, bearing the political brunt of the refusal on their behalf. Stakeholders from organizations in both networks are centering clients in their rationale, some of them protectively prioritizing the privacy of client data and others protectively wanting to ensure that all refugees are treated with the same degree of care when they cross the border. We also see that while individual organizations have been maintaining their own siloed infrastructures for some time, the proposal has brought them together into a more passionate collective, both those in Network A and in Network B. For stakeholders in Network A, their collective siloed infrastructures are now more symbolic of a common goal. This collective action enhances the impact and sustainability of the resistance, forming a network of aligned entities that support each other's endeavors to maintain autonomy and control over their data and infrastructural choices.

This research also emphasizes that non-use is not passive. For stakeholders in Network A, refusal is an active stance against the pressure to conform to normative technological practices. Their refusal aligns with a broader social movement that values data sovereignty, organizational autonomy, and cautious technological adoption over the immediate benefits of connectivity and integration touted by those who wield power, both the voices of government and the voices of technology companies. By choosing a slower, more deliberate path, and favoring grassroots consensus over top-down

mandates, these organizations are asserting a form of digital sovereignty on behalf of themselves and the refugees they serve and setting a pace of change that aligns with their unique operational rhythms and philosophical commitments.

6.2 When Colonial Design is not the Answer

We would be remiss, however, if we did not acknowledge that the infrastructural activism of stakeholders in Network A does not reflect a general unwillingness to collaborate or to share data. It is a refusal to participate in an infrastructure that has been proposed by powerful (Western) stakeholders without any input from more marginalized organizations or the even more marginalized (non-white) refugees that they serve. The digital sovereignty that they are standing for is one that exemplifies the call to decolonialize computing.

The county's current proposal exemplifies the problematic nature of colonial computing. By adopting the model implemented in Brownsville, TX, where there is one shelter to a region with dozens of shelters, the county proposal ignores local context in the El Paso Borderplex and input from the organizations and the refugees they serve. The proposal undermines local organizations' data work practices and data sovereignty. Supporting a centralized infrastructure, in this case, then, means ceding all data to legal authorities, enabling surveillance, and allowing the county to mandate the work practices of all organizations, which can erode both trust and agency. Although they aren't currently on the table, other alternatives surely exist that would support some collaboration without erasing local, situated knowledge. As Dourish and Mainwaring argue: "It is important that we find ways for different systems to interoperate, coordinate, and co-exist without pointing or requiring the existence of central agreements or universal encodings" [23]. Decentering Western universals means "undermining the asymmetry of local-global power relationships" [4] and this is precisely what the organizations in Network A are attempting through their infrastructural activism.

And yet, the proposal from the county does not in any way stand out in terms of its design. It is quite mundane, actually—a proposal to create shared infrastructure among organizations that already collaborate with each other. And this mundane normativity is likely part of the stakeholders in Network B's willingness to participate. The proposal is not much different from the myriad centralized information systems that are absolutely ubiquitous, which is a large part of Dourish and Mainwaring's argument, that colonial tendencies underpin computing writ large, they are "entwined with all sorts of aspects of how we think, how we talk, and how we work in ubiquitous computing" [23].

After all, Zong and Matias argue that refusal is considered an act of design [60]. As stakeholders from Network A continue to refuse to adopt the county's proposal for a centralized information infrastructure, they are actively contributing to design. Whereas DiSalvo argues for design as a tool for challenging and rethinking the status quo [22], our research highlights a case of non-use and do-not-design implications as a tool for challenging and rethinking the status quo—design as a collective act of resistance, arguing that the county do-not-design-without-their-voice.

6.3 Limitations and Future Work

The interviews in this research only included workers of refugee-serving organizations. Future work should focus on including the voices of the refugees themselves, whose data and information are being used within these systems, and whose lived experiences with data practices could provide valuable insights into the implications of infrastructural activism on their access to support and resources. Future research should include longitudinal and qualitative studies directly involving refugees to assess how data practices throughout their resettlement journey affect their experiences, access to resources, and overall well-being. By centering the experiences of those most impacted,

CSCW work could develop more holistic and inclusive frameworks for evaluating technology's role in marginalized communities.

Further research could investigate the potential for alternative, decentralized forms of data collaboration, such as privacy-preserving ICT models that allow information sharing through distributed systems with secure data-sharing protocols. Studies focusing on cross-contextual or cross-regional implementations of infrastructural activism would be valuable to identify commonalities and differences in resistance strategies, motivations, and outcomes, enriching the broader understanding of infrastructural activism in humanitarian settings.

7 CONCLUSION

In this paper, we conducted a qualitative case study of the organizational response to a local governmental proposal to centralize these organizations' information infrastructures. Each of the informants' organizations currently maintain their own siloed data infrastructures. Our analysis characterizes how organizations, particularly from Network A, are pushing back against the proposal to centralize the information infrastructures of refugee-serving organizations in the Borderplex.

In this research, we identify three affordances of siloed information systems for refugee-serving organizations, including (1) affording financial freedom in a resource-scarce content, (2) affording mission malleability in a highly dynamic context, and (3) supporting privacy in a liminal context. We also identify two costs of siloed infrastructure for refugees, including (1) the lack of a consistent standard of care and (2) an information vacuum that is often filled by mis- and outdated information. Finally, we contribute to research on non-use and refusal as an act of resistance, characterizing this case as an instance of infrastructural activism and unpacking the ways in which the responses of stakeholders from Network A and Network B differ along dimensions of power, temporality, and collectivity.

Network A's infrastructural activism underscores a critical assertion of organizational agency and empowerment in the face of governmental systems that may not always prioritize the best interests of marginalized communities. By resisting the centralization proposal, organizations in Network A maintain control over their data and operational practices and protect their vulnerable clients. While centralized systems may be the norm for collaborative infrastructures among organizations, this research emphasizes that centralized systems are not always the optimal solution, particularly when they are not designed to reflect the voices and values of all stakeholders, especially those from marginalized communities. This research provides a more nuanced understanding of how organizations differentially positioned in an information ecosystem enact activism in dramatically different ways and how some organizations employ infrastructural activism as a powerful tool for maintaining autonomy and advocating for the needs of vulnerable groups.

This research presents the CSCW community with an opportunity to deepen its understanding of ICT non-use as an intentional, politically motivated act of resistance in humanitarian and politicized settings. Infrastructural activism challenges typical technosolutionist views that prioritize connectivity, prompting CSCW to bring more of its focus toward expanding theoretical frameworks around non-use and digital sovereignty, especially where technology adoption poses ethical and practical risks. This study urges CSCW to reconsider the role of ICTs in humanitarian work, moving beyond efficiency and centralization to support NGO autonomy and align with the values and missions of marginalized communities. By embracing collaborative, context-sensitive approaches, CSCW can advance the broader goal of digital justice, ensuring that technology serves as a tool for empowerment rather than imposition.

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