

yakap



/yá-kap/ n. 1. hug, embrace 2. clasp (Tagalog)

An ICT Platform Enhancing Community-building and Outreach of Domestic Worker Organizations

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ACKNOWLEDGMENTS

The Yakap Team would like to thank all the individuals we worked with over the course of this study for the time, effort and support they placed in this project and in our team.

We would like to thank our advisor, Professor Jenna Burrell for her invaluable support and advice throughout the process. Our appreciation also extends to Professors Coye Cheshire and Jen King for their time and assistance.

To our nonprofit partners in this project, we would like to thank them for indulging the curiosity of four persistent graduate students and for allowing us a brief glimpse into a little-noticed world where they live and breathe and fight in every single day. Our sincere gratitude goes out to all of the leaders and organizers in the domestic worker movement - to Palak Shah and Rosie Brown from NDWA, Lindsay Imai from Hand in Hand, Sarah Leadem from CDWC and Judy Kriege from Bananas.

We would be remiss if we left out the Filipino Advocates for Justice, without whom Yakap would not have seen the light of day. Lillian Galedo and Honor Nono, thank you very much for welcoming us into your community and allowing us to contribute to the larger goal of bringing dignity to a profession that is overlooked by many in our society.

To our families, thank you for carrying us through the late nights and busy days.

Last, but definitely not the least, we would like to honor all of the domestic workers we interacted with, who inspire us with their selfless dedication to the families and households that they serve, and who deserve the utmost respect for the challenges and indignities they conquer everyday.

1. ABSTRACT

Yakap is an information and communications technology platform that aims to enhance the community-building and outreach capabilities of nonprofit domestic worker organizations, thereby improving their capacity to support the needs of the domestic workers that they serve. Domestic workers are a vulnerable population due to the nature of their work and the power dynamics between them and their employers. Several organizations have formed in the last two decades to advocate for improved working conditions for domestic workers, but for some of the smaller nonprofits, they are not well-equipped to adequately incorporate technologies that would enable them to effectively achieve their goals. This study investigates the existing state of domestic worker organizations in the San Francisco Bay Area and focuses on building the capacity of a local nonprofit that supports Filipino caregivers in the East Bay.

2. INTRODUCTION

2.1 Problem statement

Domestic work is traditionally defined to be work that is done within an employer's private household, encompassing services that include caring for children, attending to persons with disabilities, looking after the elderly and other household tasks such as cleaning, cooking and gardening.

In the United States, there were 726,437 documented domestic workers in 2010¹, but if this included overlapping categories in the US Census and undocumented workers, the number is estimated to be closer to 2.5 million². Within the state of California, it is estimated that 16% of households employ domestic workers³. Despite the essential role they play in the economy, domestic workers have historically been excluded from basic worker provisions such as overtime pay and minimum wage. Demographically, the composition of workers has shifted from minorities to immigrants with an estimated 66% being non-US citizens, and among them, 47% to be undocumented².

Because their work takes place in private homes and facilities, domestic workers are often isolated and vulnerable to exploitation, abuse and unreasonable demands from their employers. These conditions are accentuated for the undocumented, as well as for live-in workers who are increasingly dependent on their employers. In a landmark survey conducted by the National Domestic Workers Alliance (NDWA) in 2012, 67% of respondents reported being paid below the state minimum wage, with only 15% of workers having documented work agreements that guaranteed overtime pay². Of live-in workers, 49% reported that employers expected them to be available at any time, while 58% stated that their employers expected them to be available for work outside normal work hours².

The state of California has a rich history of participatory activism and organizing among domestic workers due to the large number of immigrants and demand for workers in the state. However, as is typical with small nonprofits, these organizations face difficulties with outreach to domestic workers and recruitment of new members. A community organizer interviewed for this study referred to the domestic worker movement as the "Wild West" of organizing, due to the nature of the work being dispersed and isolated in private homes. In addition, domestic workers, a large number of whom are undocumented, are understandably reluctant to speak with community organizers which further increases their isolation, making them more vulnerable to exploitation by their employers.

¹ US Census Bureau, 2004-2010

² Burnham, L. & Theodore, N, 2012

³ UCLA Labor Center, 2016

2.2 Project description

The outcome of our research into the domestic worker industry in the Bay Area resulted in the implementation of an SMS communication platform for Filipino Advocates for Justice (FAJ), a local nonprofit that serves live-in Filipino caregivers in the East Bay. The platform offers an alternative way for new workers to interact with organizers, reducing the cost of an initial interaction with the nonprofit. On house visits, organizers can leave the helpline number; alternatively, caregivers can pass on the number among their own networks of friends and acquaintances. The goal is to allow FAJ to build trust with these new workers in an easier manner, allowing caregivers to learn more about the nonprofit through low-cost, repeated interactions at a pace and level they are comfortable with and at their own convenience.

We focused on adapting the platform to FAJ's existing work practices and technical capacity. As a small organization with only 5 full-time staff members, FAJ has limited capacity to respond to the needs of multiple workers at any given time. In designing the platform, two classes of users with distinct roles were identified - 1) *administrators* that are focused on management of the system and 2) *organizers*, who are grassroots leaders that are in charge of recruitment in their respective communities, many of whom are also actively employed as caregivers in senior homes and care facilities. The platform utilizes a ticketing system that allows organizers to respond to new workers in a distributed and organized manner. Transitioning FAJ onto the platform also involved training activities for administrators and organizers, including process design for the onboarding of new organizers onto the platform.

The technology choices the team made in the design of the platform also provided affordances that help extend the technical capacity of the organization. This included the ability to conduct SMS campaigns, robust management of contacts through filters, groups and custom fields, and a central record of past interactions - tools that FAJ did not have access to with their existing systems. Scenario development and training was done to extend FAJ's ability to use these features.

Overall, the project goal was to implement a system that FAJ could maintain at minimal cost, but significantly bolster its mission to reach and support a larger group of domestic workers.

3. BACKGROUND

3.1 Motivation

Our team came from a diverse background, and were invested in issues facing domestic workers due to having relatives as caregivers, and from current and past experience with caregivers. Due to this, and as we did more research in the space, we were aware of broad structural barriers, such as economic inequality and the lack of legal protections, that limited the benefit a technological application could provide for domestic workers.

As we spoke to nonprofits in the space, we became aware of a number of different strategies that could be employed to effect change, often in concert. This related to the kind of activity, such as pushing for statewide legislation versus providing resources directly to members, as well as the target group, such as initiatives focusing on employers vs. workers.

Organizations at different levels also had different priorities. The NDWA, for instance, focused on developing state and nationwide initiatives to push through changes in legislation, and providing national voice and platform for organizing. Local organizations might focus more on community organizing, providing help with immigration and wage theft, and providing social support and other resources to Filipino domestic workers.

As we explored the space and spoke to various nonprofits, we tested and adjusted our assumptions of the concerns facing domestic workers, especially live-in workers, and where the affordances of mobile phone could play a role. We found, for instance, that among the core group of caregivers FAJ served, all caregivers had a mobile phone as they required it to find employment and maintain contact with their family abroad, and used texting frequently to communicate with friends and family members. A leader at the NDWA also confirmed that they had chosen texting as the primary way of communicating with domestic workers, rather than email, for this reason.

We also explored other areas where technology could play a role, such as a way for nonprofits to visualize and analyze the impact of various recruiting efforts (such as mapping success of field visits by geography), and a decision-flow tool for employers to increase their awareness of the needs and legal rights of their employees. Broadly, we saw more opportunity in a technological implementation that supported the activity of organizations in the field, due to the complex needs domestic workers had that might not be adequately provided, for instance, by an automated system providing information.

We were especially excited to work with FAJ due to two factors. The first was that FAJ served primarily live-in workers, many of whom were undocumented, and almost all caregivers had a mobile phone. In initial conversations with FAJ, they identified a need to be able to communicate with domestic workers primarily through SMS rather than over the phone or with in-person

meetings. The second reason was that FAJ lacked an existing system to manage contacts, conduct SMS campaigns, etc. We were interested in implementing a low-maintenance solution to help support their mission and magnify their impact.

3.2 Nonprofit Landscape

Due to the makeup of the industry, which has changed over time owing to shifts in migration, there are few organizations currently that support and advocate for the needs of various stakeholders in the domestic worker ecosystem in the United States. Many of the organizations we approached were established only within the last two decades, and were organized around lobbying the domestic worker community to support legislation for worker rights in places with high densities of workers such as New York and California.



We approached several of the organizations that operate on the national, state and local levels to learn about their activities in the San Francisco Bay Area and to understand how they support and interact with one another to achieve the broader goals of the domestic worker movement.

3.2.1 Organizations that offer support and resources for domestic workers

3.2.1.1. National Domestic Workers Alliance (NDWA)

The National Domestic Workers Alliance (NDWA) bills itself as “the nation’s leading voice for dignity and fairness for the millions of domestic workers in the United States, most of whom are women”. The alliance was formed in 2007, during the period when key organizations in New York and California were pushing for a Domestic Workers Bill of Rights in their respective states. NDWA works for the respect, recognition, and inclusion in labor protections for domestic workers, and the alliance is powered by 53 affiliate organizations of over 20,000 nannies, housekeepers, and caregivers for the elderly in 36 cities and 17 states.

NDWA’s focus is on winning improved working conditions for domestic workers through various programs. Their key focus is on building a powerful coalition which includes the entire range of domestic workers (nannies, caregivers, personal attendants), their employers and supporters to power state, regional and national campaigns around awareness of worker rights and passage of legislation to support them. They also invest in developing community leaders among women of color and investing in grassroots organizations to realize these leaders’ potential.

3.2.1.2. California Domestic Workers Coalition (CDWC)

The California Domestic Workers Coalition (CDWC) is an alliance of grassroots domestic worker organizations in the state of California and their supporters from the labor, faith, domestic employer, women and student communities. The coalition aims to advance the rights of domestic workers through a statewide network that pushes for statewide laws and agencies to protect domestic workers from abuse and to inspire Californians to uphold the dignity of domestic work in their homes.

The CDWC was formed in 2005 when key organizations came together to push the first Domestic Workers Bill of Rights through the California State Legislature. While their efforts saw the bill passed in the California Senate and House of Representatives, it was ultimately vetoed by Governor Arnold Schwarzenegger in 2006. Their organizing efforts continued through the years until Governor Jerry Brown signed the California Bill of Rights (AB 241) into law on September 26, 2013. While the law was enacted, it included a sunset provision wherein it will expire on January 1, 2017 and so the coalition is currently focused on the passage of SB 1015 which will ensure permanent overtime rights for domestic workers in the state of California.



