Strengthening La Goyco's Volunteer Program: Enhancing the Volunteer Experience through Welcoming, Data Management, and Business Partnerships

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Abstract

The goal of this project was to strengthen and structure the volunteer program at *Taller Comunidad La Goyco*, allowing for organizational growth and longevity. The team collaborated with staff and volunteers at La Goyco, a nonprofit community center in Santurce, Puerto Rico providing social services and cultural, health, and environmental initiatives. We volunteered at La Goyco to better understand the volunteer experience. We created the Welcome and Greeting Package to inform volunteers of opportunities; a Volunteer Management System to track and store data; and Business Partnership Resources to encourage community collaboration. These tools are intended for use by La Goyco and other community centers to improve volunteer orientation and integration, data tracking, and business outreach.

Executive Summary

Non-Profit Organizations

Non-profit organizations are unique operations that frequently rely on volunteers (Oostlander et al., 2014). These community-based organizations (CBOs) can provide vital resources to local areas. Working with volunteers allows these organizations to provide services and opportunities to the community that might otherwise not be feasible ("VolunteerHub," n.d.). The leadership of nonprofits benefits from having effective systems to organize and track volunteers, which often requires significant effort and resources. In Puerto Rico, many nonprofit organizations are in community centers that support the wellbeing of residents on the island (Pérez Figueroa, 2022). Many residents on the island face political and economic hardships and disaffection from governments that lead them to create their own support systems with civic leaders (Pérez Figueroa, 2022). Difficult circumstances and limited resources leave many Puerto Rican community centers reliant on an effective volunteer program.

Taller Comunidad La Goyco

The San Juan community of Santurce was dealing with several social and economic issues when *Taller Comunidad La Goyco* opened its doors in 2020. Residents continue to suffer from poverty, unemployment, and displacement (Donnelly-DeRoven, 2019; M. Reyes, personal communication, March 13, 2023). A group of activists in Machuchal, a neighborhood in Santurce, established La Goyco to focus on the three pillars of community wellbeing: culture, health, and the environment. The association hosts workshops in plena music, therapy, and a community garden. With the organization's broad range of services, managing and tracking volunteers has been a difficult task (M. Reyes, personal communication, March 13, 2023).

Figure 1: Photo of *Taller Comunidad La Goyco* in March 2023.

Volunteer management is essential for volunteer-based organizations and programs to ensure the effective delivery of activities and services. Organizations with formal volunteer programs are more likely to report high levels of volunteer participation, retention, and satisfaction (Schlachter, 2021). Strong levels of volunteer participation were recorded by 70% of organizations with established volunteer programs, compared to only 55% of organizations without formal volunteer programs (Schlachter, 2021). These statistics demonstrate the importance of volunteer management strategies to help attract and retain volunteers.

Small non-profits can track volunteer activity more efficiently, increase the effectiveness of their efforts, and enhance the volunteer experience with the aid of a well-designed digital volunteer management system. Non-profit organizations that invest in tech-based volunteer management systems are more likely to have a larger impact on their communities. Organizations are 83% more likely to report increases in the quality of their programs and services when they use technology to manage volunteers. A devoted volunteer base can help small non-profits grow; volunteers who feel involved are more likely to continue to volunteer at an organization over time (*Stanford Social Innovation Review*, 2013). It is critical for small non-profits to have a well-designed volunteer management program.

Figure 2: Volunteers at La Goyco's Saturday Work Brigade.

There are various pathways a volunteer can take to support a non-profit (Mukwashi et al., 2018) (Figure 3 modification of United Nations Volunteerism Report). This graphic is a modified version of the one publicized by the United Nations Volunteers in the report. The first layer near the center identifies both formal and informal volunteers. Formal volunteers are people who volunteer for nonprofit organizations, whereas informal volunteers perform services that include, but are not limited to, helping a relative, close friend, neighbor, etc. with a simple deed. The next layer highlights whether the volunteer is on-site or remote. While many people assume volunteering is only in-person, the report identifies that there are hundreds of volunteer services that can be done virtually, particularly in "areas like health and medicine, education, and community building" (Virtual Volunteer Opportunities, n.d). The third ring identifies local, district, national, and international volunteers (*Defining Volunteers*, n.d.; *Virtual Volunteer Opportunities - VolunteerMatch*, n.d.).
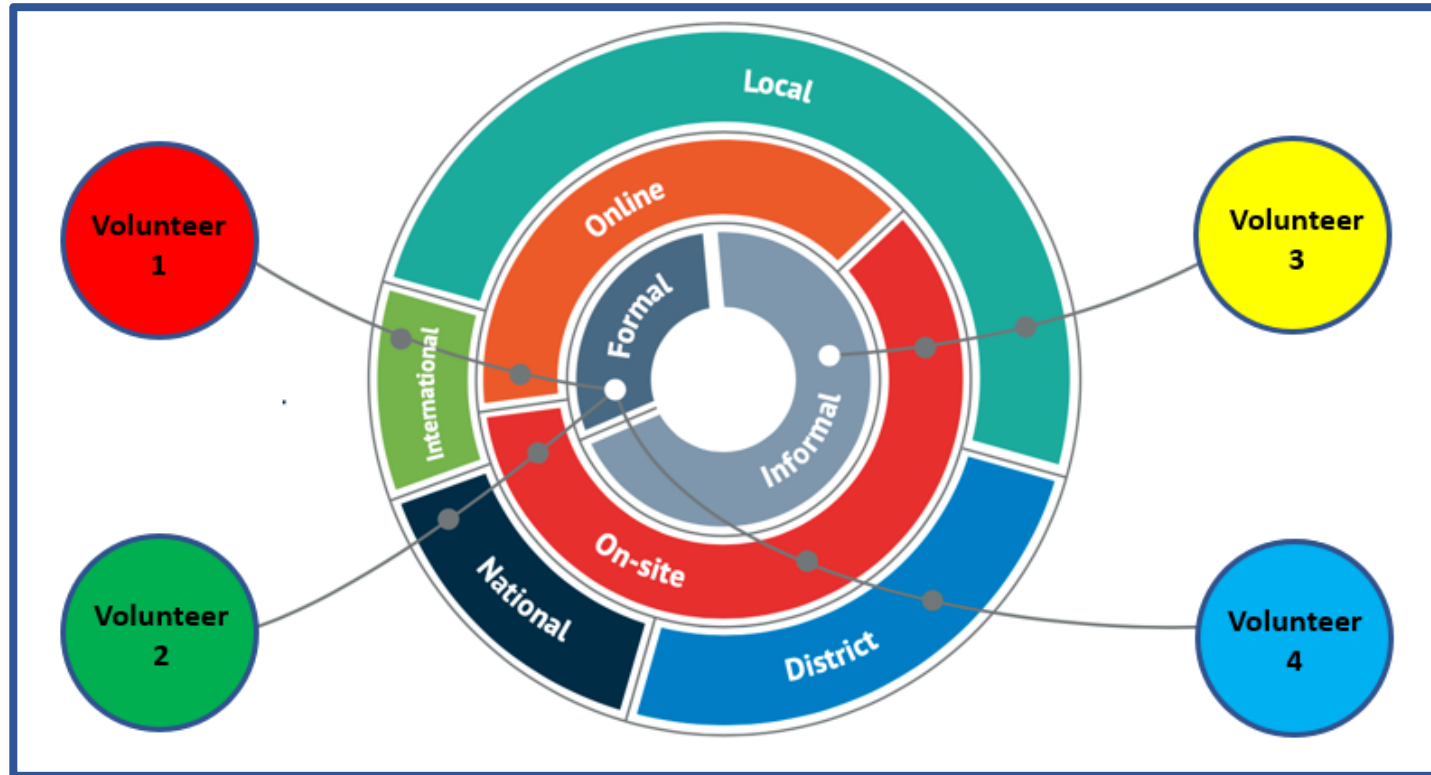

Figure 3: Different types and configurations of volunteerism in communities (Mukwashi et al., 2018).

Implementing volunteer management systems has previously been studied for non-profits in Puerto Rico. These systems can be computer or paper-based depending on the organization's resources and needs. In 2021, a project conducted by students at Worcester Polytechnic Institute (WPI) worked to strengthen the volunteer program at the Caño 3.7 Organization by creating a personalized volunteer management system (VMS) (Jayne et al., 2021). Volunteer management systems can either be tracked by hand or with computer-based software. They noted that many commercial computer-based volunteer management systems were prohibitively expensive and opted to develop a custom digital solution. The Caño 3.7 system was designed to track the number of volunteers, identify those with the most hours, and produce graphs for sponsoring organizations to utilize in reports and grant applications. This program has a free and a paid version that costs $10 per month for an administrator to manage (Jayne et al., 2021).

Volunteer managers tend to rank comfort with digital tools significantly lower than general volunteer management skills. This establishes the importance of choosing a volunteer management system that is affordable and technologically accessible for an organization the size of La Goyco (Kappelides & Johnson, 2020). Such a system must also be scalable as organizations expand to support local communities.

This project will support *Taller Comunidad La Goyco* in further developing their volunteer program to encourage individuals to participate in cultural, health, and environmental initiatives. The team worked closely with La Goyco's Executive Director Mariana Reyes, the staff of La Goyco, and their volunteers to understand their needs. To achieve this goal, the team analyzed the current system La Goyco uses to manage their volunteers, further strengthened La Goyco's greeting and welcoming of volunteers, developed a viable VMS to accurately store volunteer data and created materials to use to partner with local businesses.

Mission, Objectives and Methods

Mission Statement:

Our project goal was to support *Taller Comunidad La Goyco* in strengthening their volunteer program which provides the community with health, environmental, and cultural initiatives. To accomplish this goal, we addressed La Goyco's welcoming, data management and business partnership programs. To do this we pursued the following objectives.

Methods:

We utilized a variety of methods and to achieve our six objectives the team began engaging in key informant interviews and participating in volunteering opportunities to understand the volunteer experience at La Goyco. With this information, the team began to prototype and test the Welcoming and Greeting Package and adapt the digital volunteer management system created by the Cano 3.7 IQP group in 2021. The team conducted user-testing to further develop the Volunteer Management System and convened a focus group for designing our Partnership Resource Package. Lastly, the team worked to initiate volunteer opportunities at La Goyco for WPI students. ⌷
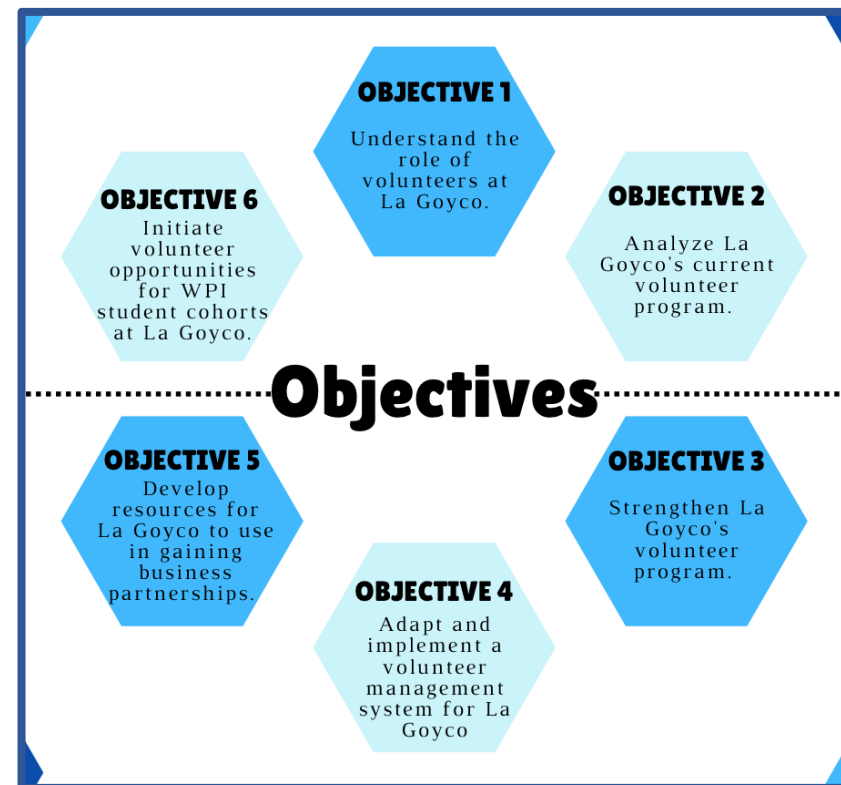

Figure 4: Our project objectives.

Findings

We collaborated closely with five informants at La Goyco (Figure 5). These members of La Goyco's leadership team have many responsibilities and their current day-to-day tasks are dynamic and changing due to the growth of La Goyco.
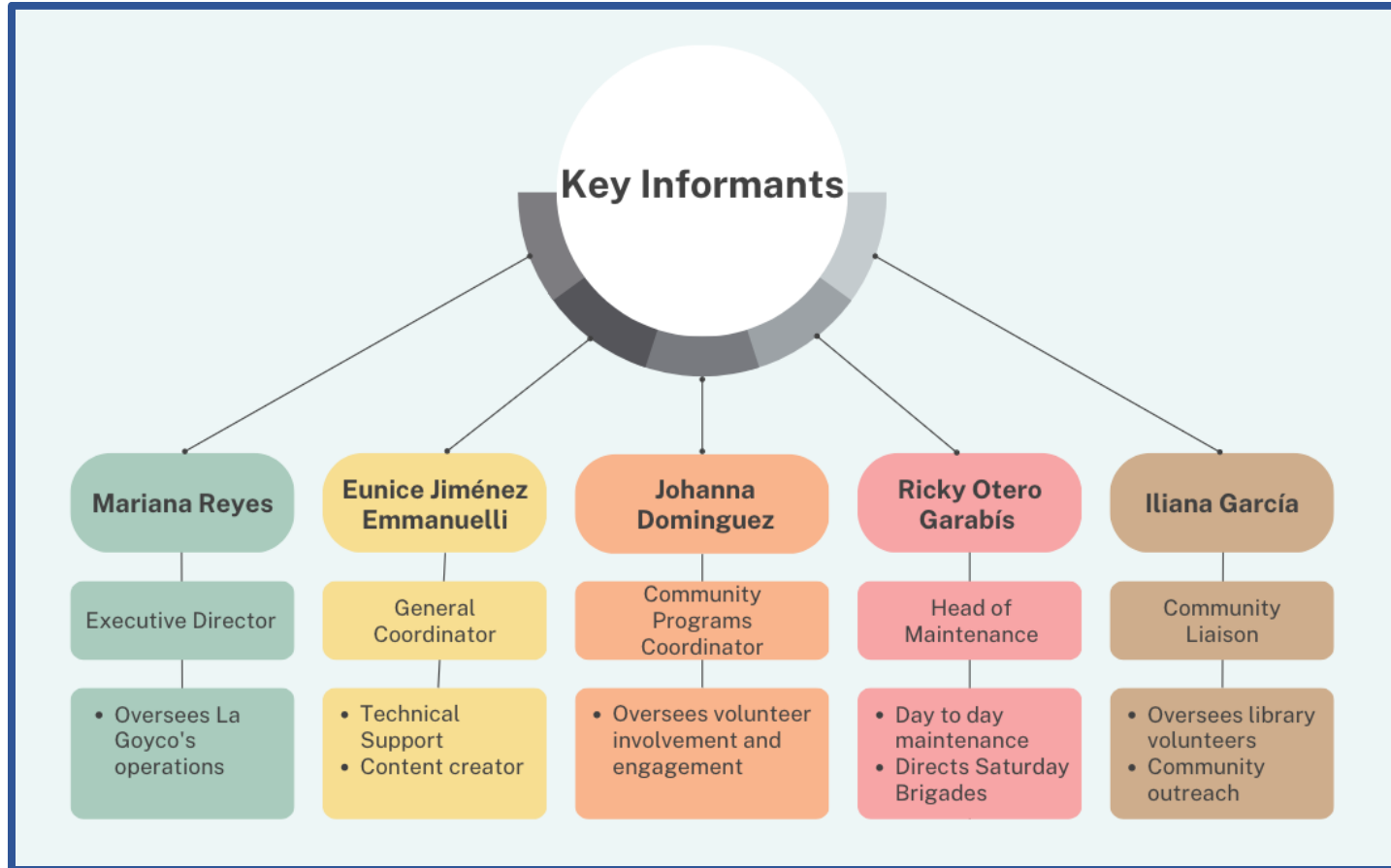

Figure 5: List and roles of key informants.