The steering committee members of the CDWC include the following organizations: Alianza de Mujeres Activas y Solidarias (ALMAS), La Colectiva de Mujeres de San Francisco, Mujeres Unidas y Activa (MUA), Filipino Advocates for Justice (FAJ), Pilipino Workers Center (PWC), Coalition for Humane Immigrant Rights of Los Angeles (CHIRLA), Instituto de Educacion Popular del Sur de California (IDEPSCA), the California Immigrant Policy Center and Hand in Hand: The Domestic Employer Association.

3.2.2 Organizations that offer support and resources for employers of domestic workers

3.2.2.1 Hand in Hand: The Domestic Employers Association

Hand in Hand bills itself as the “national network of employers of nannies, housecleaners and home attendants working for dignified and respectful working conditions that benefit the domestic worker and the employer alike”. The organization was established in 2010 as a result of the organizing efforts in New York to push a domestic workers bill of rights in that state.

Hand in Hand’s focus is to support employers of domestic workers to improve their employment practices, and to collaborate with workers to change the cultural norms and public policies that bring dignity and respect to domestic workers. (See Appendix)

3.2.2.2 Bananas, Inc.

Bananas, Inc. is a nonprofit child-care resource and referral agency established in 1975 in Northern Alameda County. It operates on a contract with the state of California to provide referrals and subsidies to families looking for childcare support, connecting them with all types of child care

options, from babysitters and nannies to preschools and family child care centers. Beyond referrals, the organization also offers workshops, classes, and support groups for parents and caregivers.

3.3 Filipino Advocates for Justice (FAJ)

Filipino Advocates for Justice (FAJ) was established in 1973 (originally as *Filipinos for Affirmative Action*) in response to the discrimination and alienation faced by the influx of immigrant newcomers from the Philippines to the San Francisco Bay Area. Over the years, the organization has advocated for immigrant and civil rights for the Filipino-American community and served vulnerable community members by implementing programs that help recent arrivals, youth and low-wage workers to navigate the challenges of life in the United States.

FAJ runs four programs in line with their goals: 1) *youth development*, which includes peer networking, youth activism and leadership development, and arts & culture, 2) *newcomer empowerment*, which includes immigration assistance for naturalization and education on government benefits, 3) *voter assistance*, which focuses on voter education and registration, and lastly, the focus of this project, 4) *worker support*.

FAJ's program for worker support was established in 2002 and was named PAWIS, which stands for the Pilipino Association of Workers & Immigrants. This program is comprised of volunteer community organizers that lead activities which include training for caregivers, general workers and immigrants on worker rights and protections, as well as job training and placement referrals.

4. USER RESEARCH

4.1 Overview

In order to decide on the best way to serve the nonprofit, the team began with a mix of generative and formative research.

Our goals initially were twofold. The first step was to learn more about the domestic worker space by talking to leading organizations and experts. Then, collaboration with FAJ was needed to:

- ❖ Further clarify our needs assessment
- ❖ Identify and begin collaborating with key users
- ❖ Begin understanding their context more fully (technological capability, financial resources, etc).

As stated above, after talking to the NDWA (amongst other local organizations), we decided to focus on FAJ. This was not only for pilot purposes, but also due to deployment and sustainability reasons. Subsequently, we conducted summative research to test the usability of our system.

4.2 Methods

Contextual interviews with organizers/domestic workers

We were especially interested in the experiences of domestic workers before they came into contact with FAJ, and how they came to know and become involved with the organization. To develop this context, we conducted three interviews with current organizers with FAJ who were currently working as domestic workers, which lasted 45-90 minutes. In these interviews, we focused on the experiences of organizers when they were first recruited by the organization, as well as on their experiences recruiting workers to the organization.

Ethnographic fieldwork

Over the course of 3 months, we met with FAJ staff 9 times, most of which were at their office in Oakland. Each meeting lasted about 1-2 hours. Our initial meetings focused on understanding their needs and areas where a technical implementation would be useful. We identified how capacities to manage our system was distributed among staff and volunteers, to build a picture of how the organization functioned and identify distinct groups of possible users, as well as the comfort level and familiarity of each staff member.

Usability testing

We conducted two phases of usability testing, for both administrators and organizers. In our initial phase, we tested basic affordances of both the Telerivet application as well as mobile texting with both groups, to gauge user's preferences and overall comfort level. In our second phase, we designed/adapted our system around our findings in Phase 1, and evaluated how comfortable administrators and organizers would be using Yakap on a daily basis.

4.3 Findings

Live-in domestic workers were often reluctant to speak to organizers

In our contextual interviews with organizers/caregivers, we found that caregivers were often reluctant to speak to organizers for a variety of reasons. During house visits, caregivers were often busy with work or wanted to test, and did not want to interact with organizers.

Some employers were also suspicious and did not allow caregivers to speak to them. One organizer ("Grace") described one employer who was "very antagonistic", asking them what they wanted with the caregivers.

Grace also said that many undocumented workers felt caregivers towards their employer ("utang na loob" - roughly translated as "debt inside"). Most of the caregivers FAJ served worked at facilities run by Filipinos, and many caregivers felt a sense of loyalty to their fellow countrymen who provided them with a job and lodging, and that the employer could often feel "like a savior".

Grace described one caregiver who was crying and told the organizer that she didn't want to talk and to leave her alone, as she was "so afraid." In general, workers were reluctant to associate with organizers and to report abuses, as they were concerned they might be fired, deported, or in general, that their "lives will get complicated."

FAJ lacked a robust contacts management system

FAJ staff used a variety of Excel files and mailing lists that they used to store the contacts of different groups of members. They described some difficulty in maintaining updated mailing lists, and to find and share contact information of specific members and other contacts. They had no centralized address book containing their contacts, and no easy way to sort and filter the different groups of contacts they needed (caregivers, youth, donors, new members, etc).

One organizer also mentioned how she could not get her contact number renewed after she returned to the Philippines for a few months, as she had stopped the service for that time, causing

some new members to lose touch with the organization when she returned. Her contact number had been listed on flyers handed out during previous house visits.

Different user groups have differing technical capacities and availability

As FAJ has a small staff and limited resources, we wanted to ensure that staff members were comfortable managing the tasks required in the daily use of our system. We identified different groups of users with differing technical capacities and availability. The first group was comprised of FAJ staff members, who tended to be over the age of forty, and were based at FAJ's main office and had daily access to a computer. They were generally comfortable with tasks like email and using spreadsheets. The second group was comprised of youth counselors who were based at FAJ's Union City office, and primarily engaged in running FAJ's youth programs. These users tended to be in their twenties, and were tech-savvy, using computers and the internet frequently. Finally, a third group of users were volunteers who worked as caregivers but were engaged in outreach and organizing activities with FAJ. They were comfortable with texting, but most did not use computers on a daily basis. We devised 3 staff and volunteer personas to match these three groups, and deliberately designed our system to distribute required tasks among these three groups of users.

Low upkeep and maintenance was a priority

FAJ staff members had a wide range of responsibilities, and most of their time was spent on coordinating campaigns, doing outreach and interacting with existing and new members, and a myriad of other tasks. Younger staff members who were more comfortable maintaining computer systems were not based in the Oakland office and had other responsibilities. FAJ staff saw their main priority as serving their members, and did not want to direct limited resources in maintaining an overly complex or elaborate communication platform.

4.4 Personas

The generative research led to the creation of a few personas that - in collaboration with FAJ - guided us in creating a system that fit both the organizational and domestic worker experience.

Staff Member: Lucy Morales - 42 years old

Lucy is a full-time administrative assistant who has daily access to a computer. Lucy coordinates all of the appointments for staff and members and is tasked with keeping the calendar in order. She is one of the few members that works in the office as the rest of her peers check in and out of doing work in the field. Lucy is dedicated to the nonprofit and is ready to learn skills to help the nonprofit grow and expand.

Youth Counselor: Emmanuel Panganiban - 25 years old

Immanuel is a full-time counselor who is only at the nonprofit's main office once a week, as he is based in the office in Union City. He works primarily on the nonprofit's youth programs, and uses a computer and the internet daily. His attention is focused on running the nonprofit's youth programs, but he is happy to help out with troubleshooting/configuring the nonprofit's computer systems.

Organizer: Jen Torres - 48 years old

Jen is a part-time organizer and community activist for the nonprofit. Jen has various roles as community leader but most importantly, she organizes meetings for caregiver support and goes on house visits to recruit and pass on information to live-in caregivers. Most of her week is spent as a caregiver, but after her job she helps the nonprofit in any manner she can. Jen is able to text during the day and generally responds quickly, as it is her main mode of communication. Additionally, Jen has had her share of experience with workers abuse and thus wishes to assist others who may be subjected to abuse or malpractice in the workplace.

Member - Caregiver: Melchora Reyes - 55 years old

Melchora is a 55 year-old live-in caregiver at a care facility for the elderly run by a former nurse from the Philippines. Melchora came to the United States as an undocumented worker in 2013, in order to provide for her husband and three children back home in the Philippines. She uses her mobile phone frequently to text and call with her family back home. She has been working at the current facility for 3 years. Initially, she was happy at her job as she did not have many expenses as her lodging and food were paid for, and she was able to send the bulk of her wages back home to her family. However, over the past year, her care facility had taken on several more clients, and she finds herself working most evenings doing laundry, taking care of clients and finishing up tasks she was unable to finish during the day. She also wakes up in the night several times a week to deal with the needs of seniors at the facility. Melchora lives at the facility with one other caregiver and her employer. She has made a few friends over her years but feels increasingly isolated. She wants to voice her concerns with her additional workload with her employer but is worried that he will be unhappy, or potentially even be fired. She wants to find another job but is worried that it will be difficult due to her undocumented status, and cannot afford to be unemployed for even a few months as her family in the Philippines is dependent on her remittance income.

5. TECHNICAL CONSIDERATIONS

5.1 Technology design for nonprofits

Most of the team have had previous experience with nonprofit organizations, thus enabling them to recognize that smaller-sized nonprofits tend to not have the ability to do proper technology planning due to limited resources, a small budget and a fixation on the complexity of technology. For instance, Farooq et al. found that many nonprofits typically “have few staff members, limited (or non-existent) technology budgets, and often do not have an in-house technology staff to address immediate problems or provide on profiting training and support” (p. 2)⁴. This is echoed by Hackler and Saxton⁵ in their analysis of a survey comprising of 1,571 nonprofits, finding that “organizations with lower budgets had fewer staff with daily use of a computer” and “were more likely to rely on volunteers to implement their IT solutions” (p. 24-25)⁴. Nonprofits tend to leverage grants, volunteer opportunities and other community-driven efforts to meet their needs, which unfortunately results in unsustainable and poorly maintained implementations of technology.

However, research and present-day conditions make it possible to bridge the socio-technical gap and build the capacity to effectively change a nonprofit’s perspective on technology. Our team researched best practices in extreme HCI settings as well as effective nonprofit technology usage, and found that the optimal solution was to co-design(using participatory design methods) a system which would be supported by the nonprofit. Research has also shown that if the nonprofit is involved with the design decisions, they will be motivated to take ownership and responsibility for the upkeep and maintenance of the system.

Additionally, the team also understood that no nonprofit or organization needs to be convinced of the benefits of technology. However, it was imperative that the solution fit the organization's needs, financial ability and culture. Understanding the context of use was another aspect which required proper thought, as it would be counter productive to create something that makes it more difficult for the caregivers to do their job. If this becomes the case, they will quickly revert back to the “old way of doing it.”

For this reason, we planned to set time to understand who at the organization has the most technical expertise and can serve either as a “support system” or resource for developing and seeing the solution through. The project is not intended to “solve” the issue of technology in this specific nonprofit’s work environment, but to ideally serve as support in an area of appropriate need.

⁴ Merkel, C., Farooq, U., Xiao, L., Ganoe, C., Rosson, M. B., & Carroll, J. M. (2007, March). Managing technology use and learning in nonprofit community organizations: methodological challenges and opportunities. In *Proceedings of the 2007 symposium on Computer human interaction for the management of information technology* (p. 8). ACM.

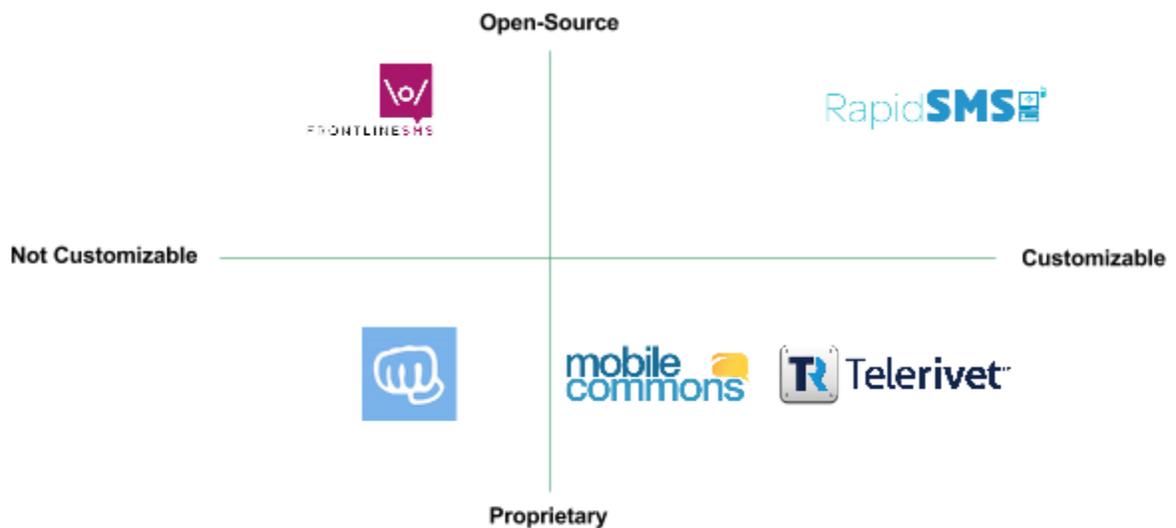
⁵ Hackler, D., & Saxton, G. D. (2007). The strategic use of information technology by nonprofit organizations: Increasing capacity and untapped potential. *Public Administration Review*, 67(3), 474-487.

Lastly, implementation of the system was designed to incorporate the concept of “fading.” This process is used to successfully disengage with the nonprofit to allow them to be self sufficient and independent. The optimal result is that enough scenarios and practiced principles of participatory design have been conducted that the disengagement process becomes natural and the ownership of the system is smoothly transferred. The following section describes the process by which a viable, sustainable and economically feasible platform was selected with our nonprofit partner organization.

5.2 Competitive Analysis

Initial Analysis of Software Platforms

The following SMS platforms were selected for analysis based on their market reputation, feature offerings, and positioning in relation to nonprofits NGOs:



1. *Mobile Commons*: is a large mobile messaging platform that sells its service as an entire package. Although costly it is a very powerful system that has its own API. Mobile Commons does require a bit of setup but once complete it should meet the needs of most organizations. The system is widely used in the U.S. and has a positive reputation with the exception of views on its price.
2. *FrontLineSMS* : This is an open source free mobile sms platform. The software can work without an internet connection and only needs a cell phone and computer. It is known for

being used in developing countries and has great use cases in the Philippines, Afghanistan and Nigeria. A criticism of the system is in regards to the maintenance and time required to meet one's needs. It should be noted that FrontlineSMS requires one's own modem to run and has little to no "professional" support.

3. *Hustle*: This application is the newest of all the platforms and found its rise to fame via the Bernie Sanders campaign. The app allows for the user to text message via iphone/android and curate their own text messaging lists. It was created as an alternative to phone-banking. Hustle is a very modern application but lacks customizability and has a price point of \$200 a month (contingent on having less than 1000 contacts).
4. *RapidSMS*: This is also a free and open source text service. RapidSMS is a robust platform which is highly customizable and it's API offers many advanced features like building services for data collection for nonprofits, streamlining complex workflows etc. Although it is highly customizable it requires heavy development and maintenance.
5. *Telerivet*: This is a mobile messaging platform that requires no servers, contracts or shortcodes. The only tool needed to have Telerivet up and running is a mobile phone. Telerivet is a cloud-based management system that routes messages to and from any mobile phone with SMS. The system offers many features and allows for the user to write their own SMS paths via its built in CloudScript API. Telerivet, however, does cost \$30 for its initial plan plus outgoing messages.

The competitive analysis and discussion with FAJ and other leaders in the nonprofit community resulted in selecting Telerivet as the platform of choice to meet the nonprofit's needs.

The first decision collectively made was between open source and proprietary platforms. The benefit of choosing an open source platform was that we could build something to our exact liking and customize it almost entirely. The downside of an open source platform was that we would need to provide extensive support; the sustainability of an open source platform in a nonprofit is slim to none, especially with the time-frame. The pros of using proprietary software are that it comes packaged, generally has a server, and is well supported, but that often comes with a large cost and minimal customizability. For their purposes, FAJ required something which was a hybrid of the two. It was also understood that we should not spend our time developing a system and instead focus on customizing the interactions and design flow.

Following that discussion, the next points of focus were price, the culture of the nonprofit, features and technical maintenance. FAJ possessed funds that they wished dedicate to a service such as this. The team was very conscious of the fact that they had input in this decision, and were careful to select a platform that fit the needs and capabilities of FAJ. If the cost of the platform was

more expensive it would have more built-in support and features with a component of customizability. If the platform was free it had little to no support and most features would have to be built. Thus - we had to find something in between.

Comparative Analysis of SMS Platforms

	Mobile Commons	Hustle	FrontlineSMS	Telerivet	RapidSMS
Price	Very expensive	Less than 1000 contacts = \$200	Free	~ \$40 per month	~ \$10 per month
Technical Maintenance	Difficult at start but easier once set up	Very Little Maintenance	Medium/High Maintenance:	Medium/Low Maintenance:	High Maintenance:
Adoption Capability	High	High	Low	High	Low
Highlight Features	Lots of features and somewhat customizable	Lots of features but not customizable	Not customizable	Lots of features and very customizable	Lots of features but requires lots of work
Extensibility	Good	Poor	Good	Great	Great

Telerivet provided a robust feature set with the ability to use a script built by them (CloudScript API), which would allow for custom flows to be built and tailored to the nonprofit use cases. One example of a text flow would be to allow potential members to subscribe to a text list or chat with organizers. Telerivet allowed for a large amount of customizability while providing basic SMS features and a dashboard to manage contacts. The cost of Telerivet (~\$40 per month, well within the budget of the nonprofit) was seen as an appropriate tradeoff as the platform provided basic features and a much higher likelihood of sustainability at a small nonprofit. Overall, Telerivet was selected due to its customizable yet user friendly design, fair price point and lack of excessive maintenance.

6. SYSTEM DESIGN & IMPLEMENTATION

6.1 Design goals

There were 3 key goals we aimed to achieve in the design of Yakap: 1) mobility and flexibility, 2) ease of onboarding and 3) ease of maintenance.

Mobility and flexibility

It was found in our user research that FAJ's volunteer community organizers did not have regular access to technology platforms meant for desktop usage due to the nature of their work. Being full-time caregivers, they are not able to use desktop or laptop computers during working hours as they need to be hands-on in caring for their elderly employers. Their volunteer work for FAJ outside office hours also requires them to be mobile and outdoors as they engage domestic workers in various areas of their neighborhood. Thus, we ensured that Yakap would be accessible from their mobile phones and that all key features could be run using existing mobile communications technologies.

Ease of onboarding

After conducting interviews with FAJ's leaders and organizers, we understood that due to the historically transient state of the organization and the nature of volunteer work, the system needed to be designed so that when new volunteer organizers came onboard FAJ, it would be easy to orient them to interact with the system and engage caregivers that reach out for support.

Ease of maintenance

Due to the small size of FAJ's staff (only 5 full-time paid employees), they have little bandwidth in their day-to-day schedules to attend to the administration and management of a system like Yakap. We took this into consideration and made strategic decisions in the choice of technologies to implement such that FAJ would be able to maintain Yakap with the limited resources it had at its disposal.

6.2 System roles

An assessment of the organizational structure of FAJ's domestic worker support program (PAWIS) led us to establish the following key roles for users of the system:

Administrator

An administrator of Yakap is responsible for:

- ❖ Contact and contact group management for FAJ’s members, including uploading/updating new contacts into Yakap
- ❖ Sending out SMS broadcasts or campaigns and replying to messages that are received in response to the broadcast
- ❖ Connecting FAJ members that need assistance or specific information with organizers or staff that are knowledgeable in these areas

These responsibilities require the administrator to have access to Telerivet’s web interface, which we decided would be best fulfilled by the administrative assistant at FAJ’s Oakland headquarters. This fit well with the existing responsibilities of the assistant, as she is one of the few that has access to a desktop computer during office hours.