After spending seven weeks immersed in La Goyco's volunteer program by participating in volunteer opportunities, communicating with administrators, and connecting with the residents of Machuchal, we arrived at a series of findings specific to La Goyco, but also applicable to other organizations (Figure 6).

Finding 1

La Goyco's organizational structure is shifting towards a more professionalized operation.

Finding 2

La Goyco did not have a defined or structured volunteer program.

Finding 3

La Goyco's volunteers are autonomously motivated.

Finding 4

The importance of feedback from volunteers and administrators is crucial to developing an effective volunteer program.

Finding 5

In manuals, provide clear instructions when the user has no prior knowledge of the subject provide clear instructions.

Finding 6

La Goyco could benefit from resources to connect with businesses and partner with them through donations, sponsorships, and events.

Finding 7

Getting WPI students involved in volunteer initiatives was more difficult than expected.

Figure 6: Our team's findings from this project experience.

Finding: La Goyco's organizational structure is shifting towards a more professionalized operation.

- The operations of La Goyco are changing to become more defined and structured.
- La Goyco is continuing to hire additional staff members to support their expanding program.

Finding: La Goyco did not have a defined or structured volunteer program.

- La Goyco needed formal systems to support new and recurring volunteers and to expand volunteer opportunities.
- La Goyco did not have a directory or system to welcome or direct volunteers when they arrive.
- The library has the most structured volunteer program at La Goyco.
- Head of Maintenance, Ricky Otero Garabís, does not use any formal methods to track volunteers' hourly contributions or greet new volunteers at the Saturday Brigades.
- Participation in La Goyco's programs revealed how reliant La Goyco is on volunteer efforts.

Finding: La Goyco's volunteers are autonomously motivated.

- Volunteers at La Goyco exhibit autonomous motivation as opposed to controlled motivation for their work.

Finding: The importance of feedback from volunteers and administrators is crucial to developing an effective volunteer program.

- It is important to appeal to volunteers in the presentation of the welcoming information.
- It is important to consider the placement of welcoming information on printed posters.
- The length of the process of filling out the Google Form dictates how willing volunteers are to complete it.

Finding: In manuals, assume the user has no prior knowledge of the subject.

- It is difficult to create effective user manuals that can be used across a variety of languages for a variety of individuals, including facilitators and trainees.
- Provide clear written instructions and strong visuals in any manual.

Finding: La Goyco could benefit from resources to connect with businesses and partner with them through donations, sponsorships, and events.

- La Goyco did not have a structured approach to partnering with surrounding businesses.
- The order of the "Business Partnership Resources Package" presentation is important when making an initial connection with a business.

Finding: Getting WPI students involved in volunteer initiatives was more difficult than expected.

- We found that simply sending out volunteer opportunities to the WPI cohort was not enough to get them involved at La Goyco.
- A relatively more effective approach to reaching the cohort was to use the shared Outlook calendar, shared Excel spreadsheet, and to send out reminders the evening before a volunteer opportunity took place on WhatsApp.
- The sign-up sheet in the Excel spreadsheet was underutilized by members of the cohort.

Findings based on Physical Recruitment Methods

In our efforts to strengthen La Goyco's volunteer program, we utilized the five physical approaches to recruiting new volunteers. These include fundraisers, face-to-face conversation, community awareness days, collaborations, and posters/signage (Figure 7). By experimenting with these five approaches, we were able to develop two deliverables: The Business Partnership Resource Package and The Welcoming and Greeting Package (Figure 7).
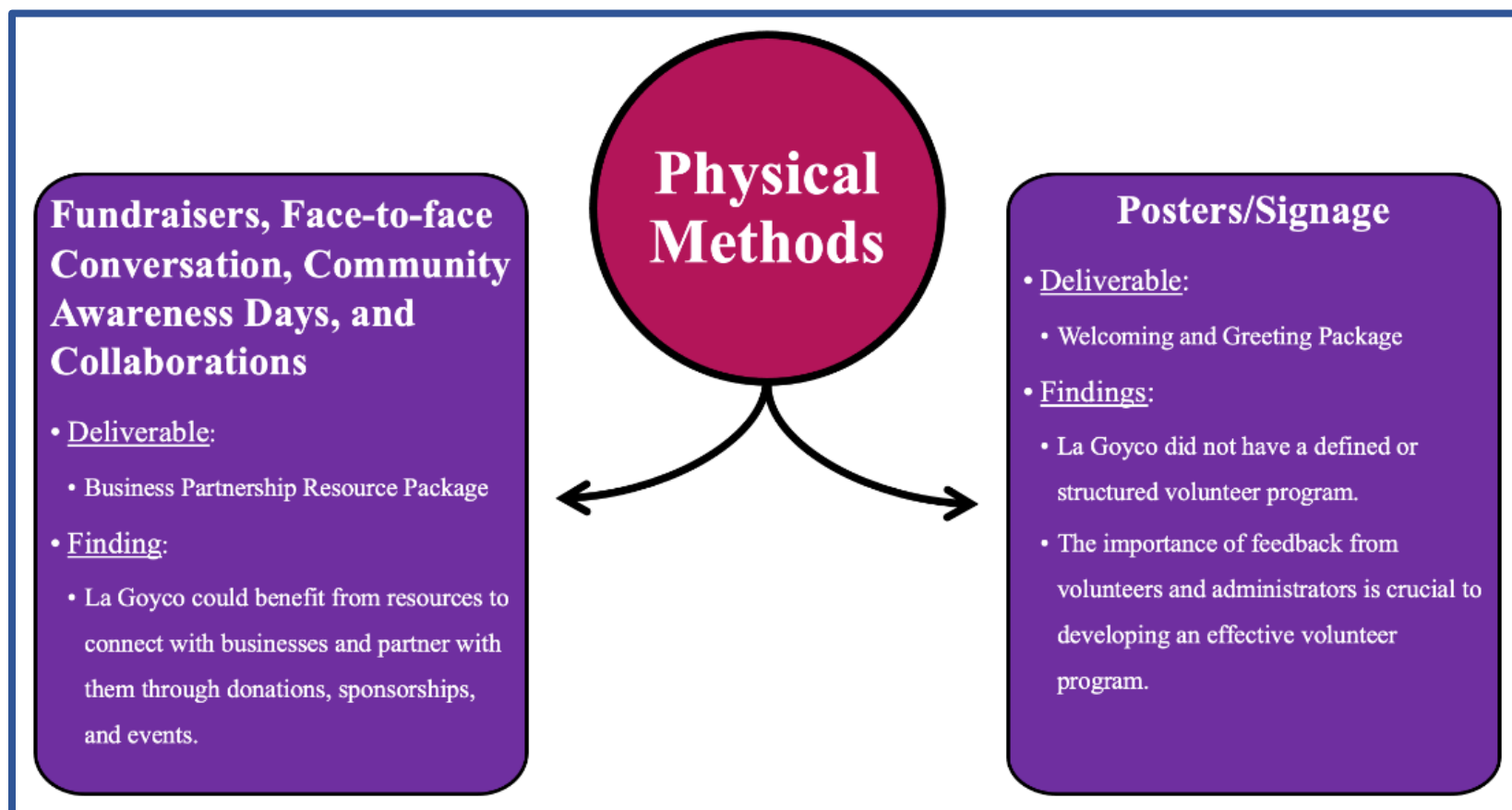
Physical Methods

Fundraisers, Face-to-face Conversation, Community Awareness Days, and Collaborations

- Deliverable:
  - Business Partnership Resource Package
- Finding:
  - La Goyco could benefit from resources to connect with businesses and partner with them through donations, sponsorships, and events.

Posters/Signage

- Deliverable:
  - Welcoming and Greeting Package
- Findings:
  - La Goyco did not have a defined or structured volunteer program.
  - The importance of feedback from volunteers and administrators is crucial to developing an effective volunteer program.

Figure 7: Team deliverables and findings based on physical methods for recruitment.

Outcomes and Recommendations

Outcomes:

      We developed four major deliverables to enhance La Goyco's volunteer program and business partnership outreach. The Welcoming and Greeting Package is comprised of a range of posters and signage to initiate and streamline the recruitment/registration process of new volunteers. For the Volunteer Management System, we utilized Retool software to manage and analyze internal trends in volunteer efforts. Additionally, we produced the Volunteer Management Systems for Non-Profits user guide to supplement the VMS and assist La Goyco's administration in software usage and troubleshooting. Lastly, the Business Partnership Resource Package was created to aid in local business outreach.

Welcoming and Greeting Package	Volunteer Management System	Volunteer Management System User Manual	Business Partnership Resource Package	Outreaching Volunteer Opportunities to Cohort
• This package includes a poster displaying La Goyco's volunteer opportunities and a QR code linked to a registration form. • It also contains physical registration forms, volunteer profiles with photos and descriptions, and a laminated calendar that can be customized with erasable markers for daily activities.	• La Goyco's VMS incorporates a Google interface linked to Retool software, utilizing two QR codes on Google Forms for new and recurring volunteers to gather information via questionnaires.	• This manual provides a comprehensive guide on how to use Retool software to implement a VMS for non-profits, including a case study of its successful implementation at La Goyco. • It discusses the features of the VMS, such as data collection and analytics, and provides instructions on how to utilize the system. • The guide also highlights the benefits of the VMS, such as data analysis for grant applications and program management.	• This package is a binder containing documents and resources that facilitate local business partnerships. • It includes a portable presentation for pitching possible partnership opportunities in events, sponsorships, donations, and community collaboration. • Additionally, the package contains an appendix for meeting notes and information on each business on Calle Loiza, which can be displayed centrally in La Goyco's VMS.	• We tested two systems, a shared Excel spreadsheet and a shared Outlook calendar, to communicate volunteer opportunities at La Goyco. • The Excel spreadsheet displayed a weekly schedule of events, and we tested sending it to our cohort via Outlook and WhatsApp. • We also prototyped and tested a sign-up sheet for event attendance tracking.

Figure 8: Five major project outcomes for La Goyco.

Recommendations:

The following recommendations are intended for administrators of *Taller Comunidad La Goyco,* and other non-profit organizations aiming to enhance their volunteer programs and cultivate relationships with businesses in their community. Furthermore, we provide recommendations for future cohorts at WPI with the aim of promoting volunteerism.

Recommendations for *Taller Comunidad La Goyco* Administration

- We recommend having La Goyco's front desk attendant provide further information about La Goyco's opportunities for new volunteers.
- Assign previously determined dollar values to each task listed in the VMS.
- We recommend that the Welcome and Greeting Package be used to promote a positive first impression for new volunteers.
- Continue to add new Volunteer Profiles to the front wall of La Goyco.
- We recommend updating the calendar in the Greeting and Welcoming Package every week to promote the volunteer opportunities to new and recurring volunteers.

Recommendations for Non-Profit Administrators

Using a Volunteer Management System

- We recommend that any VMS dashboard adapted from our system be kept at a technical skill level that is appropriate and accessible to the administration of a nonprofit organization.
- For future additions to the Volunteer Management Systems for Non-Profits Manual, it would be helpful if designers assumed that the user has no prior experience with the system.
- We advise having a physical copy of the Volunteer Management Systems for Non-Profits Manual on hand for administrators at an organization to have a quick reference when encountering any issues with the VMS.
- Ensure a support network is developed to address technical hiccups as they arise.
- Respect the privacy of the volunteers and the information they provide.
- We recommend using statistics available on the VMS, including the monetary value of each task completed at an organization, when applying for grants.
- We advise including graphs available on the VMS in end-of-year reports.
- Data tracking on the VMS can be used to celebrate volunteers that hit key milestones.

Partnering with Businesses

- We recommend the Business Partnership Resources Package be used to promote collaboration between the nonprofit and surrounding community.
- When partnering with businesses, we recommend that the representative of the organization leave a paper copy of the summary sheet of partnership opportunities and organization contact information with the business representative.
- It is important to showcase previous business partnerships when looking to build new connections.

Recommendations for Future WPI Cohorts

- We recommend that when working with nonprofit organizations attend as many volunteer events as possible.

Table of Contents

The Dynamics of La Goyco's Volunteer Program

This chapter begins with a brief description of different types of volunteer services and volunteers. We then transition to *Taller Comunidad La Goyco's* history and their important role in the community. Next, we provide information about volunteer programs at small nonprofits and discuss various recruitment strategies for small nonprofit organizations using both digital and physical methods to appeal to volunteers. We also address the process of connecting with volunteers by analyzing volunteer motivation, issues related to volunteer orientation and training for nonprofit organizations. Then we address the benefits nonprofits receive when connecting with local businesses. We provide an overview of different volunteer management systems, discussing their capabilities and drawbacks, including a review of a system created by WPI students for a Puerto Rican nonprofit organization. Lastly, we investigate various approaches to track volunteer information and account for the value of volunteer hours.

Typology of Volunteer Service

Many La Goyco services fall within the five categories of volunteering initiatives defined by the United Nations Volunteer Organization authored by Mukwashi et al. (2018) (Figure 9). These categories include mutual aid, service, campaigning, participation, and leisure. Mutual aid is the unity of people during a time of need or crisis. Service volunteering is when volunteers help an individual or community based on their needs. Volunteer campaigning works to support marginalized voices to be heard by a wider audience and interrupt the existing normality. An individual or group giving their time and skills is participation volunteering. Events and activities that promote one's interests and culture are leisure volunteering.