In addition, we built redundancy within the organization for this role by identifying and assigning two staff members that had the technical capability to provide first level support for the administrator. Their familiarity with modern technology and the documentation our team provided would be sufficient to address simple issues encountered by the administrator. Telerivet also has a support team in place to address customer problems, and this would provide the second level of support in case FAJ encountered more complex issues with the platform.

Organizer

The organizer is responsible for responding to messages that come from FAJ’s members and new workers seeking support from FAJ, who we call *potential members*. Once a message is received from a potential member, the organizer will be given the option to accept the new message and engage with the worker or let another organizer take it if they are unavailable or busy. Once the message is accepted by the organizer, all other organizers will be notified of who was assigned to the potential member. In this way, the organizer is best positioned to recruit new members into FAJ and is key in evangelizing the usage of Yakap to FAJ’s domestic worker community.

The organizers are fit for this role as they are community leaders who are also caregivers that work full-time. Thus the system must be contained to the SMS apparatus as to not cause any inconvenience.

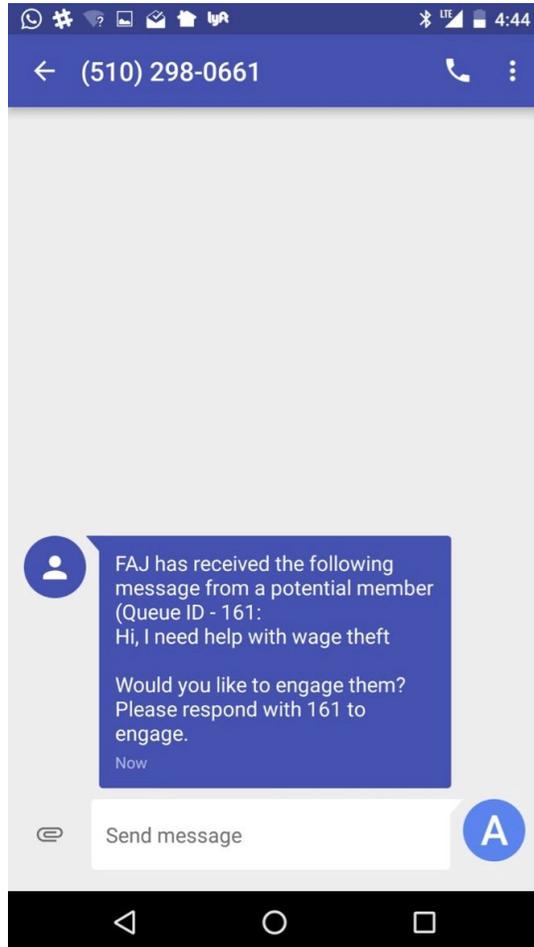
6.3 Product overview

We designed Yakap to be an SMS service that would be used by FAJ to connect with domestic workers both current and new to the organization. The core use case for the system would allow a potential member to seek help or support with a issue they are facing and for the leaders of the organization to help them with information and resources. In addition, this interaction would

our office at (510) 465-9876.”

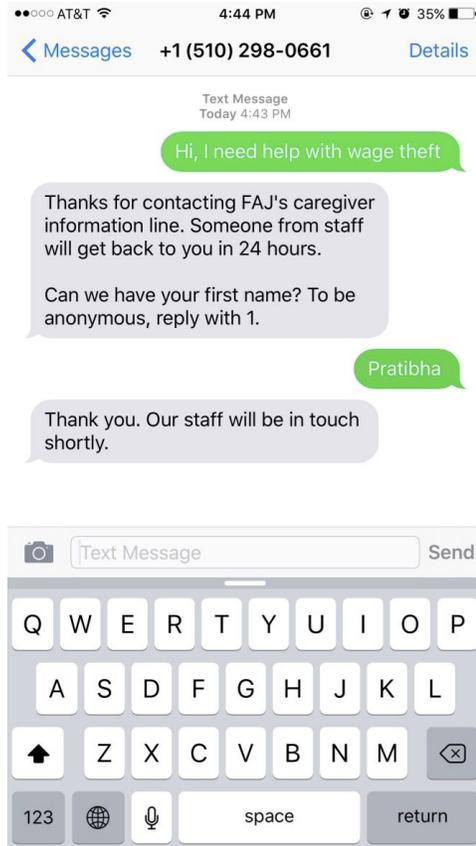


Potential Member (1,2)

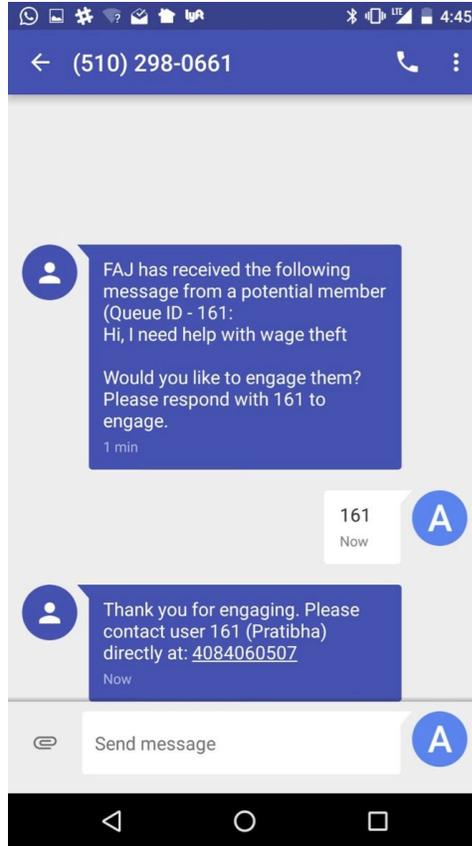


Organizer (3)

3. All the organizers in the system gets a message with the queue id. *“FAJ has received the following message from a potential member (Queue ID 161): Hi, I need help with wage theft. Would you like to engage with them? Please respond with 161 to engage.”*
4. The potential new member ‘replies’ with his or her name and gets a response from Yakap *“Thank you. Our staff will be in touch shortly.”*

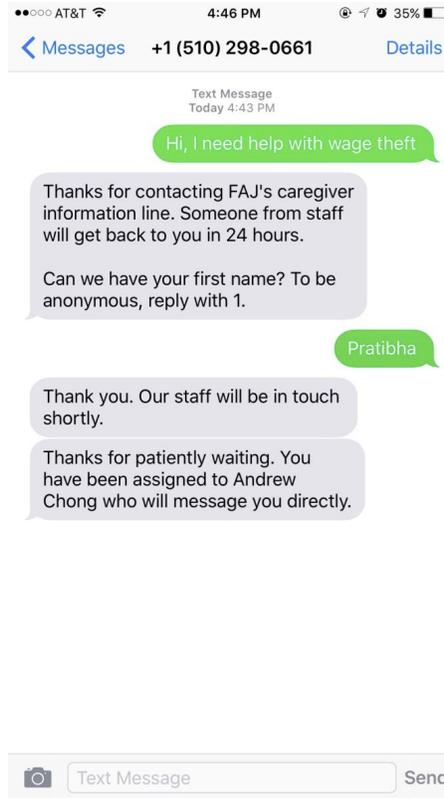


Potential Member (4)



Organizer (5)

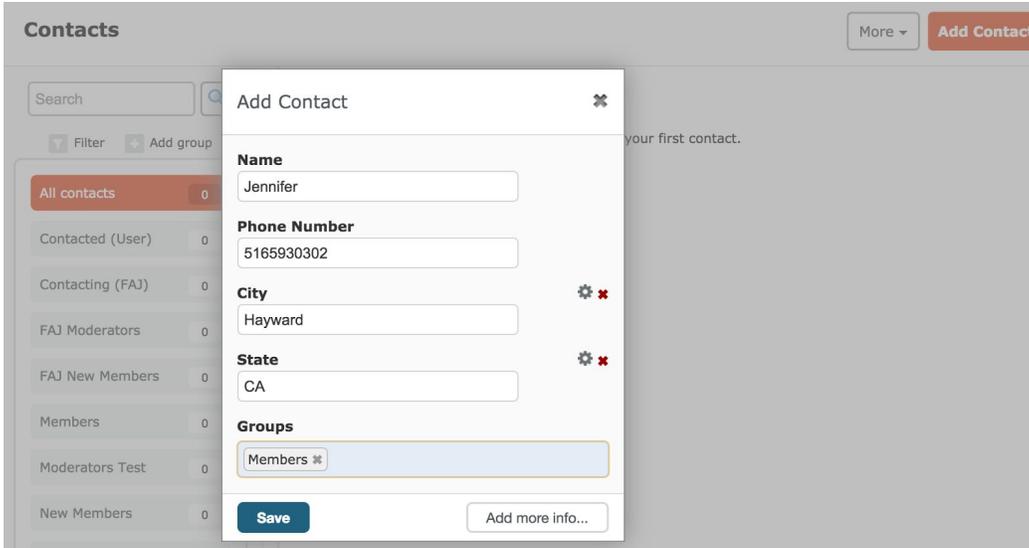
- The first organizer to reply to the text message with the Queue ID number will be assigned the potential new member, and receive the potential new member's number from the system - *"Thank you for engaging. Please contact user 161 (Pratibha) directly at : 4084060507."*
- When the potential new member has been assigned a organizer, he or she gets a message *"Thank you for waiting patiently. "You have been assigned to 'name_of_organizer_who_first_responded' who will message you directly"*.



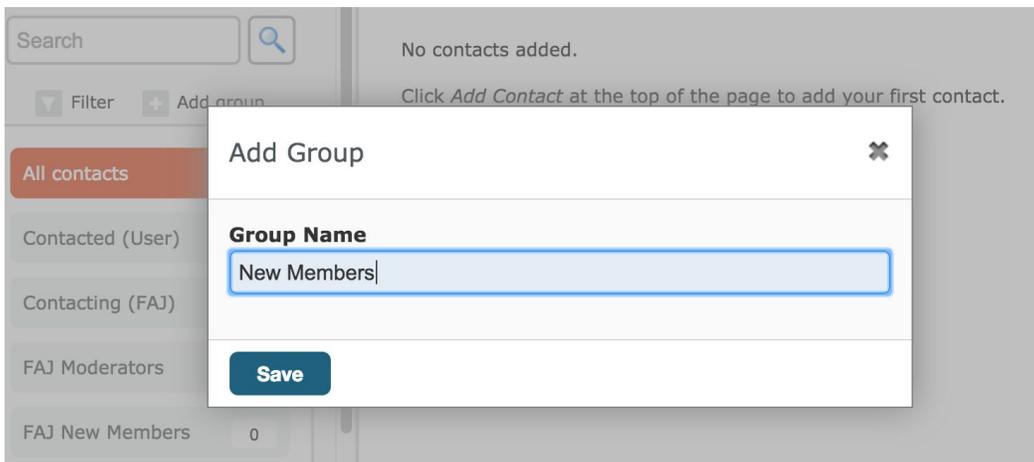
Potential Member (6)

In addition to this core use case FAJ had additional use cases which we took into consideration in the technology choices we made, ensuring that Telerivet was able to support the following requirements of the organization:

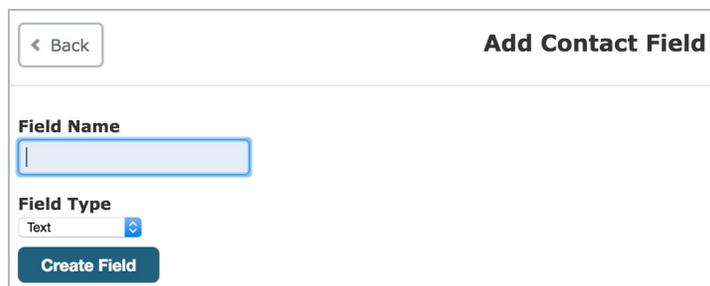
1. **Contacts Management:** FAJ needed to transition to a centralized way of managing their mailing list, as they currently manage this across multiple files for the different programs they run; as a prerequisite to SMS messaging, Telerivet already has a contacts management module that the organization can leverage for this purpose.



1.a. Contacts Management - Creating a new contact

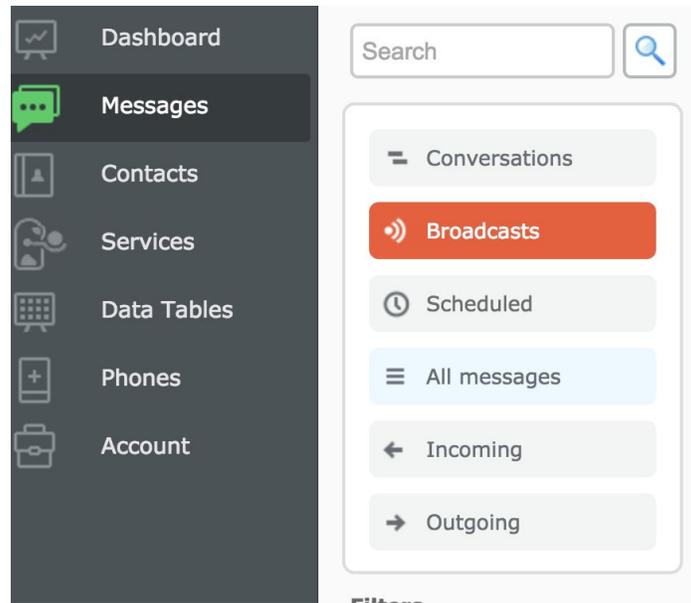


1.b. Contacts Management - Creating a new group

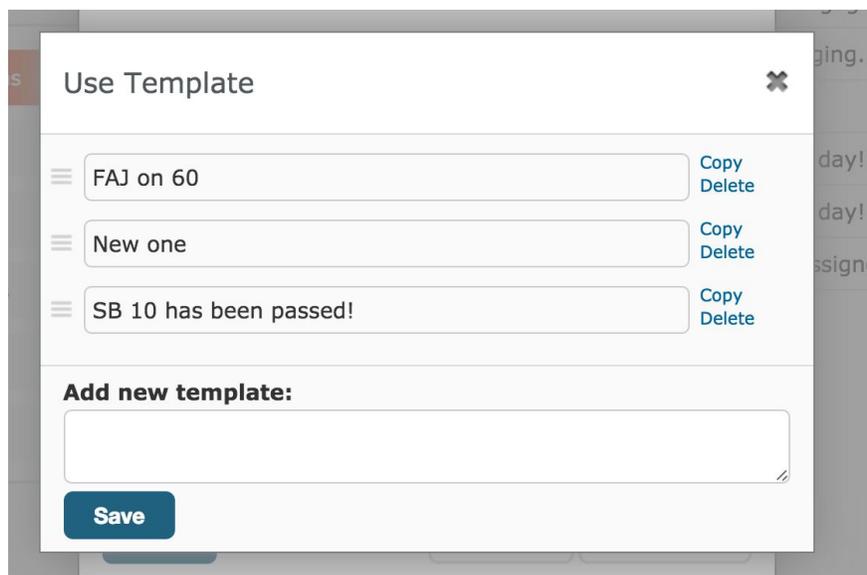


1.c. Contacts Management - Adding custom data fields for contacts

2. **SMS Campaigns** - FAJ currently manages SMS campaigns by manually texting their members, and thus they were also looking for this functionality in the design of Yakap. Telerivet enables them to do this through the Broadcasts module and custom message templates.



2.a. SMS Campaigns - The Telerivet Broadcasts module



2.b. SMS Campaigns - Custom message templates

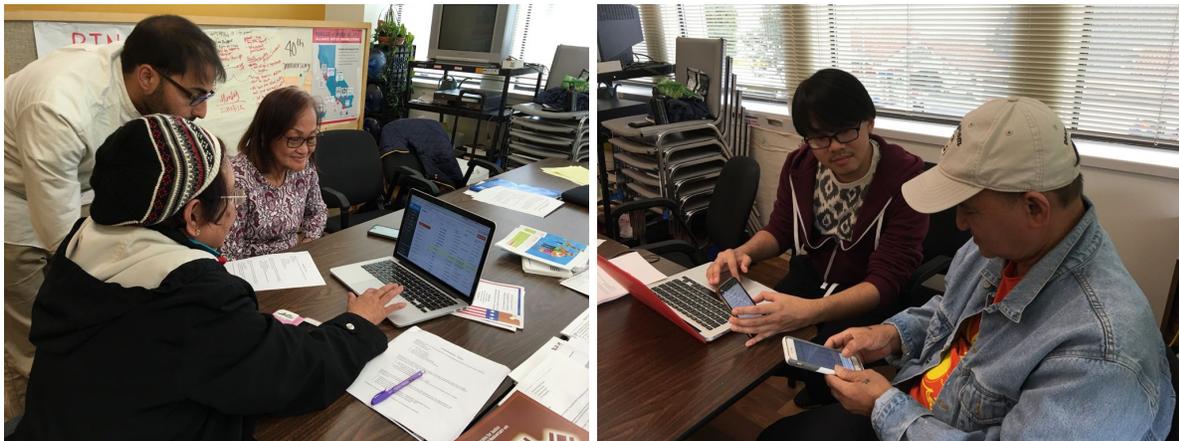
7. EVALUATION AND NEXT STEPS

7.1 Usability testing

After developing and iterating on the system we developed with FAJ, we conducted a day-long usability testing session with several FAJ staff and members. We set up five back-to-back think-aloud sessions in which we:

- ❖ Gave caregivers scenarios to replicate
- ❖ Gave potential administrators tasks to reenact
- ❖ Gave multiple potential organizers tasks to complete at the same time, so as to display the system's affordances

Each task for the caregiver was self-contained, while the administrator's tasks were sequential. We designed the usability study this way to reflect the nature of how one were to interact with the system. Caregivers would generally interact with the system in a one-off instance while administrators would perform multiple tasks at once when using the system.



Our Results

The usability tests served as a great way to open up dialogue around the organizational needs and allowed us to gain new insight on the way caregivers interacted with their phones, the web and SMS system. Going into the usability testing, we chose to change our method of conducting research. We did not follow some traditional usability test standards due to a conscious tradeoff of capacity building. The team realized this was a teachable moment as well as a test of our

system. We thus worked with the nonprofit to not only test the system, but also begin training some of the potential organizers and admins of the system.

Lastly, we received great feedback and many suggestions that we went on to add to our final design such as:

- ❖ Ability to add additional data for each contact such as job location, personal address, etc.
- ❖ Additional documentation for certain scenarios: we realized that the system developed would need additional documentation to use so that nonprofit members could have a reference point but also the ability to train one another.

7.2 Maintenance and sustainability

Our focus in Yakap was its ease of use and maintenance for FAJ. It was important to our team that FAJ was able to integrate Yakap into its work practices effectively and leverage its SMS chat and other features without reducing its capacity to focus on their strengths as an organization. For instance, we designed our system so that organizers' interaction with Yakap was simplified, making it easier to train and bring on new organizers. One reason we chose not to exploit the full capabilities of CloudScript, such as the ability to create nested menus in text or to allow members to modify fields through texting, was to reduce the system's complexity and maintenance.

Nevertheless, we expect additional capacity-building will be required for FAJ staff to be accustomed to the affordances and full capabilities of Yakap and Telerivet. FAJ staff may be require additional training and assistance around using advanced features of Telerivet, adapting the system to accommodate new processes, troubleshooting when unexpected bugs arise, and other scenarios consistent with the implementation of any reasonably complex system.

For scenarios that do not involve the implementation of a new process (such as adding a calendar subscription service for members, etc), which would require programming in CloudScript, our goal is for FAJ to be able to maintain Yakap without external assistance in six months. To achieve this, we utilize the "fading" concept described in Farooq et al. to progressively reduce the amount of technical support and assistance we provide to FAJ⁶, alongside building the familiarity and technical capacity of FAJ staff during that time. As all 4 of our team members are remaining in the Bay Area, we'll be able to provide any assistance required over this time.

One strategy is to allow FAJ staff to identify various options when problems arise. The first option is looking at the documentation of Yakap and Telerivet's system which we created for FAJ.

⁶ Merkel, C., Farooq, U., Xiao, L., Ganoie, C., Rosson, M. B., & Carroll, J. M. (2007, March). Managing technology use and learning in nonprofit community organizations: methodological challenges and opportunities. In *Proceedings of the 2007 symposium on Computer human interaction for the management of information technology* (p. 8). ACM.