Figure 9: Five categories of volunteering initiatives from the 2018 United Nations State of the World Volunteerism report (Mukwashi et al., 2018).

Operations of La Goyco

School Closures in Puerto Rico

Between 2007 and 2018, the Puerto Rican Department of Education closed 673 schools across the island (Rubiano Yedidia et al., 2020; Kennedy, 2018). Increasing tourism and the government's inability to provide social services during economic and natural crisis encouraged gentrification in Puerto Rican neighborhoods (Donnelly-DeRoven, 2019). These issues affected Puerto Ricans across the island (Figure 10) causing their population to decrease by 12% which placed pressure on their school systems (Katz, 2019). Hurricane Maria alone reduced enrollment on the island by 22,350 students as families were displaced after nearly a year without power or access to government aid and services, causing many families to flee the island (Kennedy, 2018). According to Mercedes Martínez, president of the Puerto Rican Teachers Federation, the Secretary of Education used natural disasters and enrollment as leverage to close even more schools (Kennedy, 2018).
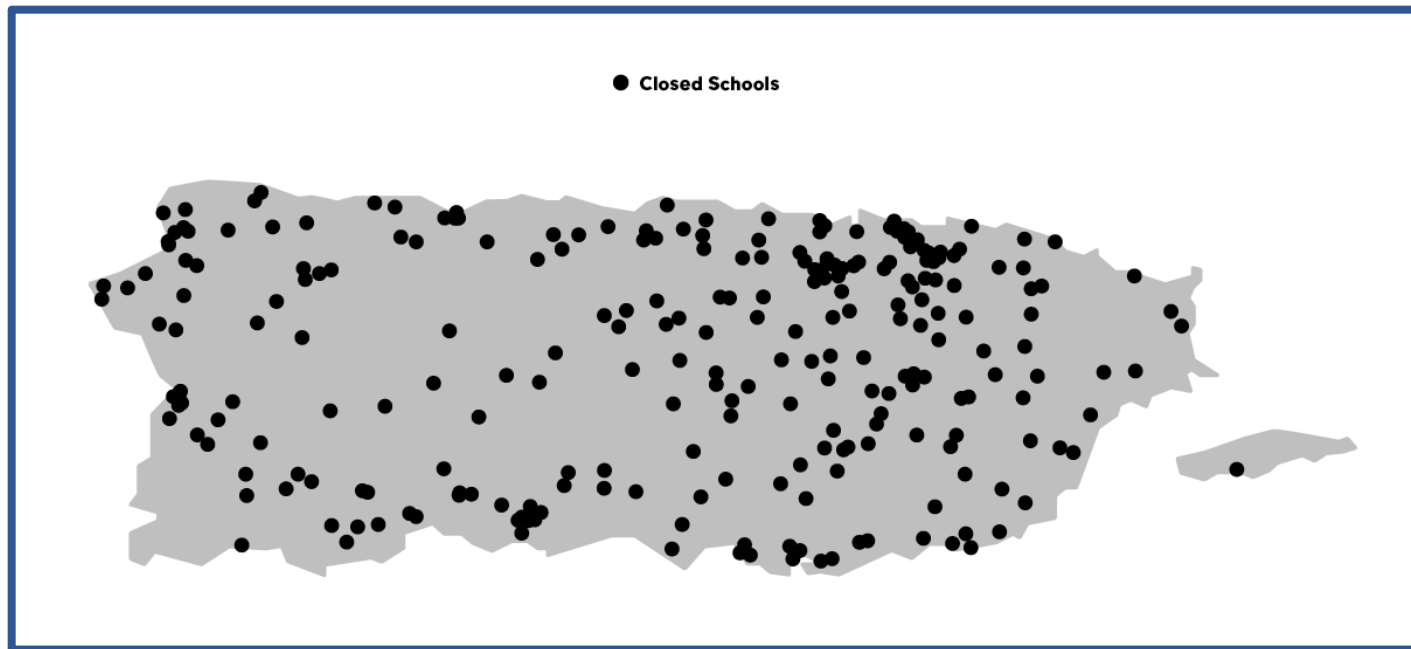

Figure 10: Map of the public-school closures in Puerto Rico since 2017 (Katz, 2019).

With more than $120 billion dollars in accumulated public debt as of 2017, Puerto Rico implemented a policy of austerity by closing struggling schools (Kennedy, 2018). The closures designed to reduce spending and increase funds for social services never reached the Puerto Rican people. As of 2020, only 44% of the abandoned schools were being used according to their intended use in their contracts (Abizeid, 2020). According to a University of California, Berkely (2020), the minimal financial gains from closing the schools went to investors and to pay down public debt, while increasing the distance and travel expenses for students attending new schools (Abizeid, 2020). Schools were closed with minimal input from island residents, highlighting residents' lack of political freedoms and influence (Abizeid, 2020). These political and economic limitations leave communities in Puerto Rico to create their own support systems (Pérez Figueroa, 2022).

Amid continuing natural disasters and community hardships, these schools are being repurposed to provide essential support to the community (Kennedy, 2018). However, this is an uphill battle as 69% of the closed schools remain vacant (Abizeid, 2020). Following Hurricane Maria, many grassroots organizations emerged to utilize these abandoned spaces and support the vision of "a reimagined Puerto Rico run by its people in their interests" (Klein, 2018, p. 12). Community collaboration is important in creating strategies to increase the resiliency of the community (Pérez Figueroa, 2022).

The Pedro G. Goyco Elementary School located in Santurce, San Juan, Puerto Rico permanently shut down in 2015 (Figure 11 and Figure 12). Like many schools in Puerto Rico, Goyco's enrollment declined due to the large exodus of local Puerto Ricans off the island (Donnelly-DeRoven, 2019). The population decline in the area is worsened by increasing gentrification. As of March 2023, approximately 800 of the 2,000 apartments located in Santurce's Machuchal neighborhood have been transformed into Airbnbs (M. Reyes, personal communication, March 13, 2023). After the school's closure, there was no formal procedure in place to transfer students to another school or utilize the property (Am et al., 2022). The loss of the school was felt by the entire community and the tourist developments also limited the availability of community gathering places for the people of Santurce.

Figure 11: Photo of the closed Pedro G. Goyco Elementary School (Ralston, 2017).

Figure 12: Photo of empty hallway in Pedro G. Elementary School (Donelly-DeRoven, 2019).

Transition to a Community Center

The Machuchal community in Santurce launched grassroot initiatives in 2015 to reuse the La Goyco school building after their unsuccessful attempt to keep the school operational. Through these efforts, the *Taller Comunidad La Goyco* community organization was formed to acquire ownership of the building from the Municipality of San Juan in 2020 (Am et al., 2022). After the Pedro G. Elementary School closed in 2015, volunteers and members of the Machuchal community worked to restore the functionality and beauty of the building (Figure 13 and Figure 14). La Goyco provides programs, services, projects, and events that serve and showcase the Machuchal community's historical, social, and cultural richness.
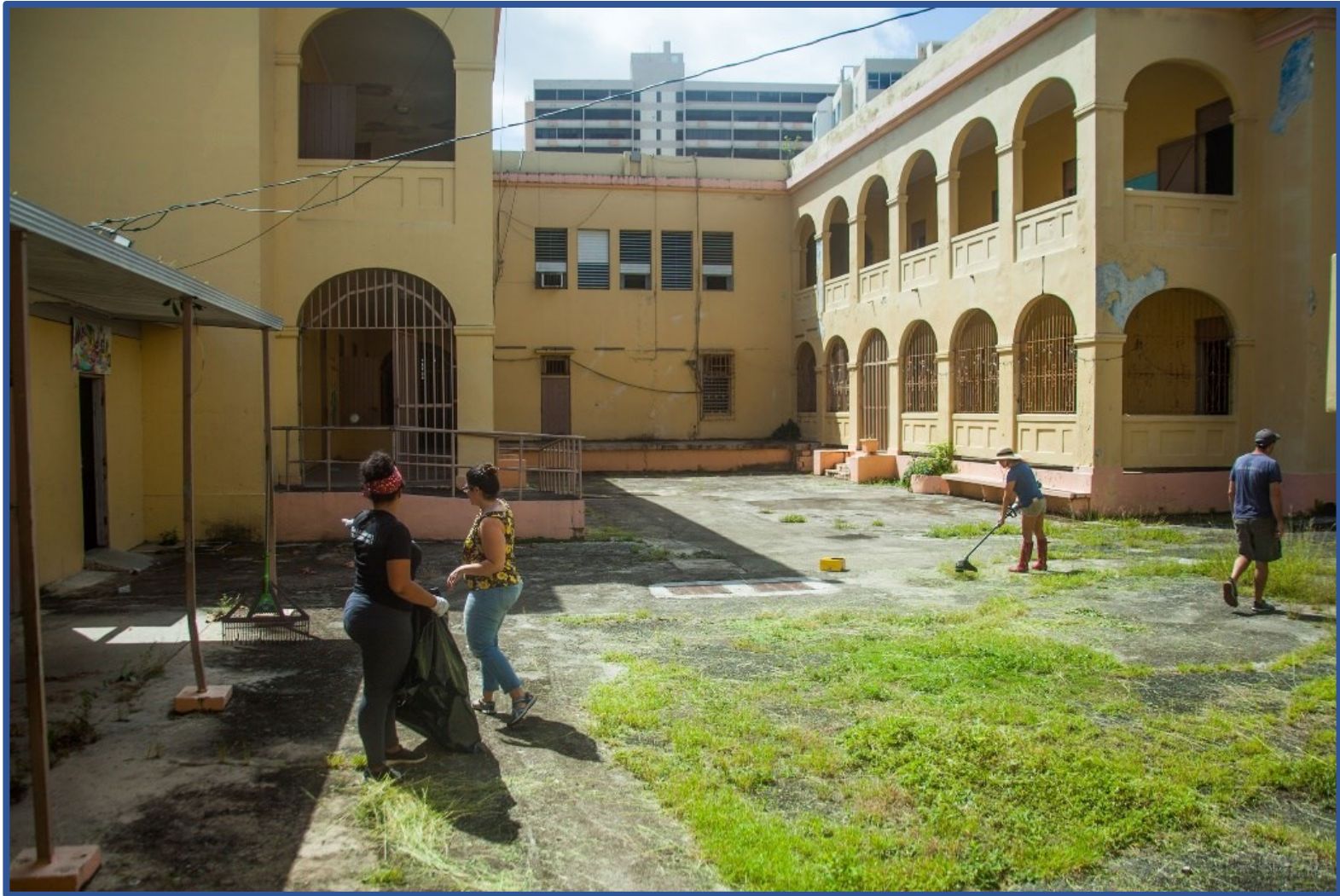
Figure 13: Volunteers raking backyard of Pedro G. Elementary School (Singh, 2019).

Figure 14: A volunteer power washing stairs at Pedro G. Elementary School (Donelly-DeRoven, 2019).

La Goyco's Mission

La Goyco's main objective is to empower communities through initiatives in culture, health, and the environment (M. Reyes, personal communication, March 13, 2023). This includes preserving cultural traditions, such as music, dancing, art, and education about the history of Afro-Puerto Ricans (La Goyco, n.d.). La Goyco has expanded and changed over the years, but it has stayed faithful to its initial purpose of fostering and safeguarding the cultural history of Santurce's Afro-Puerto Rican population (Figure 15, Figure 16, and Figure 17).

Figure 15: Photo of *Taller Comunidad La Goyco* in March 2023.

Figure 16: Photo of *Taller Comunidad La Goyco* courtyard in March 2023.

Figure 17: Mural of Tito Matos in La Goyco's courtyard.

The Machuchal community is predominantly home to elderly residents, hence La Goyco places a high priority on the availability of health resources (Am et al., 2022). Additionally, many performers, including musicians, actors, and other artists live in Machuchal and contribute to La Goyco's workshops (Am et al., 2022).

Volunteer Operations at La Goyco

La Goyco is currently headed by Executive Director Mariana Reyes Angleró, a local activist and resident in Santurce who works alongside approximately 100 volunteers who have varying levels of responsibility and commitment (M. Reyes, personal communication, March 13, 2023). Volunteers range from consistent contributors to occasional drop-in volunteers. La Goyco also collaborates with student volunteers from the University of Puerto Rico, Worcester Polytechnic Institute, Northwestern University, Universidad de Sagrado Corazón, and other academic and social institutions and organizations (La Goyco, n.d.). La Goyco's funding has increased since opening in 2020. La Goyco relies on twelve principal donors, including the Miranda Foundation, the Jazz Foundation, and Northwestern University, among others (La Goyco, n.d.).

Figure 18: Community Garden at La Goyco.

In addition to providing social and cultural services, La Goyco is a local hub that provides support to community members in case of natural disasters. La Goyco has a steady source of power from an array of Tesla Solar Panels allowing residents to charge their phones and receive a cooked meal in an emergency. Also, a community garden is used as a seed bank for various plants and vegetables. The community center also provides volunteer-run professional services such as healthcare, mental health clinics, and COVID vaccines. La Goyco hosts social and cultural events and rents space to local businesses. The Head of Maintenance at La Goyco is Mr. Ricardo (Ricky) Otero Garabís who receives help from a varying number of regular and drop-in volunteers and through a monthly volunteer cleaning brigade (Figure 19).

Figure 19: Head of Maintenance Ricardo Otero Garabís composting during the Saturday Brigade.