The next option is to bring in our second group of administrators, the youth councillors, to help provide troubleshooting, who were comfortable with Telerivet's interface and the logic of Yakap's service in our usability testing. Next, because Telerivet is a paid, subscription service, Telerivet's manned staff can provide additional support when required, a benefit we will encourage FAJ to take advantage of. Finally, FAJ can contact our team members through email or phone, and schedule a time for us to come into the office to provide additional assistance.

In the first few months, in addition to any requests we may receive, we will check in with FAJ on a monthly basis, and come in on an as needed basis. At each visit, we will evaluate the problems FAJ staff are facing and adapt Yakap accordingly if deeper issues arise over time. In other scenarios, we will progressively direct FAJ staff to explore other options, to build their capacity for managing Yakap & Telerivet over time.

7.3 Measuring success

We will visit FAJ's offices every 2 months to conduct a formal evaluation of Yakap, and devise contingencies as required, according to the following criteria. This is in addition to monthly check-ins (by phone or email) and ad hoc requests we might receive from the organization.

User Activity

How many new members have contacted FAJ through the SMS chat feature? How many of these tickets have been assigned to organizers? This information is recorded automatically in Yakap, so we'll be able to collect this information from examining FAJ's records.

Centralized Contacts Management

Is FAJ using Yakap as their primary contacts management platform? Have FAJ staff continued to import new contacts into Telerivet, in addition to the separate contact lists (in Excel files, mailing lists, etc) imported when Yakap was first implemented? Is FAJ using Yakap's search, filtering and sorting features for contacts management? FAJ staff described some difficulties in finding and sharing some contacts due to lacking a central, searchable repository for contact information. Do FAJ staff use Yakap's search, filtering and sorting features on a weekly or daily basis? Why or why not? What difficulties do they face in using these features?

Qualitative feedback

What are some common problems users encounter with the system? (Etc. sending the wrong input to pick up tickets.) Can the problem be more easily solved with additional training or modifying the system's language/features?

What do users, especially administrators, find frustrating or useful about the current system?

Do administrators find anything confusing or ambiguous about the system?

Are there repetitive tasks that administrators take up too much time and adds to their workload? Are there "stubs" or incomplete data generated by the system that administrators find takes too much time to remove or maintain?

After each evaluation, we will assess whether the system can be modified to improve the user experience and ease of maintenance for the organization, or whether more training, better documentation, or alternative management procedures are required.

8. OUR TEAM

Andrew Chong has a background in behavioral and urban economics, and experience in software development and quantitative research. He previously spent 2 years at the National Bureau of Economic Research, implementing field experiments in health and personal finance, and developing predictive models of healthcare expenditure for Picwell, a health insurance recommendation engine. His research interests include data-augmented public spaces, urban sensors, and designing effective data tools for city departments and residents.

Carlos Miguel Lasa has interests in human computer interaction and information and communications technology for development (ICTD). He has worked on social good projects benefiting populations such as victims of dengue fever, the blind and visually impaired, Native Americans and volunteers at nonprofit organizations. With this experience, he helps teach social entrepreneurship and product management to undergraduate students at the UC Berkeley Sutardja Center for Entrepreneurship & Technology.

Hasnain Nazar also works in the ICTD and social entrepreneurship space at the School of Information. Before attending UC Berkeley, Hasnain was Director of Technology for the Everett program, which trains undergraduate students to become enterprising IT-literate activists who pursue sustainable development by working with grassroots organizations. At Everett, Hasnain worked in places like Watsonville and Santa Cruz, as well as in Nigeria and Malaysia. Hasnain sits on the board of a non-profit and continues to serve marginalized communities by learning best practices in design methodologies, user research and user experience at the I School.

Pratibha Rathore is focusing on data science and data-driven product management. She has worked with Jaynaa, a San Jose based nonprofit, which focuses on developing creative problem solving skills for rural kids in India. Pratibha is also highly interested in women empowerment and gender equality, and has participated in several campaigns in rural parts of India to educate women about their rights and duties.

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10. APPENDIX

10.1 User interviews with nonprofits

10.1.1. Lillian Galedo, Executive Director, FAJ

There are four organization that forms the steering committee. MUA is the anchor organization.

Both La colectiva and MUA are originators of organizing domestic workers. They were the founding members of NDWA. Many of the airport screeners in California were Filipino workers, however, after the 9/11 incident, they were all pushed back and lost their jobs. After that they started looking for jobs, mostly women and got interested in working as caregivers. So, right now, 70% of the people we work with are undocumented. Domestic workers work on one on one basis or in caregivers homes. The owners for these homes and facilities are filipinos, so they hire filipino caregivers. The owners recruit either from Philippines or when people are on visitor visa. The owners claim that they file visa petition for the worker. Often times, people go back and forth in terms of working on one on one basis or for the institutions. The work involves taking caring of disabled people, elderly people, terminally ill, people dealing with alzheimer's diseases etc. Domestic workers send 40-60% of their income back home to Philippines, and therefore employers see the workers desperate for work. Some of the workers went back to philippines after having bad experiences here, however, people come back again as they can send some money back home. The economy in philippines promotes people working abroad and send remittances.

FAJ acts as support group and help workers understand what their rights are, what are the implications of deals when they are hired. In many cases, people did not know about minimum wage law and the workers will not written contract. If they are hired by some agency, there will be a contract between client and the agency. In most of the cases the employers are filipinos and the assumption is that they are treated as families by the employers, they are fed and taken care of and they are doing a favor to the worker by giving them a job, and therefore they do not need money. Gradually, domestic workers are realizing about minimum wages, and victory story of wage theft cases, now they have become aware about what goes into an agreement when they are hired. A worker can only win if they document how many you worked and hours etc..so many times workers win the case and could not collect it as they did not have proper documentation. Last year, FAJ won the bill AB 525, which makes it easier to collect when you win.

We are also fighting abuse cases. The domestic workers are are in a vulnerable situation many times, because they live in, they are treated as maids and do not get the differential pays.

There are no set off days and lot of times employers have small facilities with limited workers, so even on off days the workers have to work. So, in general it is hard work and very isolating and people are afraid to talk about it the situation as they might get on the bad side of employers.

Since most of them are live in, if they lose their job, they will loose the place to live also and essentially be homeless.

FAJ, for now is only connected to a fraction of the caregivers. We asked some volunteers to reach out to facilities in contra costa county to find people are caregivers, so that we can connect with them. In 2010, California passed a domestic workers bill of rights. It benefited nannies and caregivers but not the housekeepers, as they work on part time basis. This year we are launching. We also are concerned about healthcare and have done wellness activities together with the workers like yoga, dancing, acupuncture etc. Even though most of the caregivers who are connected to us. Labor laws are available to undocumented or documented workers. Justice dept or dept of homeland security so not penalize undocumented people. More than the worker, employer is at more risk from IRS if they hired undocumented worker, as they will be fudging the timesheets etc. We recommend caregivers to keep their own time sheets. Some undocumented workers file taxes and IRS accepts the TIN number. Your team should also talk to dept of labor in SF who can give more information about wage theft etc.

Right now FAJ uses primary emails in addition to Facebook and calling to communicate with the caregivers. But we want to have a texting system, as everyone has phones. They have a list of 150 people to be put in the system. We want to be able to share resources, victory stories, bill passed. We are not very tech savvy nor are most the workers so we want to have a system which is easy to understand and maintain. We have several programs, but our largest one is the youth development program. We get resources for youth development from government but not much for domestic workers, since government feels they are doing a good job of dealing and wage theft and other issues related to domestic workers.

10.1.2. Interview Summary with Judy Kriege, Program Director, Bananas, Inc.

We spoke with Judy Kriege, who is the Program Director of Bananas, Inc., and she gave us an overview of what their organization does and their role in the larger childcare ecosystem. Bananas, Inc. is a childcare resource and referral agency whose primary function is to assist parents in Northern Alameda County to find childcare which may come in the form of licensed care facilities (centers or homes) or license-exempt individuals.

In the past, they used to provide nanny referrals where they gave names and contacts of individuals looking for nanny work to parents. These nannies were dominantly immigrant women of diverse ethnicity - Hispanic, Chinese, Vietnamese, etc. However, they discontinued nanny referrals due to the structure of their business model - Bananas, Inc. derives much of its funding from the state of California, and the state is only interested in providing referrals to licensed programs.

It was also a gray area for the organization when it came to liability in case something ever happened to a child while they were being cared for by a nanny they referred. Now, they do the reverse - they encourage parents to post jobs to their website and at their office, and the nannies can come and look through the openings that are available. Once a nanny is chosen, parents are encouraged to use a service called Trustline that accesses FBI, DOJ and Child Abuse Index databases to perform criminal background checks. They are also advised to get references from previous employers, as well as consider performing a test run for a day or two prior to signing a contract with the nanny.

Another thing the organization does is employer education for parents by advising them about their responsibilities and how best to set up a positive and successful childcare experience with their domestic worker. Nannies are also given training in various areas, including CPR, First Aid and even child development. Much of their employer education is supported though by a national organization, Hand in Hand, which has a local affiliate office in Oakland. Hand in Hand goes deeper and provides advice on legal requirements for employers, including guidelines on paid time off, health insurance, guidance on crafting employee contracts and the like.

We asked about the organization's experience with undocumented domestic workers, and Judy responded that they did not do any screening of domestic workers for citizenship. They did give advice to parents though that they could encourage undocumented workers to secure a tax ID number for filing taxes, and that the IRS wasn't actively looking for undocumented workers. It would actually be to the benefit of the worker to file taxes in case an opportunity for amnesty came in the future. Judy clarified that even for the payment services they provide, there are no requirements that someone should prove their legal residency in the United States in order to access a childcare subsidy.

In terms of problem areas or disputes between parties, Judy relayed that there were very few complaints that would reach their level and of those that did, were mostly centered around business practices - wages, scope of job responsibilities or things like paid time off and overtime. As an organization however, they could not act as an intermediary nor could they provide any legal assistance so they could only provide advice to both parties.

She then proceeded to tell us that nannies comprise a small scope of their organization's duties and gave us an overview of the childcare resource and referral network of agencies in the state of California. Childcare resource and referral is largely a state-funded activity in California, where the state provides subsidies to parents for their childcare costs. The agencies involved are independent 501(c)(3) organizations that have individual contracts with the state to supply childcare referrals to parents.

Bananas is unique that on top of licensed childcare facilities and professionals, they also supply license-exempt referrals. The vast majority of agencies restrict their referrals to licensed providers which are businesses outside of the parents' home, but Bananas allows parents to choose a license-exempt individual such as a friend or a family member to take care of the child. License-exempt individuals must go through the Trustline system if they aren't a direct relative before Bananas can pay them the state subsidy.

10.1.3. Interview Summary with Lindsay Imai, Bay Area Organizer, Hand in Hand

We interviewed Lindsay Imai, who is the Bay Area Organizer for Hand in Hand, a national network of employers of domestic workers working for dignified and respectful working conditions that benefit the worker and employer alike. The Bay Area chapter has around 40 active members, with a mailing list of 400.

Lindsay shared with us a brief history of the organization, which was started in 2010 as a result of discussions with the National Domestic Workers Alliance after they were able to pass the Domestic Worker Bill of Rights in the state of New York. Since then, they've established several chapters, with the California chapter being the first local chapter outside of New York.

Their key programs of action are to support the mobilization of employers of domestic workers to support legislative campaigns around domestic worker labor protections, advocate for domestic employer rights and to educate and inform employers on how to establish a professional working relationship with their domestic employee.

To the second program of action, Lindsay mentioned that many employers have problems with the affordability of hiring domestic help, especially persons with disabilities that may not have enough resources to pay for personal attendants. The community of domestic employers are diverse, not just ethnically, but also economically. While there are a lot of privileged employers, not all are rich and not all are powerful. So there's a conscious effort to push government to provide support for in-home care. Currently, there are programs like Medicaid that do pay for the support for low-income seniors but a large swath of the population doesn't qualify for Medicaid.

This diversity in employers also translates to the power dynamics between employers and workers, as the balance of power is not always uni-directional. For employers who are disabled and require attendants, there are cases of abuse by their caregivers, so Hand in Hand strongly advocates for mutually respectful and dignified working relationships. In this respect, the organization also educates workers about ableism and how to disrupt commonly held perceptions about the disabled community.

We probed Lindsay about common issues experienced by employers and she zoned in on the complicated tax system in the United States as hindering employers to pay domestic workers on the books. She mentioned that it's hard to incentivize domestic workers and their employers to file taxes given the complex tax code and the affordability of domestic care. For the employers that do file taxes, some even understate the amount that they file so that the domestic worker can take home more of their salary; this also has implications to the benefits that these workers receive from the government, as a higher income would disqualify them from welfare benefits such as food stamps and Medicaid. There have been several platforms built like Homepay (used by Care.com)

and Homework Solutions but these aren't widely used to do the aforementioned issues that affect the industry at large.

When it comes to undocumented workers, this problem is compounded because of the lack of comprehensive immigration reform. Lindsay mentioned that the laws of the land are contradictory in the sense that the law mentions that employers must file taxes even if they employ undocumented immigrants, but that they also should not be employing undocumented immigrants in the first place. She echoed what Judy Kriege of Bananas told us though that having undocumented domestic workers pay taxes would help them if the government implements reforms and provides a pathway to citizenship. In addition, she mentioned that lawyers have advised them that there is a large firewall between the IRS and the Department of Homeland Security, in that there is no exchange of information between the two agencies and there is little risk of deportation for undocumented workers who pay their taxes.

10.1.4. Interview with Palak Shah, Founding Director, Fair Care Labs & NDWA

In the design innovation stage of our project, we spoke with Palak Shah, founding director of Fair Care Labs, the innovation arm of the National Domestic Workers Alliance (NDWA). Fair Care Labs was a great fit for the scope of our project as it focused on creating new tools and social innovations that could enable change at scale. Projects Fair Care Labs have developed include Neat Streak, a mobile site that enabled house cleaners to agree on a list of tasks and how they are to be carried out, especially where there might be a language barrier, and a web tool that made it easier for workers to create in-house agreements.

We were interested in learning more about the needs of the NDWA and domestic workers, as well as previous work in the space, to identify area where a technical artefact/information system could make a meaningful impact.

Potential and limitations of technology

We discussed the various initiatives NDWA and its affiliates are involved in, and different avenues to effect change, such as pushing for changes in legislation, community organizing, and the introduction of a technical artefact/information system. In many cases, providing information about worker rights and/or new tools for workers may have a limited impact, especially where workers have limited mobility or face structural inequalities. In these cases, it may be more effective to target the employer, such as through tools and initiatives that help change norms and expectations of employers and employees, as well as pushing for nationwide or state-level changes in legislation.

We also discussed the philosophy behind Palak's TEDx talk "Who decides the future of work", and NDWA's Good Work Code, a set of guiding values of how we can structure equity in technical systems. Palak emphasized the potential of design in technical systems to effect positive change in a systematic way, but also, if unexamined, to "codify inequity at a greater pace and scale than we've ever seen before."

Organizing for domestic workers

Palak also mentioned that outreach to domestic workers was like the "wild west of organizing" due to domestic workers being generally dispersed, and working in private homes. We also discussed how while many domestic workers rely on informal networks to learn about job postings and other information, there was no easy way to leverage those dispersed networks to reach unengaged domestic workers.

Palak mentioned how in previous outreach efforts, the most effective approach was to go to parks and places where domestic workers frequent and to speak to them directly. She also discussed how large, centralized on-demand companies (like Care.com) can provide a way for organizations like the NDWA to reach a large number of aggregated users, getting around the problem of dispersed workers.

We also discussed how the NDWA currently managed their contacts within the NDWA and across its affiliates, with coordinating contact information between affiliates and the NDWA being an ongoing effort.

Potential areas for a technical system

Our subsequent discussion was an open-ended exploration of potential areas for a technical system/artifact.

Outreach and organizing

We briefly discussed ways we could improve outreach efforts, potentially by leveraging informal networks members currently relied on, including social media.

Tools for employers

One area of interest was to create a decision tool guiding a first-time employer through the process of hiring a domestic worker. For the new employer, this flow may be beneficial by increasing the employer's awareness of the needs and legal rights of their employee (such as including the cost of transportation, as well as what counts as overtime). This decision tool could serve as an extension of Fair Care Lab's In-House Agreements tool. For the employee, this could also simplify the various legal provisions, tax laws and paperwork that accompany various kinds of domestic work.

Enforcement

We discussed the need for enforcement alongside nationwide and statewide initiatives to push through changes in legislation. At a conference organized at Barnard College, a panelist member mentioned the need for litigation to create a "cost" to ensure compliance with the law. Palak said this was not a core NDWA strategy, but was interested in other ways enforcement could

be better secured. Part of this was through increasing awareness and changing social norms, both through the decision and in-house agreement tools (discussed above) as well as worker education and changing how domestic work and caregiving is regarded by employers, legislators, and companies, etc.

10.1.5. Interview Summary with Sarah Leadem, Northern California Field Coordinator, CDWC

Sarah is the Northern California Field Coordinator for CDWC. She is housed at MUA as they are funded by them. Working wise, CDWC is a partner with NDWA and work very closely with NDWA as it shares same goal of educating and organizing domestic workers, however they are independent in terms of funding. CDWC's affiliates locally support many campaigns organized by NDWA, like campaigns against human trafficking, immigrants reforms etc. They participate when goals and priorities align. CDWC is leading the policy changes that benefit domestic workers in California. They have launched many campaigns like Enforcement and educational campaigns to train the whole network of domestic workers. They are also actively involved in community outreach, helped file wage thefts. CDWC also partners with MUJERES in their political advocacy, enforcement and education, immigrants rights campaigns. There are a lot of layers of coordination in terms of how affiliates support each to improve lives of domestic workers.

CDWC has two layers of communication, one is internal which happens with steering committee and the channel is mostly emails, phone calls and in-person communication. The external communication involves using NDWA's Mobile commons mass texting system to reach out to a broader base of domestic workers in California. They also use Action-Network for mass emailing to diverse group of people and social media for engaging creating more awareness. Any affiliate organization can have access to NDWA's mass texting system called Mobile commons for free. Some of the affiliates like MUA, La colectiva have implemented it on small scale and while others such as FAJ are interested but are not sure how to roll out this plan. CDWC and NDWA have developed a protocol to limit use of Mobile Commons to only 3 messages to be send as blast as we do not want to overwhelm people or want people to unsubscribe.

Sarah is glad to know that our team will be working with FAJ to meet their information needs. In addition, she also sees other communication gaps that can be filled by having an structured Information system like documenting and organizing the information they get after any campaign or outreach to basically look back, helping them to streamline their efforts in future. Also systems that can track and standardise a worker's information will be helpful. Right now they are using google forms and however would be interested to have an information system that can get store all the information about a domestic worker and track how the leaders of the organization coordinate with them and help in their development. Presently, affiliates have varying systems and technologies for documentation but CDWC does not offer a standardised process to manage information about members. They have formerly used Powerbase to management information but are assessing needs of affiliates and best systems that match our needs. Sarah suggested working with an affiliate to build an information system for them and then they can plan how to scale it further.

10.2. User Interviews with FAJ organizers

10.2.1. Interview Summary with Grace, Organizer at PAWIS, FAJ

Grace is one of the organizers working with People's Association of Workers and Immigrants (PAWIS), and currently works with FAJ in campaigning and outreach. She has been a domestic worker in the US for more than 5 years and currently has a Green Card.

Grace recounted how she was recruited while working as a live-in caregiver and administrator at a care facility for the elderly in the East Bay. While she had one child in southern California, she knew relatively few other Filipinos. Grace initially did not want to speak to the organizer who had come to the facility, as she was busy and wanted to rest. She also did not like the term "domestic worker" that the organizer used repeatedly.

After repeated calls, she decided to attend a forum organized by the National Alliance for Filipino Concerns, to see if she could meet other Filipinos. She described the event as "an eye-opener". The event was large, with about 100 people. She mentioned seeing slides at the event about how caregivers were abused, as well as attending a workshop on immigration. She described a sense of pride that the event and subsequent interaction helped instill in her role as a caregiver. After the forum, she became actively engaged in organizing and outreach activity, and became friends with the organizer who had come to her facility.

Later during recruiting for PAWIS, Grace went to many facilities to reach out to Filipino caregivers. These were largely Filipino-run (many of whom were former nurses who subsequently started care facilities). This also gave a way for the organization to locate these Filipino caregivers by looking for facilities that were Filipino-owned.