Recruiting New Volunteers to Community Centers

Appealing to Volunteers through Digital Methods

According to E.S. Soegoto and A.T. Utomo, authors of Marketing Strategy Through Social Media (2019), there are two main approaches to appeal to volunteers Media. One approach is to target the "digital lives" of potential volunteers. Volunteer organizations have a variety of digital platforms and channels to connect with potential volunteers where they "live" online (Soegoto & Utomo, 2019). According to Day (2013), methods to reach volunteer's digital lives include social media, e-newsletters, blogging, etc. (Figure 20). Soegoto and Utomo (2019) note these channels are excellent for recruitment outreach because they "directly engage consumers in the creative process by producing and distributing information through collaborative writing, content sharing, [and] social networking" (p. 3).
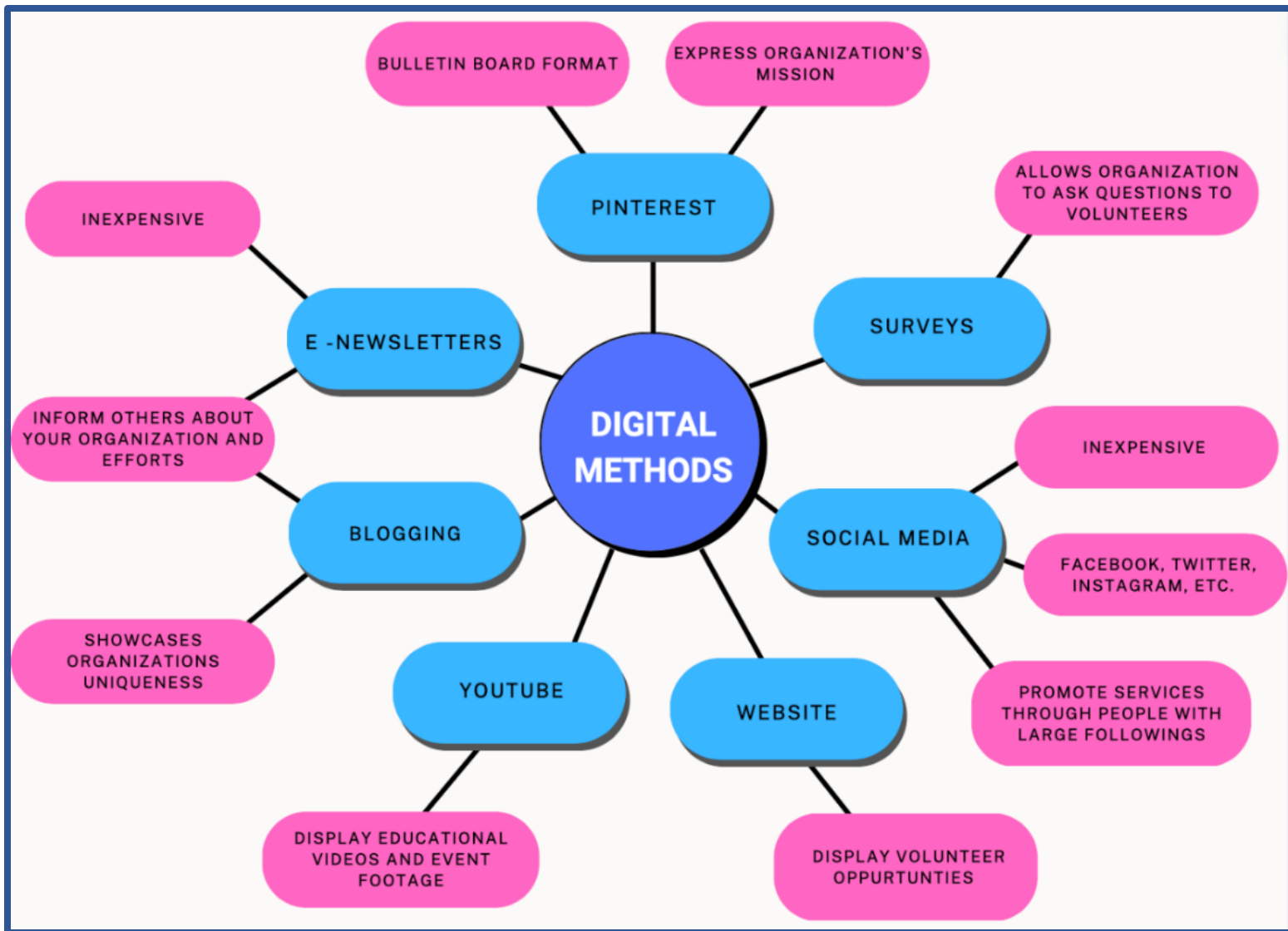
Figure 20: Digital methods to recruit volunteers (Soegoto and Utomo, 2019).

Appealing to Volunteers through Physical Methods

Although digital strategies can be effective approaches to recruiting new volunteers, hosting events and other non-digital strategies are also effective methods to attract volunteers (Figure 21). According to *The Smart Nonprofit's Guide to Volunteer Management* (2022), each of the five approaches can help small non-profit organizations with recruitment. These include fundraisers, face-to-face conversations, community awareness days, collaborations, and posters/signage.
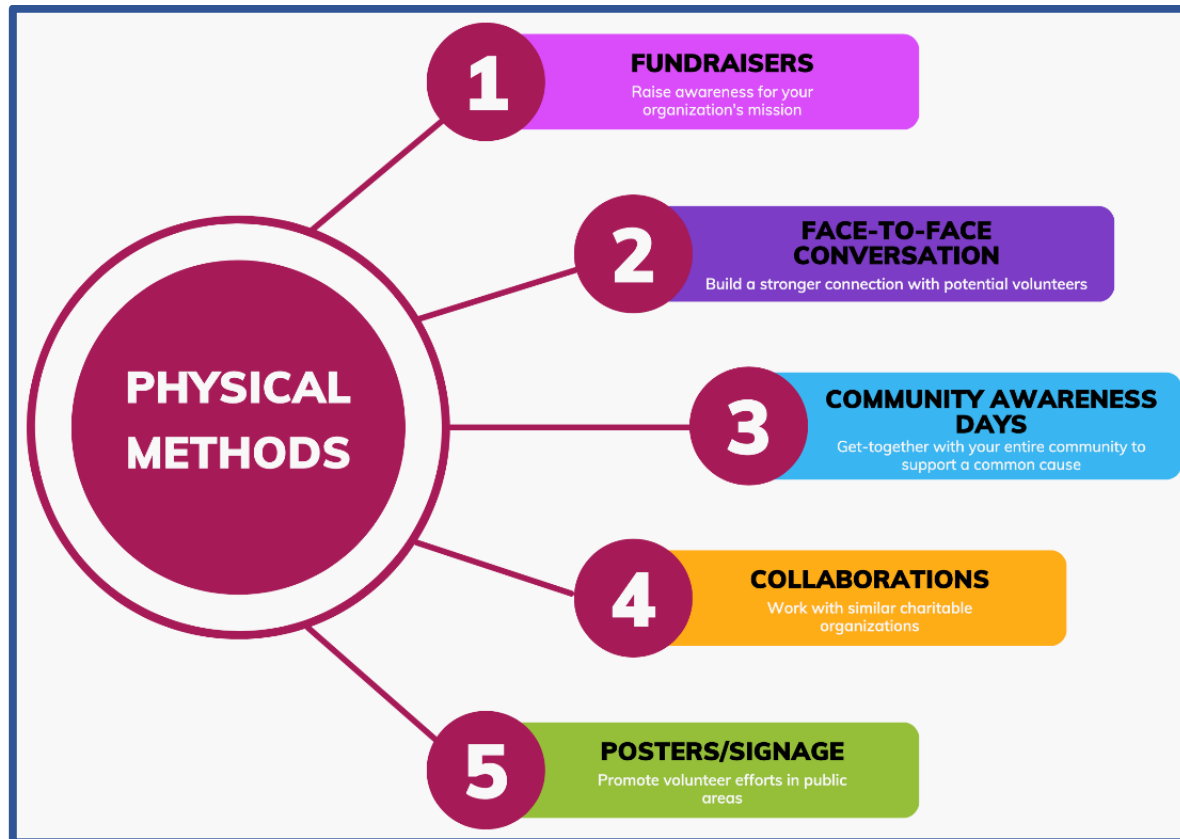
Figure 21: Physical methods for recruitment (The Smart Nonprofit's Guide to Volunteer Management, 2022).

Executive Director Kwasi Acheampong from Our Bright Future Inc., a non-profit organization in Massachusetts, focuses on building a relationship with a potential volunteer through in-person interactions such as taking the individual or group for coffee or a meal (K. Acheampong, personal communication, February 9, 2023). He uses this method to recruit local college students to help with his programs. Instead of using other methods, he prioritizes connecting with students and asks if the student has any friends who would be able to help with his program (K. Acheampong, personal communication, February 9, 2023).

Volunteer-Organization Relations

Many organizations focus on what they need, but many volunteers have their own objectives that they want to achieve in addition to helping others. Effective volunteer management can allow for creativity and decision-making. Mr. Acheampong from Our Bright Future noted that organizational leaders "have to build a relationship with your volunteers, you can't micromanage them. Allow them to make mistakes and learn from them. If you don't give volunteers their space, then you'll prevent them from expressing their creativity" (K. Acheampong, personal communication, February 9, 2023).

The Self-Determination Theory of Motivation

Because volunteers provide unpaid work, their motivation, work ethic, and commitment come from nonmaterial sources (Oostlander et al., 2014). This calls on nonprofit organizations to create a solid relationship with the volunteers and effectively relay their mission and project goals. According to Oostlander et al. (2014), an effective model for nonprofit organizations to utilize is the self-determination theory of motivation. This theory weighs the influence of controlled motivation and autonomous motivation. Autonomous motivation is determined by the individual's own free will. Alternatively, control-based motivation is rooted in avoidance of guilt and punishment. As opposed to fear of external rules and expectations, volunteers are guided intrinsically by autonomous motivation (Oostlander et al., 2014). Letting the volunteer's personal initiative lead the way rather than stressful rules and deadlines can prolong the longevity of the volunteer's commitment as the work does not feel forced (Oostlander et al., 2014). People

have differing levels of autonomous and control motivational baselines (Oostlander et al., 2014). This presents a challenge to find a system that works best for everyone.

Orienting New Volunteers

Orientation plans to welcome new volunteers into a nonprofit organization such as *Taller Comunidad La Goyco* can be very useful. In orientation, new members are usually given introductory information about the organization's culture and background. This provides volunteers with opportunities and resources to be successful and useful to the organization.

Experts note that orientation is carried out in different ways. In general, there are three main approaches to orienting a new volunteer. The first approach allows for volunteers to finish screening and orientation before they are placed in a position. During orientation, staff evaluate volunteers to see which role they are best suited for (Edwards, 2012). In other organizations, orientation does not occur until the volunteer has completed the screening process and placed in a specific department (Edwards, 2012). Another approach features two parts. The first part of orientation is brief and occurs during the recruitment phase where a volunteer learns briefly about the organization's mission and culture. Once the volunteer clears the screening process, a more structured orientation is undertaken where the volunteer gains additional insight into the culture and the operational practices (Edwards, 2012).

Regardless of the approach, an effective orientation plan aims to introduce new volunteers to each aspect of the organization without overwhelming them. Providing this information through a variety of mediums can be beneficial for the volunteers. It is often useful for an organization to convey the purpose of the organization, its history, and an overview of policies and available training (Edwards, 2012). Taking volunteers on a guided tour to meet staff members helps individuals understand how they will fit into the organizational structure (Edwards, 2012). Another useful tool is to provide orientation leaders and new members with an agenda of training topics. In addition to preparing new volunteers with policies, it is beneficial to introduce the organization's culture can be beneficial (Edwards, 2012). This can be accomplished through hosted organizational events which immerse individuals into the culture and provide opportunities to meet others in the organization.

Many nonprofit organizations now are switching from traditional in-person face-to-face orientation methods to technology-based approaches. In this transition it is important to consider the use of technology with scheduling volunteer activities (Stevenson, 2009). Using communication technology allows organizations to create modules that can be completed online. Even though this

alleviates the problem of in-person scheduling, the use of technology can create barriers for a volunteer due to individuals' access and comfort with technology (Edwards, 2012). Older volunteers and those who are less accustomed to using computers normally prefer completing their training in person (Edwards, 2012). It is important to consider access and comfort with technology when creating a welcome and orientation plan for new volunteers.

Training Volunteers

Managing the transition between orientation and training for new volunteers is a vital part of the new member's experience. Volunteer training is aimed at enhancing the effectiveness of paid and non-paid members (Stevenson, 2009). Training allows volunteers to feel confident and knowledgeable about the duties they will perform. Before training volunteers for their job, it can be beneficial to have them shadow others to better understand roles and responsibilities (Stevenson, 2009). Having both paid staff and volunteers work together during training allows for a relationship to be formed between the two groups of people (Soegoto & Utomo, 2019). This connection helps volunteers and paid staff feel like partners collaborating in the organization. Not only is it important to provide training when volunteers join, but implementing periodic training for members is also beneficial for an organization's success (Stevenson, 2009). Conducting refresher training provides volunteers and staff with additional skills and tools to have a positive impact on the community. This can be a challenge for organizations that are smaller and have a wide range of different volunteer activities such as La Goyco.

Partnerships with Local Businesses

Nonprofits can connect with local businesses through donations, sponsorships, and different forms of fundraisers. By partnering with local businesses, nonprofits can strengthen their ability to face climate, biodiversity, and poverty challenges (Antolin-Lopez et al., 2022). Partnerships between businesses and nonprofit organizations often focus on financial support. However, these partnerships also build a sense of community and encourage more intrinsic support from members of each organization (McRay, 2021).

Financial support from businesses through financial donations can be very helpful in supporting the community services of nonprofits. However, this source of funding is not the most reliable as local businesses in smaller communities such as Machuchal have financial struggles of their own (McRay, 2021) (Figure 22). It is also difficult for small nonprofits with limited outreach to large corporations to rely on donations alone for support and funding (McRay, 2021).

Figure 22: Calle Loíza (Loíza Street) in Machuchal (De León Soto, 2018).

Sponsorships are another useful method for nonprofits to connect with local businesses. It is important to acknowledge support from businesses and thank them through images or posters   that celebrate the partnership (McRay, 2021). Businesses can also participate in fundraisers with nonprofits. This can take the form of donating productors or supplies, asking customers to donate, or giving a percentage of their sales over a period to the nonprofit (McRay, 2021).

A 2022 study in Bolivia analyzed the motivations of community members to partner with the nonprofit Natural Park and Integrated Management Natural Area to support social impact in the areas of climate preservation and poverty. In the study, 799 community members were interviewed along with 50 local community representatives across four municipalities and 45 communities (Antolin-Lopez et al., 2022). This study found that the main motivating factors driving partnership with a nonprofit are their environmental consciousness, organization strength, and how well the organization represents the needs of the community (Antolin-Lopez et al., 2022).

Partnerships also depend on the social prestige and recognition that the business gains. The business will also grow its network and connection to the community through partnering with a nonprofit. This is valuable as only 20% of for-profit organizations believe that they effectively communicate with their relevant stakeholders (Simpson & Varley, 2022). Bringing corporations and nonprofit organizations together allows them to combine their resources. 89% of these partnerships believe this improves their ability to impact the surrounding community in a positive way (Simpson & Varley, 2022).

Volunteer Management Systems

Tracking Volunteer Engagement

Keeping track of volunteer time contributions is a useful resource for small non-profit organizations such as *Taller Comunidad La Goyco*, not only to track internal engagement but also to justify external fundraising, grants, and donations (Kappelides & Johnson, 2020; Proulx et al., 2018). One popular way to manage this data is with a volunteer management system (VMS), which can be digital, or paper based.

There are many volunteer management systems focused on non-profits, but only a select number are accessible when considering cost and complexity to an organization at the scale of La Goyco. VMSs track individual hours, age, location, education, special skills, and spoken languages for each volunteer, permitting a non-profit to effectively engage with and track volunteer efforts (Proulx et al., 2018). A volunteer management system turns the focus away from the stress of managing volunteers and more on developing meaningful relationships with volunteers. An efficient VMS allows staff to spend less time dealing with paperwork and

more time working alongside community members (Kappelides & Johnson, 2020). Many volunteer management systems are based on free software such as Google Sheets or similar low-cost tools.