While Grace had a range of experiences, she described difficulties with being able to speak with caregivers. (Grace's own current Filipino employer is very supportive of her organizing work.) Some common problems were that the caregivers had work to do, wanted to rest on their break, or were suspicious of her and the organization and did not create any trouble. Grace described one caregiver who was crying and told them that she didn't want to talk and to leave her alone, that she was "so afraid." Some employers were also suspicious and did not allow caregivers to speak to them. Grace described one employer who was "very antagonistic", asking them what they wanted with the caregivers.

In these situations, Grace would leave flyers with her contact number. She would then arrange a time to come by when the employer was not around, or at a more convenient time for the

caregiver. Grace also described how she could not get her contact number renewed after she returned to the Philippines for a few months, as she had stopped the service for that time, causing some caregivers to lose touch with her.

Grace described how caregivers had to be assured that the organization was “not here to ruin their lives”, but “to help them”, and even then, were still afraid. She mentioned a term “utang na loob”, translating roughly to “debt inside” - a sense of being indebted for life. Especially for undocumented workers who are isolated, the employer, partly due to being their own countrymen, can feel “like a savior.” In addition, caregivers worry that if they report abuses or wage theft, they may get deported, fired, or in general, that their “lives will get complicated.”

Grace also mentioned that caregivers only tended to call if they had problems, and were willing to see her only then. In this situations, they preferred in-person meetings, and felt they could talk to people “who they trust.” In issues involving wage theft and immigration, caregivers are referred to the Asian Law Caucus. Grace also mentioned bringing caregivers to free clinics, as many had no medical insurance. In subsequent conversations with Grace and other members of PAWIS, the members described it as a problem that many people only reach out and are involved with the organization when they needed help. They described a major goal as “base-building” where they could bring a wider group of people to the organization, some of which to become committed volunteers and leaders in the organization.

Grace also described how caregivers were more willing to accept wages below minimum wage, long hours, and other employer demands as their pay, once converted to pesos, is quite large in their home country, especially if their food and lodging is already paid for. They are “contented with the amount, even if it is minimal”, especially earlier on. (Grace described this as her own initial experience.) In general too, “Filipinos are hardworking, they can work 24 hours, they feel it’s okay”. She described this as one reason why it can be difficult to educate workers “about their rights” here.

Grace also discussed how it had been difficult to get members of PAWIS to attend regular meetings in recent years, due to caregivers having busy day jobs, limited time and other priorities. She described how activities that were more social were more effective, such as karaoke or a picnic. One strategy was to incorporate “educational” or organizing activities together with these social events.

10.2.2. Interview Summary with Mike, Organizer at PAWIS, FAJ

Mike is a 61 year old male who came to the United States for work around 2010. He is a husband and the father of three children - all of whom live in the Philippines. Mike first came to the United States because of a friend telling him of a job opportunity in the Midwest. He worked in the Midwest for 8 months before moving to Southern California because of how he was being treated and the environment in the state. Mike was denied certain pay and was not given the agreed upon payments. Once in Southern California he found another caregiver job via his wife's connections but that job also was not appropriate for him which resulted in him moving to the Bay Area. He found more information about the Bay Area job via a community leader of Pawais and FAJ. He then connected with this leader of PAWIS via Facebook as they had a history together in the banking industry when in the Philippines.

While working in the Bay Area, Mike and a co-worker were not being paid for overtime and fought a case against the agency that was employing him. Mike himself did not know that his rights were being violated until his daughter brought to light that he should be paid for overtime. He then connected with FAJ and they informed him of all the violations that were being made and recommended an attorney to him that took on the case - which eventually led to his victory of the case. Despite being undocumented Mike has won a case of wage abuse and proudly holds a California driver license. He was able to get a California driver license via a bill by the name of AB-60. Mike was made aware of this bill via his work with FAJ in lobbying for the bill. Mike also believes that most caregivers won't stand up for their rights due to fear of being deported or having issues with the government but he does believe if the right stories were shared or information was given that people would change their attitude towards community activism. Mike still has the passion to fight his past cases and help others do the same.

10.2.3. Interview Summary with Thomas, Organizer at PAWIS, FAJ

Thomas is a 65 year old man who had worked in the same small facility in the Bay Area. Although he was treated poorly from time to time he did not think much of it as he felt the employer was well intentioned and loyal to him. However, one day there was a large dispute at work and the employer fired Thomas' friend on a whim. Thomas was shocked by this and began to question the employer's intentions and rethink his treatment over the last several years. He realized the employer would also fire him if something similar were to happen and decided to quit and find another job. After quitting he soon realized that it was very difficult to find a job and that he should be compensated for all of the previous maltreatment from his employer. He then sought out justice by approaching the Philippine consulate. The consulate referred him to a local nonprofit in the Bay Area. He then fought his case and began working for the nonprofit as a dedicated member for many years.

Thomas later won his case and still volunteers at the nonprofit. He stated that he refuses to be someone who takes from something good and not give back. Thomas feels that many only take from nonprofits and do not give back. He credits the nonprofit for winning his case in that they provided important information and support for him to seek justice. When discussing Yakap, Thomas was very excited about the prospect of such a system but also expressed that the younger population (~50s) would be much more receptive to this type of system.

10.3 Usability testing scenarios

Administrator - Tasks

Scenario 1: You are the administrator of the FAJ group and just received 2 new contacts.

New Contacts

Hasnain: 510-387-7070

Carlos: 510-809-7393

- ❖ Add New Contacts
 - New contact
- ❖ Create a new group(Members)
- ❖ Add new contacts to the group
- ❖ Send out broadcast to this new group about Rock the Balut

Scenario 2: You just sent out a broadcast to existing members about an upcoming event (Rock the Balut). You receive a message from an existing member: I want to volunteer who should I talk to?

- ❖ Reply to their message with “Thanks! We’ll put your name down as a volunteer.”

Scenario 3: The FAJ administrator wants to send a few templates to the organizers to use with questions that come up often. We need to create a few templates and send them to the organizers.

- ❖ Navigate to the Messages tab
- ❖ Click on New Message
- ❖ The bottom of the pop-up box has a “templates” hyperlink. Click it.
- ❖ Add a new template with the words - “SB 10 Passed!”
- ❖ Send the message to the FAJ Organizers group

Scenario 4: The FAJ administrator wants to create custom fields to the contacts, for example city, state, etc.

- ❖ Navigate to Contacts
- ❖ Click on all Contacts
- ❖ Hover over More on the right top side
- ❖ Click on Manage Fields
- ❖ Click on Add new field on the top right corner
- ❖ Add the name of field in the Field Name(for example ‘city’)
- ❖ Click on the field type to add what type of field it is, for example ‘city’ will be a text field.
- ❖ Then, click on Create Field
- ❖ Navigate to Contacts
- ❖ Click on a particular contact and click on Add more Info
- ❖ Then, click on the newly created field ‘city’ and add city information to it.

Scenario 5: The FAJ administrator has a excel file of new contacts and wants to import those contacts and upload that excel file directly to Telerivet.

- ❖ Navigate to Contacts
- ❖ Click on all Contacts
- ❖ Hover over More on the right top side
- ❖ Click on Import contacts
- ❖ Add columns to the right side
- ❖ Now, click on upload file, choose the file from the computer
- ❖ Click Ok

Scenario 6: The administrator wants to send a message to members who they haven't heard from in the last 7 days. We need to filter users and send all members who haven't messaged FAJ in the last 7 days a message.

- ❖ Navigate to the Contacts Tab
- ❖ Click on Filter “Last Heard From”
 - Click on Less than and enter 7 - - days
- ❖ Select all and send the message saying “Hey, haven’t heard from you in a while - do you have any questions?”

Scenario 7: Attach a file/url from computer or Facebook to message

Organizer - Tasks

Scenario 1: You have just recruited a new member and they said they would text you. They just sent you a text message and have some questions for FAJ. The entire team of organizers gets a message and you would like to respond. Please accept the message and respond to the new member.

- ❖ Wait for text message, once received please follow directions and respond accordingly.

Scenario 2: The FAJ administrator just sent you a message that you would like to send to other members. We need to forward the message to a few members.

- ❖ Wait for text message from administrator.
- ❖ Once received, forward the text message to the previous contact who messaged you from scenario 1.

10.4. Onboarding guide for new organizers

Onboarding sheet for New Organizers

The following is a quick reference to familiarize new organizers with Yakap's service to assign organizers to potential new members.

We recommend spending 15-20 minutes on becoming familiar with the system, and additional time as needed to discuss the process after the organizer is assigned to a new member.

Yakap's SMS Service Demonstration:

Setup: The demonstrator will play the role of a new potential member.

- ❖ If a new number not in the system is available, text from that number to FAJ's hotline to simulate a new potential member.
- ❖ If not, remove the Members and Organizers groups from the demonstrator's contact in Telerivet, and use that number to simulate a new potential member. (Remember to add those groups back in later)
- ❖ Add the new organizer's contact information in Telerivet
- ❖ Add the Organizer's group in

1. **The demonstrator sends a text message** (*"I need help with wage theft" etc*) to the Telerivet's phone number provided by FAJ.
2. The demonstrator gets a automated response back *"Thanks for contacting FAJ's caregiver information line. Someone from staff will get back to you soon. Can we have your first name? To be anonymous, reply with 1. The demonstrator shows the message to all the organizers.*

3. **All the organizers in the system gets a message with the queue id.** *“FAJ has received a the following message from a new contact (Queue ID 107) Would you like to engage with them”.*
4. **Show the organizer how to respond to the message with the queue id by texting “107” in response to the service, etc.**
5. The first organizer to reply to the text message with the Queue ID number will be assigned the potential new member, and receive the potential new member’s number from the system (Etc: *Thank you for engaging. Please contact user 107 directly at :+5101984043.*)
6. If the potential new member provides a number, the organizer will receive an additional text with the user’s name. **Demonstrate by entering your name as a potential new member into the system.** (“Maria” etc). Organizers will receive a text (*“User name is Maria.”*)
7. **Demonstrate how the assigned organizer can use the phone number in the text to start a new text with the potential new number.**
 - ❖ For iPhones, press on the number and hold. Option to send a text will appear.
 - ❖ For most Android phones, tap on the number once. Option to send SMS will appear

After the demonstration, repeat Steps 1-7 again, this time having the organizer input the queue number and send a new text. It is not necessary to do setup again, as a new text from the demonstrator’s number will restart the assigning process.

If you have removed the Members and Organizers group from your contact, remember to add them back in after the demonstration to ensure you continue receiving texts from the system.