Data to Investigate Return on Mission

Furthermore, volunteer management systems enable the effective collection of statistics that measure an organization's social impact, which could inspire investors to donate to an organization's causes and programs (Urban, 2018). The availability of data – commonly compiled into a formula known as "return on mission" that incorporates the social value of a volunteer's monetary or time contribution – help inform potential and current volunteers about the worth of their contribution (Urban, 2018).

To realize both the tracking of volunteer contributions and to encourage donations, many non-profit organizations utilize volunteer management systems on a day-to-day basis. A 2018 survey by researchers at La Trobe University noted that 67.5% of volunteer managers use at least one [volunteer management] platform and 8.1% utilize a spreadsheet to track their volunteers (Kappelides & Johnson, 2020, p. 11). Similarly, universities such as Worcester Polytechnic Institute utilize software such as Microsoft Excel to keep track of community service hours completed by students and campus groups (M. Lipman, personal communication, January 27, 2023).

Custom VMS for Caño 3.7

In the process of selecting a VMS system it can be helpful to analyze the systems used by organizations like La Goyco. In 2021, a team of WPI students created a VMS for Caño 3.7, a nonprofit organization in San Juan, Puerto Rico composed of three sub-entities (Jayne et al., 2021). The VMS organizes the work of approximately 1,000 volunteers annually. The principal elements of the system can be adapted to fit La Goyco's specific needs.

The 2021 IQP team began by compiling information on the capabilities and prices of commercial VMS software packages. After reaching out to the companies and performing software demonstrations, the team determined that the best VMS for Caño 3.7 was a Google Forms and Sheets system connected with an Open-Source Volunteer Management Dashboard (Jayne et al., 2021). This method for organizing volunteer data has nearly all the features that commercial VMSs have but at a fraction of the price. The team utilized a software package called Retool to organize and better showcase data stored in the Google Sheets into a VMS dashboard

(Jayne et al., 2021). The dashboard displayed the information gathered by the Google Forms and stored in the Google Sheets. As of 2021, the Retool software costs $120.00 per year (Jayne et al., 2021).

The process of logging volunteer data was performed through a Google Form (Figure 23) that volunteers submit on their phone or computer. This method requires that a volunteer has access to the internet, which must be considered when implementing this system and planning accommodation. The Google Form asks for the volunteer's email address, name, date of service, hours completed, related workshop, active project, task completed, and additional comments (Jayne et al., 2021). A 'task completed' question asks volunteers to choose from a drop-down list. Each task has a corresponding dollar amount based on current wage evaluations.

Figure 23: Logging volunteer data on Google Forms (Jayne et al., 2021).

The answers to these questions are automatically stored in a connected Google Sheet (Figure 24) that must be validated by an administrator with access. The system has multiple sheets with different features based on validated responses. One sheet contains the name of each volunteer with the number of hours they volunteered (Jayne et al., 2021). Another sheet contains hourly wage

equivalents with cited resources and calculates the total work value for each volunteer and organization (Jayne et al., 2021). Another sheet breaks down each project by the hours for each task associated with it and total volunteers per project (Jayne et al., 2021).

Figure 24: Storing volunteer data on Google Sheets (Jayne et al., 2021).

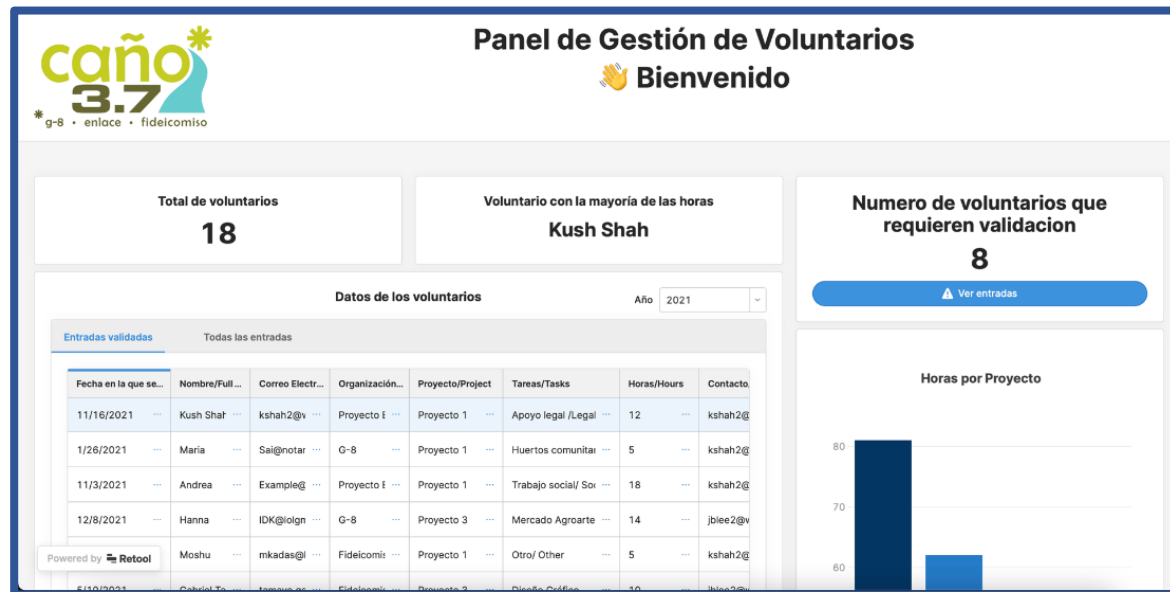This data is then displayed on the VMS dashboard website utilizing the Retool software (Figure 25).

Figure 25: Analyzing volunteer data on Retool (Jayne et al., 2021).

Generating Funding Through Investments and Community Support

Justifying Investments Using Metrics

To fund initiatives, many community-based organizations such as La Goyco count on donors and investors, who fund philanthropic endeavors to gain both social and financial returns on their investment (Roundy, 2017). Financial return on investment (ROI) measures the financial gain an investor receives from a particular investment (Roundy, 2017). Social return on investment (SROI) measures the cost-benefit analysis of an investment's value, including the social, environmental, and tangible outcomes for a set of stakeholders that would be made possible with a particular investment (Yates & Marra, 2017). Detailed data highlighting the social impact of a donation to a particular program can encourage philanthropic investors to earmark their money there (Roundy, 2017). Other metrics, categorized as "return on mission," focus on the total impact in terms of a specific program, including not only the cost or time a particular initiative would take to complete, but also the value of that initiative to the community once completed – all serving to justify a donation to the program most deserving of funding (Urban, 2018).

Community Donations

Additionally, many local community members are willing to fund initiatives that benefit their neighborhood. A 2014 study conducted by Indiana University, among other partnering organizations, showed that on average 74.9% of Puerto Rican households donate to charity each year, with 82.0% indicating they donate specifically "to give back to [their] community" and 78.7% indicating they donate when they "believe [their] gift can make a difference" (Osili et al., 2016, p. 11). These donations totaled $286 per year on average for a general household (defined as a household income of less than $150,000 or a net worth of less than $1,000,000). Though approximately 41% of these donations were to religious causes on average, Puerto Rican donors identified education and health care as the top two issues that matter most to them (Osili et al., 2016). As La Goyco has an overarching goal of promoting the education and health of their community, a targeted approach focusing on these two initiatives may yield funds to ensure their continued success.

Our Project Goal

Our project goal was to further strengthen La Goyco's volunteer program by creating systems that better organize the flow of volunteer recruitment, the management of volunteer contributions, the relationships with local businesses and volunteer retention. To meet this goal, we participated in a variety of volunteer opportunities to learn what it is like to volunteer at La Goyco, and we conducted interviews with the staff of La Goyco to understand the need for managing volunteer efforts. We gained an understanding of the variety of volunteers, their motivations, and identified new opportunities for their volunteer program. To strengthen La Goyco's volunteer program, we developed material for La Goyco's greeting and welcoming of volunteers, designed and launched a digital Volunteer Management System, created a tool for La Goyco to partner with surrounding businesses in the Machuchal community and devised retention strategies for keeping volunteers.

Methodology

Mission Statement

Our project goal was to support *Taller Comunidad La Goyco* in strengthening their volunteer program which provides the community with health, environmental, and cultural initiatives. To accomplish this goal, we addressed La Goyco's welcoming, data management and business partnership programs. To do this we pursued the following objectives.

Objectives

1. Understand the role of volunteers at La Goyco.
2. Analyze La Goyco's current volunteer program.
3. Strengthen La Goyco's volunteer program.
4. Adapt and implement a volunteer management system for La Goyco.
5. Develop resources for La Goyco to use in gaining business partnerships.
6. Initiate volunteer opportunities for WPI student cohorts at La Goyco.

Objective 1: Understand the Role of Volunteers at La Goyco

Method: Conduct Key Informant Interviews

The team interviewed La Goyco's Executive Director Mariana Reyes to understand the organization's volunteer needs and current volunteer management system. The team also interviewed La Goyco's Community Liaison and library program overseer, Iliana García, to understand how volunteers contribute to running the library, and La Goyco's Head of Maintenance, Ricardo (Ricky) Otero Garabís, to understand how volunteers assisted in monthly cleaning brigades.

Method: Participant-Observation

The team prioritized the establishment of trusting and respectful relationships with staff and volunteers at La Goyco. These connections were built by participating in multiple volunteer opportunities offered by La Goyco and working alongside other volunteers of the Machuchal community.

We also attended a community meeting discussing the ongoing issues of displacement and waste disposal within the neighborhood, participated in volunteer opportunities with the Head of Maintenance at La Goyco, Ricardo (Ricky) Otero Garabís, and their monthly Saturday Work Brigade.

The team attended La Goyco's community fair which invited members of the Machuchal community and the surrounding area to set up stands to showcase their art, products, or social services.

Objective 2: Analyze La Goyco's Current Volunteer Program

Method: Conduct Key Informant Interviews

The team conducted additional key informant interviews with administrative staff members Eunice Jiménez Emmanuelli and Johanna Dominguez, and La Goyco's Community Liaison, Iliana García, to better understand La Goyco's volunteer program. Iliana, the head of La Goyco's library, discussed the paper forms she uses to keep track of her volunteers and their contributions.

Objective 3: Strengthen La Goyco's Volunteer Program

Method: Prototype and Test Welcome & Greeting Package

For the greeting and arrival aspect of the volunteer experience we created various posters to help structure the welcoming component of La Goyco's volunteer program. The posters were designed to welcome a volunteer when they arrive for the first time and inform them of the opportunities La Goyco offers. The initial design of the posters for this welcoming component consisted of two posters (Figure 26 and Figure 27). The first poster defined the cultural, environmental and health initiatives, while the second poster displayed a QR code allowing new/first-time volunteers to fill out a Google Form to register as a volunteer for La Goyco.
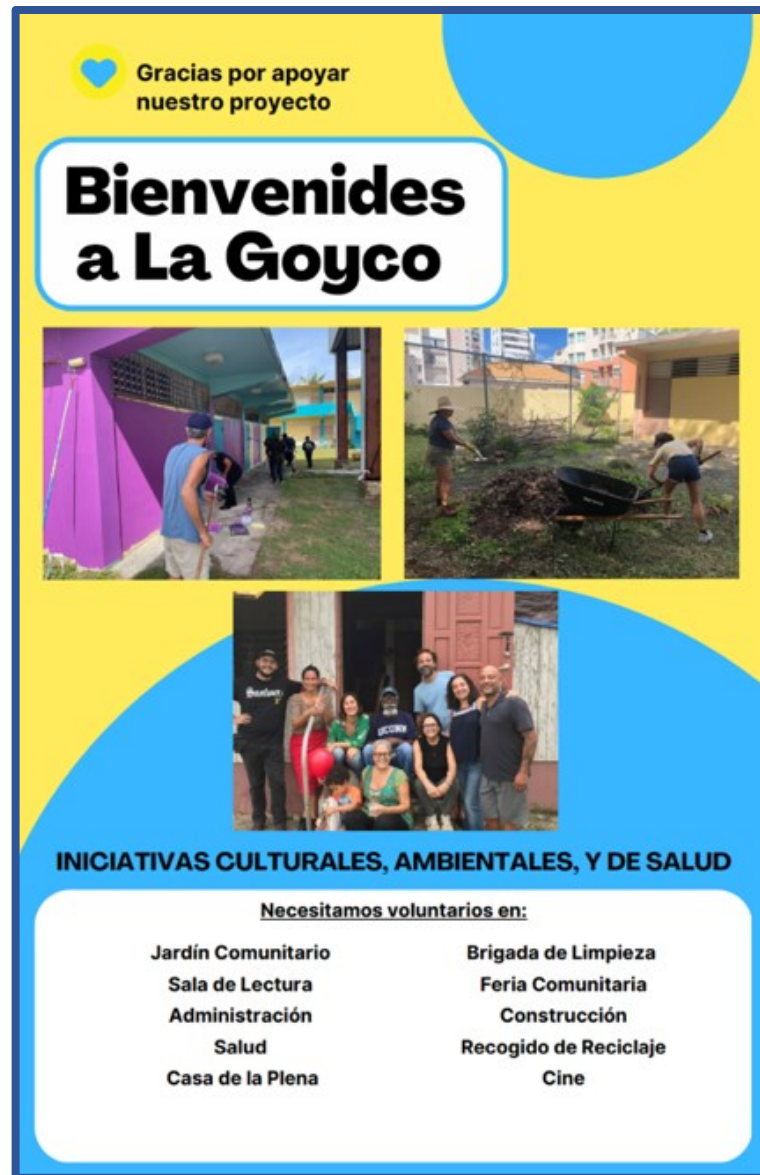
Figure 26: Initial welcome poster for volunteers.

Figure 27: Poster with the QR code for new volunteers.

We implemented the initial greeting and welcome system at La Goyco's April Community Fair by printing out the posters and hanging them at the entrance. The team collaborated with Executive Director Mariana Reyes and administrators Eunice Jiménez Emmanuelli, Johanna Dominguez, and Iliana García to determine the placement of the posters. Volunteers who attended the Community Fair were encouraged by the team members to fill out the New Volunteers Form and their feedback and critiques were recorded. Our goal was to receive feedback from La Goyco's volunteers on what aspects were effective and how it could be improved. At the event, the team talked to Anna Andresian and Steph Newton, two volunteers at La Goyco.

Objective 4: Adapt and Implement a Volunteer Management System for La Goyco

Method: Adapt VMS Developed by Caño 3.7 IQP Group in 2021

Building a volunteer management system for La Goyco required a careful analysis of the data, graphs, and figures they hoped to record and display. We chose to display this data using a combination of Google Forms, Google Sheets, and the Retool software, branching from the similar system created in 2021 by the Caño 3.7 IQP Team (Jayne et al., 2021). This decision was made to allow La Goyco's volunteer program to scale gracefully, as a Google Sheet alone could quickly become cumbersome to view if thousands of rows were added. We then created a similar proof-of-concept (with Google Forms and Google Sheets) to record hours completed by returning volunteers, linking both Google Sheets in Retool present a unified dashboard to La Goyco's administrative staff.

Method: User-Test Digital VMS

After we developed a proof-of-concept VMS, we conducted user tests of the digital volunteer management system at La Goyco's April Community Fair. This involved inviting volunteers to scan the QR code that brought them to the Google Form survey for new volunteers. Two La Goyco volunteers, Anna Andresian and Steph Newton, tested the system and recommended the addition of questions relating to the skillsets of new volunteers as well as a feedback box for returning volunteers. After consulting with Ms. Reyes and her fellow administrative staff members Eunice Jiménez Emmanuelli, Johanna Dominguez, and Iliana García, we revised volunteer questions to ask:

For new volunteers:

1. Name
2. Email address (or N/A)
3. Phone number (or N/A)
4. Address (optional)
5. How the volunteer heard about La Goyco (optional)
6. Their skills (optional)
7. Which area(s) of La Goyco they are interested in volunteering for (optional)
8. If the volunteer lives in Machuchal, the VMS asks if they would like to be added to the WhatsApp group for community members

For returning volunteers:

1. Name
2. Which project area they volunteered for
3. How many hours they volunteered for
4. If they have any feedback for La Goyco (optional)

Objective 5: Develop Resources for La Goyco to Use in Gaining Business Partnerships

The team researched different methods of how nonprofit organizations partner with local businesses. The team investigated different partnership opportunities and why businesses are motivated to collaborate with nonprofits organizations.

Method: Conduct Focus Group to Inform Design of Partnership Resource Package

The team worked to create a tailored set of resources to use in presenting partnership opportunities to surround businesses. The resources were workshopped with a focus group with Ms. Reyes, Eunice Jiménez Emmanuelli, Johanna Dominguez, and Iliana García to determine where improvements could be made.

Objective 6: Prototype Sign-up Systems for WPI Student Cohort Volunteers

We tested two methods to present La Goyco's weekly and monthly events schedule to our cohort members for volunteer opportunities.

Method: Developed and Tested Online Scheduling Tools

1. An Excel spreadsheet with events shared with the cohort.
2. An Outlook calendar with events shared with the cohort.

Findings

The findings addressed here are based on the outcomes of our project's six objectives seen below in Figure 28.
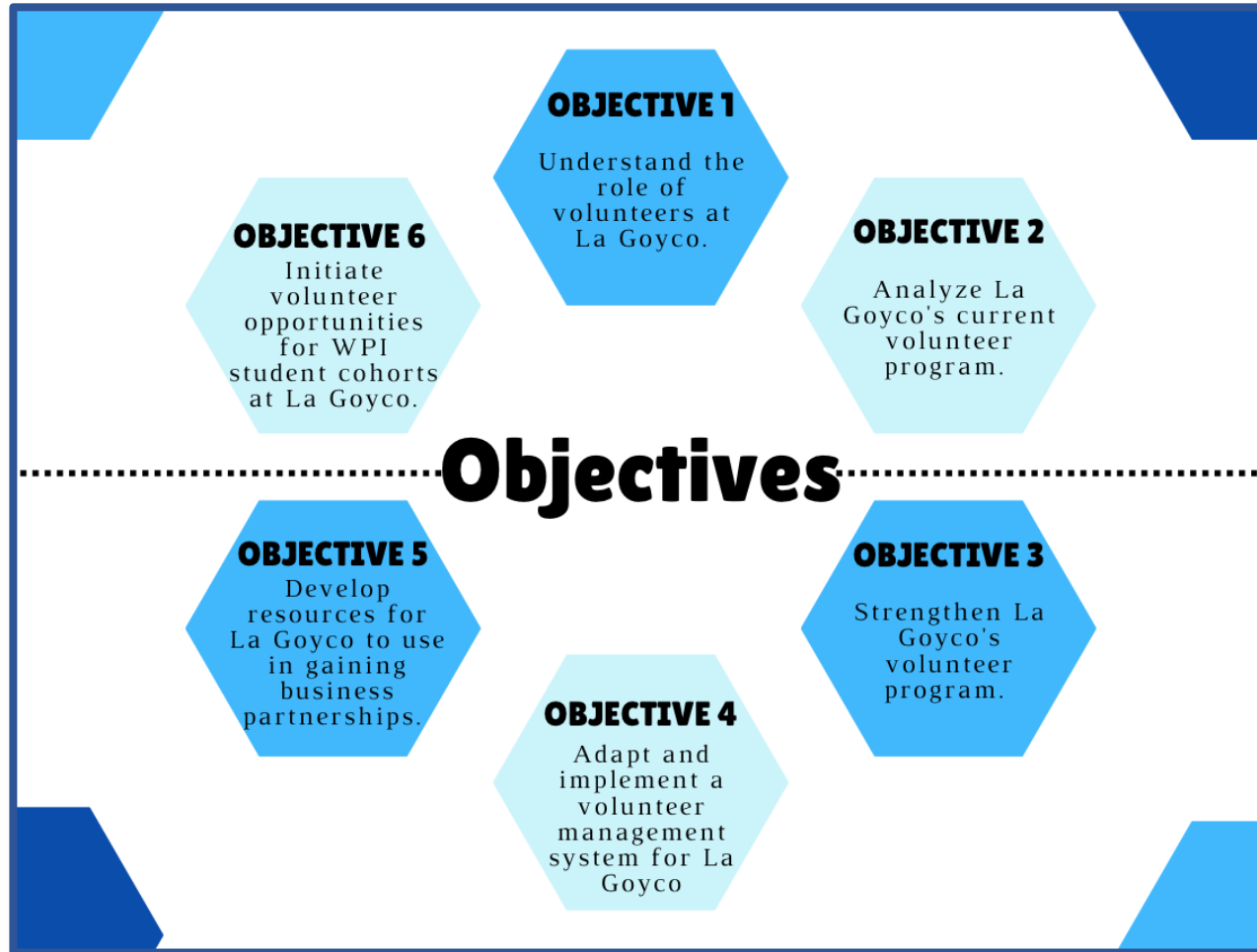
Figure 28: Our six project objectives.

After spending seven weeks immersed in La Goyco's volunteer program by participating in volunteer opportunities, communicating with administrators, and connecting with the residents of Machuchal, we arrived at a series of findings specific to La Goyco, that are also applicable to other organizations (Figure 29).

Figure 29: Our team's findings from this project experience.

The names of the key informants our team collaborated with are shown below in Figure 30. Figure 30 also contains each informant's position title and brief overview of their most important responsibilities. While these contributions are the focus of their work, their day-to-day tasks are dynamic and changing due to the growth of La Goyco. Over the course of our project, we gathered this information through semi structured interviews, volunteer experiences, and focus groups.
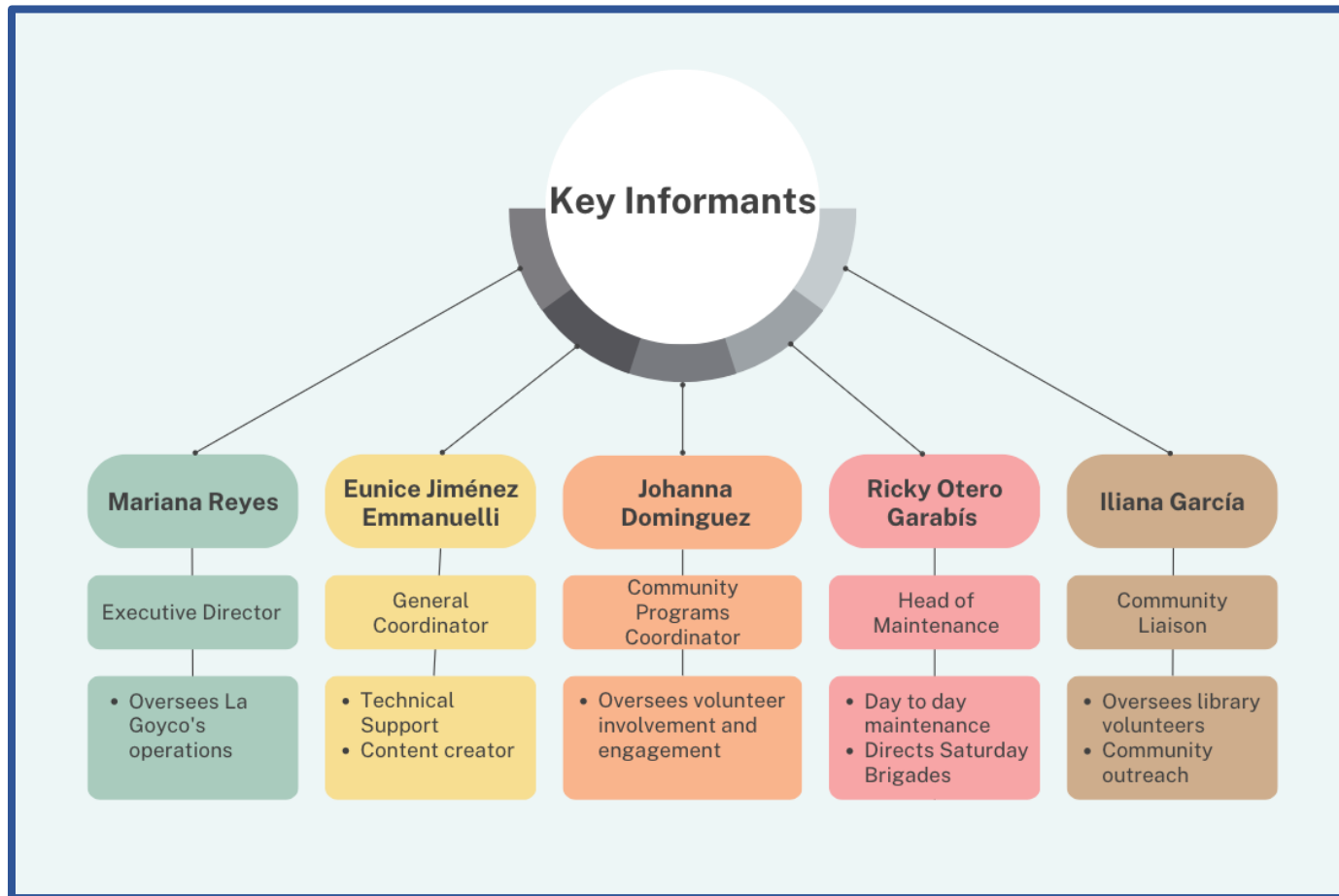
Figure 30: List and roles of key informants at La Goyco.

Finding: La Goyco's organizational structure is shifting towards a more professionalized operation.

- <u>The operations of La Goyco are changing to become more defined and structured.</u> La Goyco is currently adjusting their day-to-day organizational operations from a responsive, but less formal, structure to an organized structure focusing on future growth. When the building changed from an abandoned school to *Taller Comunidad La Goyco* in 2020, staff and volunteers did not have defined roles because the needs of the community center were ever-changing. Now that La Goyco's funding has increased and a more developed volunteer program is being established, administrators and staff are adjusting the organizational structure to address growth.

- <u>La Goyco is continuing to hire additional staff members to support their expanding program.</u> An organization hiring more staff is often seen as a sign that it has a more professionalized operation. This is because a larger workforce can indicate that the organization is expanding, taking on more projects, or seeking to improve its capacity to deliver products or services. The ability to attract and retain skilled staff members also reflects positively on an organization, suggesting that it has a strong reputation and offers competitive compensation and benefits. Furthermore, a larger workforce can enable an organization to delegate responsibilities and establish specialized roles, which can increase efficiency and effectiveness. Overall, hiring more staff is often viewed as a strategic move that can enhance an organization's ability to meet its objectives, strengthen its competitive position, and demonstrate its commitment to professionalism.

Finding: La Goyco did not have a defined or structured volunteer program.

- <u>La Goyco needed formal systems to support new and recurring volunteers and to expand volunteer opportunities.</u> La Goyco's Executive Director Mariana Reyes informed us that there were no formal documents or databases that the La Goyco administration uses to organize information or track the hourly contributions of their volunteers. Occasionally, sign-up sheets were created on an event-to-event basis to track attendance at events such as the monthly Community Fair. For day-to-day volunteer efforts, the only program that currently has an organized sign-up system is the library. Forms are not required to be filled out by managers or volunteers and the data gathered is not stored in any central location for data recording. The two main areas where we saw an opportunity to strengthen La Goyco's volunteer program were welcoming both new and recurring volunteers into La Goyco and creating a system to partner with local businesses.

- La Goyco did not have a directory or system to welcome or direct volunteers when they arrive. La Goyco's welcome desk featured a few fliers for some workshops and events, but no welcome message to volunteers or directions on where volunteers should go to receive additional information. New and recurring volunteers reported that sometimes there is confusion on where to gather for volunteer events such as the Saturday Brigade and workshops such as the Bomba class.
- Head of Maintenance Ricky Otero Garabís does not use any formal methods to track the volunteers' hourly contributions or greet new volunteers at the Saturday Brigades. He writes a list of tasks to be completed on a white board and separate volunteers into teams to complete various tasks including sweeping the parking lot, removing leaves, and picking weeds out from the buildings. The Saturday Brigade often is the first event attended by new volunteers such as people trying to get involved, or students who are looking to fulfill volunteer hour requirements. This event also presents opportunities to integrate volunteers into La Goyco and encourage their increased participation.

Figure 31: Volunteers at La Goyco's Saturday Work Brigade.

Figure 32: Team members volunteering at La Goyco.

- <u>The library was the most structured volunteer program at La Goyco.</u> Librarian and Community Liaison Iliana García oversees eight volunteers who work in the library. She currently uses WhatsApp to coordinate their hours and shifts. Volunteers have the option to sign up for one of two shifts between 11:00am-5:00pm Monday through Saturday. This system ensures good communication but does not have the ability to track hourly contributions.

Figure 33: Volunteers helping the *Gente Tropical* Podcast set up at El Boricua.

- <u>Participation in La Goyco's programs revealed how reliant La Goyco is on volunteer efforts.</u> Our team assisted on the set of La Goyco's *Gente Tropical* podcast, which was recorded at El Boricua restaurant near the University of Puerto Rico. The stagehands, many of whom work in the film and audio industry, donated their time and skills to ensure La Goyco could produce high-quality productions to attract a diverse audience and expand La Goyco's reach. This set up of this event was performed by volunteers and headed by Ms. Reyes.

Finding: La Goyco's volunteers are autonomously motivated.

- La Goyco is an informal, non-corporate setting. We observed that volunteers and staff have personal intrinsic motivations to support the community in the areas of culture, health, and environment. <u>Therefore, volunteers at La Goyco exhibit autonomous motivation as opposed to controlled motivation for their work.</u> Autonomous motivation is determined by the individual's own free will. Alternatively, control-based motivation is rooted in avoidance of guilt and punishment. These forms of motivation are defined by the self-determination theory of motivation in the study done by Oostlander et al. (2014), "The Self-Determination Theory of Motivation."

Finding: The importance of feedback from volunteers and administrators is crucial to developing an effective volunteer program.

- <u>It is important to appeal to volunteers in the presentation of the welcoming information.</u> Having the word "Volunteer" in the title poster of the welcoming collage draws new and recurring volunteers to the presented information.
- <u>It is important to consider the placement of welcoming information on printed posters.</u> Placing the QR code for new volunteers into the welcome poster is less confusing for volunteers. When the poster and QR code were separated, volunteers often did not see the QR code. Placing the welcome poster in a high traffic area with an accompanying welcome sign is an effective way to attract the attention of volunteers.
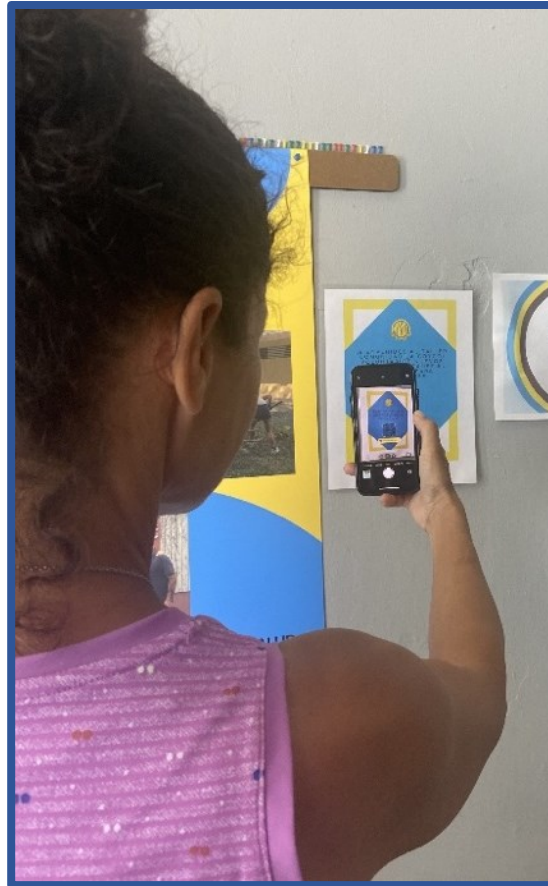
Figure 34: Volunteer Anna Andresian testing the volunteer signup QR code.

- <u>The length of the process of filling out the Google Form dictates how willing volunteers are to complete it.</u> It is important to create forms that are not tedious to fill out and can be done in less than two minutes. Questions that require a short answer should be presented as optional to conserve the user's time and privacy. Placing questions for new and recurring volunteers in one Google Form is dull and unmotivating during the volunteer experience. Asking repetitive and unnecessary questions will cause the volunteer to be less interested in filling out the Google Form when they arrive at La Goyco as new or returning volunteers.

Finding: In manuals, assume the user has no prior knowledge of the subject.

- It is difficult to create effective user manuals that can be used across a variety of languages for a variety of individuals, including facilitators and trainees. The administrative staff of La Goyco operates in Spanish. Therefore, instructions on how to use each component feature of the Volunteer Management System needed to be translated from English to Spanish. This proved to be a difficult process because information is lost in translation due to differing connotations of words between languages and limited time and skill in translation.
- Provide clear instructions and strong visual elements for any manuals that are created. This is essential for ensuring that the intended audience can use the product and/or service effectively and efficiently. Clear instructions help to avoid confusion and reduce errors, while strong visuals can aid understanding and retention of information. A well-designed manual can also enhance the user's overall experience, increasing satisfaction and confidence in the product or service. Investing in the creation of a high-quality manual can ultimately save time and money by reducing support calls and product returns. Overall, clear instructions and strong visuals are crucial for ensuring that users can easily understand and effectively use the product or service being offered.

Finding: La Goyco could benefit from resources to connect with businesses and partner with them through donations, sponsorships, and events.

- La Goyco did not have a structured approach to partnering with surrounding businesses. La Goyco leaders had considered ways to connect with the businesses on Calle Loíza to expand La Goyco's outreach and for volunteer appreciation but had never created an organized system.
- The order of the "Business Partnership Resources Package" presentation is important when making an initial connection with a business. Displaying La Goyco's initiatives of health, culture, and environment shows the business possible common interests in supporting the community. Furthermore, it is useful to present potential business partners with examples of past business partners to show that La Goyco is active in their partnerships and engaging with the community. Showing current business partnerships can help a business trust the outreach capabilities of La Goyco and provides them with examples of how they can form a new unique partnership.

Finding: Getting WPI students involved in volunteer initiatives was more difficult than expected.

- We found that simply sending out volunteer opportunities to the WPI cohort was not enough to get them involved at La Goyco. When we sent out the volunteer opportunities at the beginning of the week, most students would either not look at the shared calendar or see the events posted but would forget that they were happening by the end of the week.
- A relatively more effective approach to reaching the cohort was to use the shared Outlook calendar, shared Excel spreadsheet, and to send out reminders the evening before a volunteer opportunity took place on WhatsApp. The "WPI Student Cohort Outlook Calendar" does not allow members to sign up for specific events. The only way to keep track of attendance for an event when using the Outlook Calendar would be to send out invites to the scheduled event or record attendance at the event.
- The sign-up sheet in the Excel spreadsheet was underutilized by members of the cohort. None of the students who attended the volunteer events used the sign-up sheet within the spreadsheet.

Findings based on Physical Recruitment Methods

In our efforts to strengthen La Goyco's volunteer program, we utilized the five physical approaches to recruiting new volunteers. These include fundraisers, face-to-face conversation, community awareness days, collaborations, and posters/signage (Figure 7). By experimenting with these five approaches, we were able to develop two deliverables: The Business Partnership Resource Package and The Welcoming and Greeting Package (Figure 7).
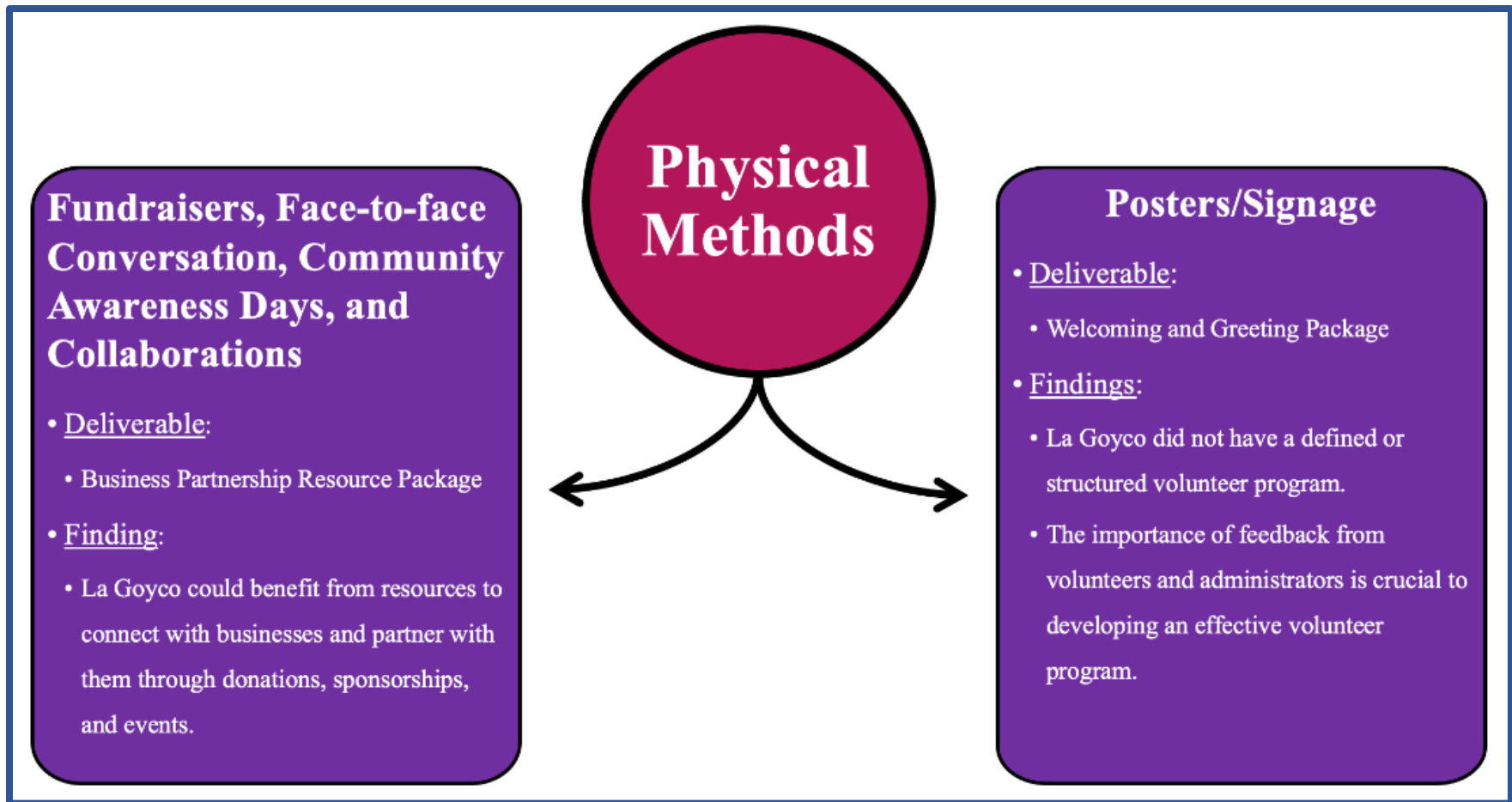
Figure 35: Team deliverables and findings based on physical methods for recruitment.

Outcomes and Deliverables

We created four deliverables to strengthen La Goyco's volunteer program and business partnership outreach. For La Goyco's greeting and arrival of volunteers, we designed a variety of posters and signage known as the Welcoming and Greeting Package to structure the flow of new volunteers into La Goyco's volunteer program. For La Goyco's online Volunteer Management System, we utilized a software program known as Retool to digitally manage their volunteers' efforts and analyze trends in the internal components of their volunteer program. We also created a manual called Volunteer Management Systems for Non-Profits: A User Guide to Google Forms, Google Sheets, and Retool to go along with the VMS to help guide La Goyco's administration with using the software and to troubleshoot any problems. For reaching out to local businesses we created the Business Partnership Resource Package.

Welcoming and Greeting Package

The Welcoming and Greeting Package of La Goyco's Volunteer Program contains a welcoming poster, physical registration forms for new or first-time volunteers, a weekly schedule, and volunteer biographies with a 6' by 2' banner to hang in the entry hall at La Goyco (Figure 36 and Figure 37). The variety of volunteer opportunities available at La Goyco is highlighted in the welcoming poster. On this poster, there is a QR code that, when scanned, directs the user to a Google Form where they can register to become a volunteer within La Goyco. The days of an entire week (Monday through Sunday) are shown on the calendar. Volunteer activities can be shown on each day of the week and can be changed using erasable markers after the calendar has been printed and laminated. The volunteer profiles contain pictures of the volunteers from La Goyco along with a description. Below is the final version of the entrance wall-layout of all these materials for La Goyco (Figure 36).

Figure 36: Welcome materials designed for the entrance wall of La Goyco.

Figure 37: Paper sign-in and hour forms for new and recurring volunteers.

Volunteer Management System

La Goyco's Volunteer Management System is composed of a Google interface that is connected to Retool software. The Google interface begins with two Google Forms, one for new volunteers and one for recurring volunteers. Each of these forms has a QR code that can be scanned and directs the user to the form. The form gathers information through a series of questions (Figure 38).

For new volunteers, the VMS asks:

1. Name
2. Email address (or N/A)
3. Phone number (or N/A)
4. Address (optional)
5. How the volunteer heard about La Goyco (optional)
6. Their skills (optional)

7. Which area(s) of La Goyco they are interested in volunteering for (optional)
8. If the volunteer lives in Machuchal, the VMS asks if they would like to be added to the WhatsApp group for community members

For returning volunteers, the VMS asks:

1. Name
2. Which project area they volunteered for
3. How many hours they volunteered for
4. If they have any feedback for La Goyco (optional)

Figure 38: New volunteer sign-in Google Form.

Each form is linked to a Google Sheet that automatically updates with the answer to each of the questions when the user is completed with the Google Form (Figure 39).

Nombre / Name	Correo electrónico / Email Address (N/A si no tiene uno)	Número de teléfono / Phone Number (N/A si no tiene uno)
Jessica Smith	jsmith@example.com	555-555-1111
James Patrick	jpatrick@example.com	555-555-2222
Katherine Wilson	kwilson@example.com	555-555-3333
Brian White	bwhite@example.com	555-555-4444

Figure 39: New volunteer sign-in responses stored in Google Sheets.

The Google Sheet is then connected to the Retool dashboard using a JavaScript program. The information gathered from the Google Forms filled out by the volunteers is finally displayed on this dashboard in a series of graphs and charts, allowing *Taller Comunidad La Goyco* to visualize the monetary value of hours, among other visualizations available in the attached VMS manual, contributed by each volunteer to each project (Figure 40, Figure 41, and Figure 42).

Figure 40: Retool dashboard overview.

Figure 41: New volunteer sign-in information displayed on Retool.
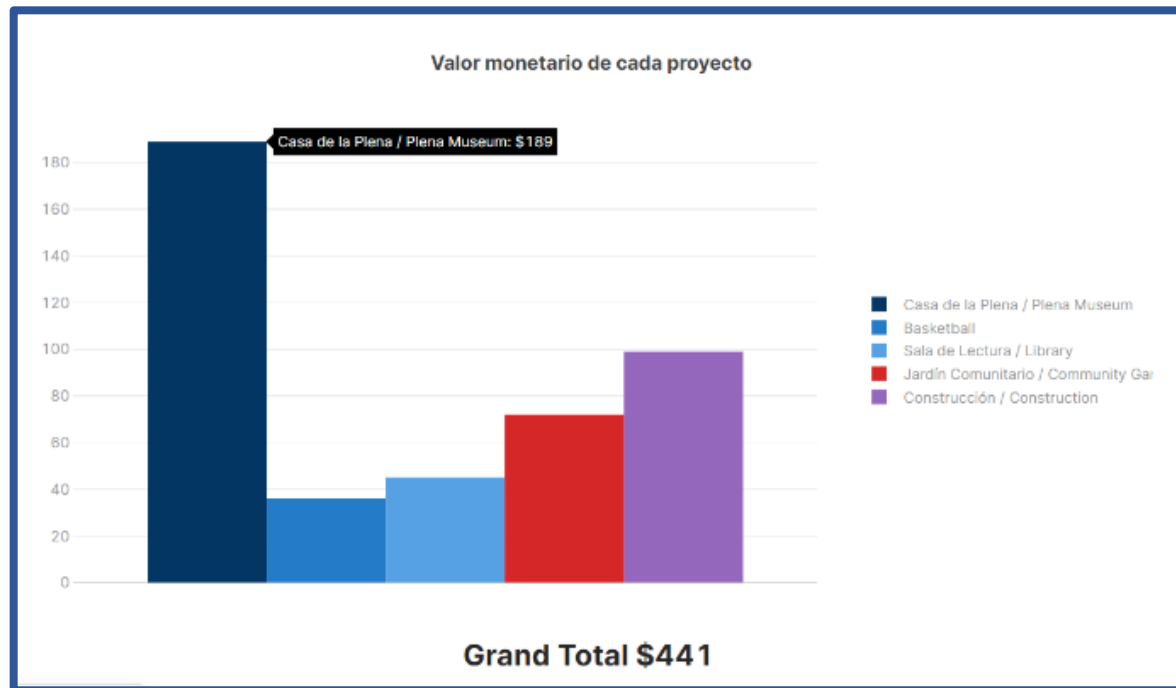

Figure 42: Monetary value of each project displayed on Retool.

Volunteer Management Systems for Non-Profits: A User Guide to Google Forms, Google Sheets, and Retool

This manual provides a walkthrough of a volunteer management system (VMS) for non-profits using the software known as Retool (Figure 43). A VMS helps non-profits analyze data and identify trends that can be used in grant applications, program management and internal organization, etc. The First Edition of this guide was developed by a team of WPI students in Fall 2021 for the Caño 3.7 Organization. The Second Edition has been updated by our team in Spring 2023 to meet the needs of *Taller Comunidad La Goyco*. We first discuss a case study detailing the implementation and features of the VMS developed for *Taller Comunidad La Goyco*. This is followed by a detailed discussion of those features that can be applicable to many non-profits. To display data in the VMS, volunteers first fill out a Google Form accessed through a QR code that can be scanned with a phone. Volunteers have the option to provide various details, including personal contact information, how they learned about the organization, their skill sets, interests, or other information the organization may require. This information can be directly exported into a Google Sheet. Retool software can retrieve that data to display analytics in the dashboard. Retool is a powerful tool that utilizes JavaScript, SQL, and other technologies to create a visually appealing dashboard.
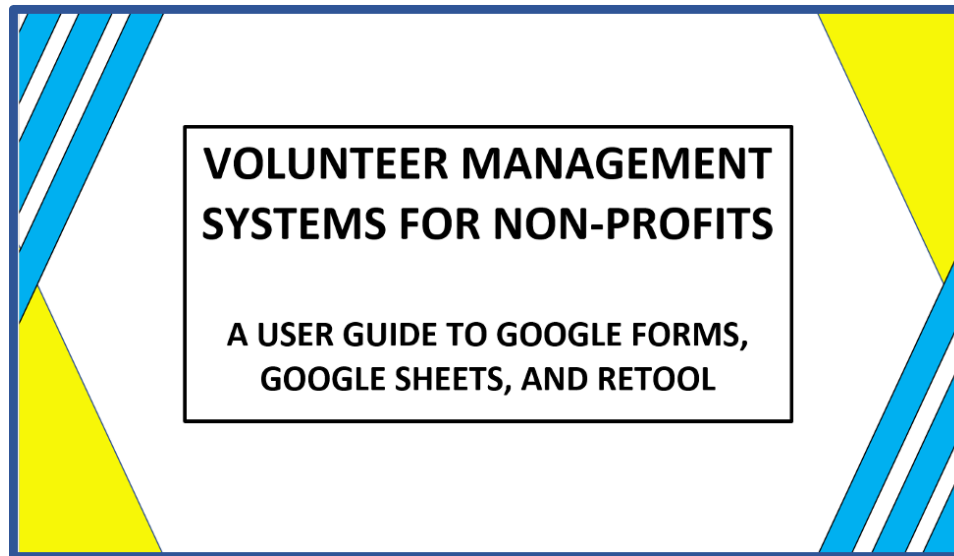

Figure 43: Cover page of the VMS manual.

Business Partnership Resource Package

The "Business Partnership Resource Package" is a series of documents and resources that was compiled into a printed binder that the administration of La Goyco can use to partner with local businesses (Figure 44). The binder acts as a portable presentation for a representative of La Goyco to use to pitch possible ways they can partner with a business. The documents display possible partnership opportunities in the areas of: Events, Sponsorships, Donations, and Community Collaboration. The package also contains an appendix for meeting notes. These notes can be compiled into an adjacent Google Sheet document that is connected to La Goyco's VMS so the information from the meetings and for each business can be displayed in a central location. Another appendix contains information on each business on Calle Loiza; including their business type, address, contact information, and hours of operation.
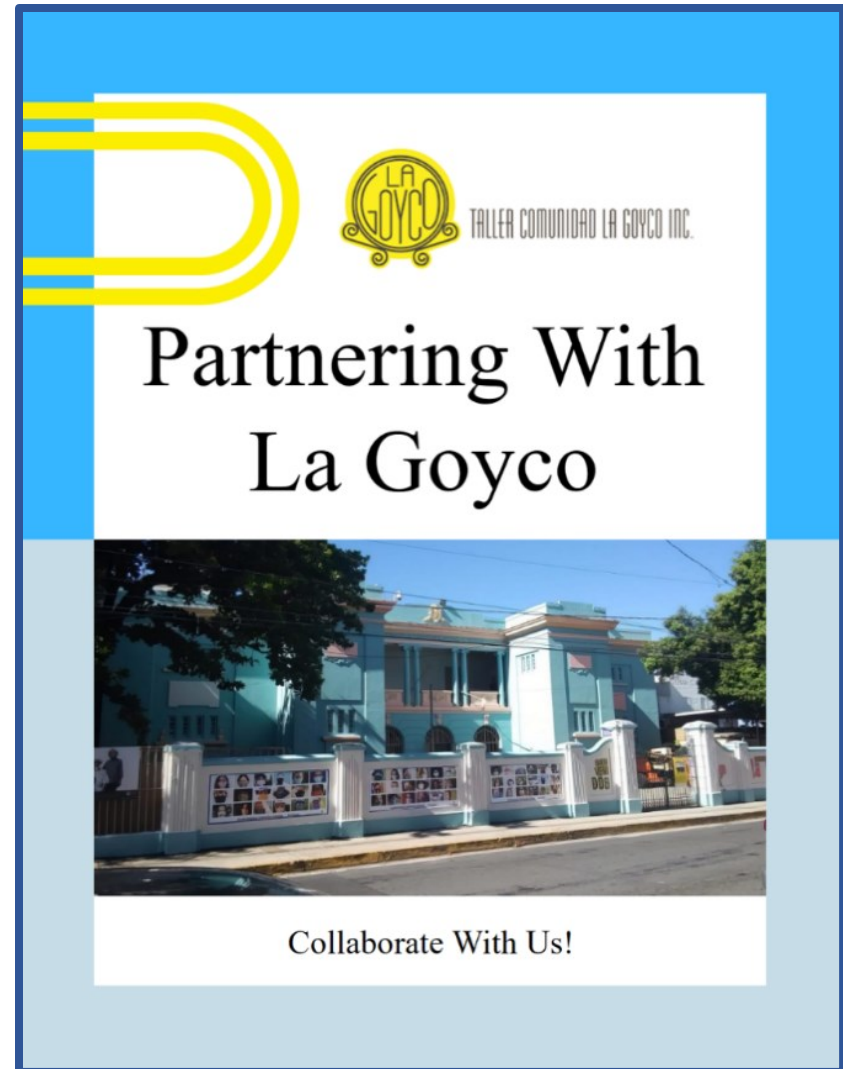

Figure 44: Cover page of the Partnership Resource Packet.

Outreaching Volunteer Opportunities to Cohort

With the other members of our WPI cohort, we test trialed two systems to see how to best communicate the volunteer opportunities at La Goyco. The two systems we used were a shared Excel spreadsheet and a shared Outlook calendar. For the shared Excel spreadsheet, we created a weekly schedule of La Goyco's events. We performed a test to send the weekly calendar over Outlook and WhatsApp to our cohort. We also prototyped and tested a sign-up sheet to track the attendees at each event (Figure 45 and Figure 46).

Figure 45: Shared Excel spreadsheet schedule of La Goyco's events.

Signups per Event										
Volunteer/ Participant	Pilates		Organic Recycling Worksop	Management Program	Reading Stories		Yoga	Tito's Matos Plena Class	Cleaning Brigade	
1									Ryan Chesanek	
2									Andrew Kerekon	
3									Evan Russell	
4									Hunter Lassard	
5										

Figure 46: Shared Excel spreadsheet sign-up sheet for La Goyco's events.

For the shared Outlook calendar, another member of the cohort created a shared calendar for other project groups to add their sponsors' events. We took advantage of this by adding La Goyco's events for the current week. Like the Excel spreadsheet approach, we carried out a test trial by sending a message about the events over WhatsApp and Outlook to see how effective this approach was (Figure 47).
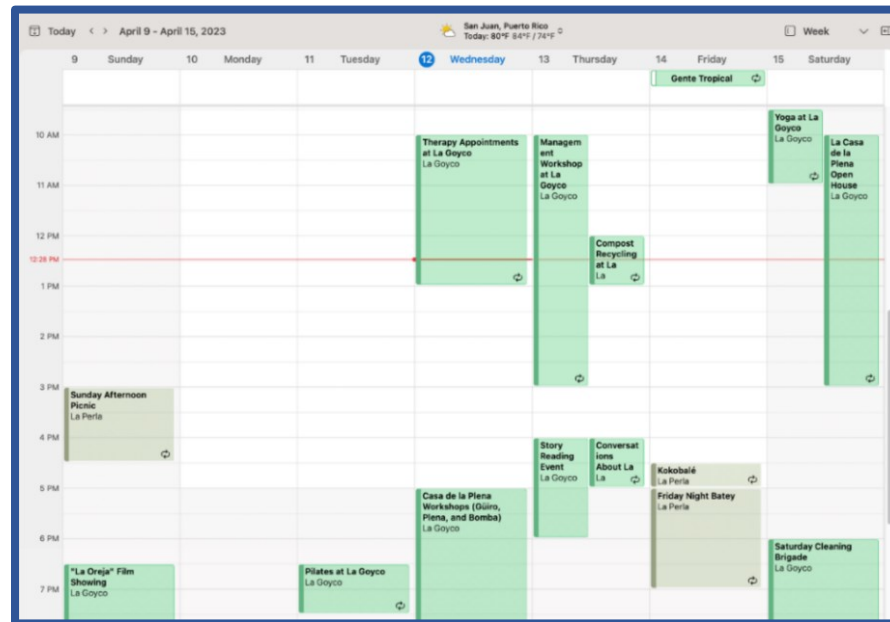

Figure 47: Shared Outlook calendar for La Goyco's events.

Recommendations

These recommendations are for *Taller Comunidad La Goyco* administrators and other non-profits looking to strengthen their volunteer programs and foster connections with businesses in their communities. We also include recommendations for future WPI cohorts to help encourage volunteerism.

Recommendations for *Taller Comunidad La Goyco* Administration

- We recommend having La Goyco's front desk attendant provide further information about La Goyco's opportunities for new volunteers. For events such as the Saturday Brigade and Community Fair, we advise having a person and printed signs to welcome and direct volunteers when they arrive.
- Assign previously determined dollar values to each task listed in the VMS. This will allow for an accurate quantification of volunteer work, which will be helpful when applying for grants. One possible database matching each task to a value is available from the U.S. Bureau of Labor Statistics, which tracks the average wage for many occupations in Puerto Rico as of 2019: Occupation Wage Database (U.S Bureau of Labor Statistics, 2019).
- We recommend that the Welcome and Greeting Package be used to promote a positive first impression for new volunteers. The Welcome and Greeting Package highlights La Goyco's values. The intention is to inspire volunteers to get involved in the community center and the programs offered.
- Continue to add new Volunteer Profiles to the front wall of La Goyco using the template available within the Welcome and Greeting Package. This helps retain existing volunteers and encourages new volunteers by showcasing their contributions and that they can be a part of La Goyco's welcoming community.
- We recommend updating the calendar in the Greeting and Welcoming Package every week to promote the volunteer opportunities to new and recurring volunteers.

Recommendations for Non-Profit Administrators

Using a Volunteer Management System

- We recommend that any VMS dashboard adapted from our system be kept at a technical skill level that is appropriate and accessible to the administration of a nonprofit organization, rather than expanded to include additional features that could cause confusion and increase system cost. Any features that will be added in the future should be thoroughly documented in the Volunteer Management Systems for Non-Profits Manual for future users.

- For future additions to the Volunteer Management Systems for Non-Profits Manual, it would be helpful if designers assumed that the user has no prior experience with the system. This can be difficult for the developers to remember as they may have high levels of understanding for the system. Therefore, it is helpful to have multiple reviewers of the user manual with different levels of experience with the platform before finalization.

- We advise having a physical copy of the Volunteer Management Systems for Non-Profits Manual on hand in order for administrators at an organization to have a quick reference when encountering any issues with the VMS. A physical copy can be easier to read simultaneously than having multiple windows open on a computer.

- Ensure a support network is developed to address technical hiccups as they arise. A support network consisting of detailed user instructions alongside knowledgeable staff members, such as a technical administrator or web designer, allow an organization to feel confident using their system and ensure that all problems are addressed in a timely manner.

- Respect the privacy of the volunteers and the information they provide, including their email address, physical address, and phone number. Ensure that access to the VMS is limited to only a handful of administrators, and that the password to administrative accounts is not widely shared.

- We recommend using statistics available on the VMS, including the monetary value of each task completed at an organization, when applying for grants. These statistics quantify the tasks completed by an organization's volunteers in the form of graphs and charts that can be included in grant applications.

- We advise including graphs available on the VMS in end-of-year reports, which are often read by funders and philanthropies. Providing compelling figures in an approachable form can encourage a potential funder to donate to your organization.

- Data tracking on the VMS can be used to celebrate volunteers that hit key milestones, such as one year volunteering at an organization or volunteers who have donated a defined number of hours towards a program. Such celebrations foster relationships and encourage volunteers to return again and again.

Partnering with Businesses

- We recommend the Business Partnership Resources Package be used to promote collaboration between the nonprofit and surrounding community. This can be done by communicating the nonprofit organization's values to the businesses and finding ways they can support one another. Overall, such a partnership can bring communities closer together and promote progressive social change.

- When partnering with businesses, we recommend that the representative of the organization leave a paper copy of the summary sheet of partnership opportunities and organization contact information with the business representative. This shows the business that the partnership is important to your organization and further grows the connection between both parties.

- It is important to showcase previous business partnerships when looking to build new connections. This helps to establish the nonprofit's credibility and provides concrete examples of ways to partner.

Recommendations for Future WPI Cohorts

- We recommend that when working with nonprofit organizations attend as many volunteer events as possible. Volunteering alongside local volunteers helps create trust and shows that you have common goals of supporting the community and the future of the organization.

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