

The Intersection of Humanity and Technology in Nonprofit Human Capital Management:
A Report Based on the Calgary Drop-In Centre

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Presenting the Case

I. Business Context and Background

The emergency drop-in centre (DIC) is a people-focused business committed to the essential care of individuals experiencing homelessness. The shelter provides a multitude of services to support clients' return to independent living, such as housing, education, and employment (NTT Data, n.d.). Operating in an environment of demand uncertainty and scarce resources makes the careful allocation of time and people critical to the fulfillment of the DIC's mission. As a non-profit organization in an unstable funding environment, the DIC requires a cost-effective, integrable, and time-saving technological solution to its business needs that enable its people to focus their efforts on what truly matters: changing lives (Knight, 2021).

When Helen Knight came to the DIC, she found its supporting technology in dire straits. There were multiple, disparate databases using incompatible systems and obsolete hardware. With data isolated in this way, the organization could not use it to gain insights into donor engagement, volunteer retention, and client relationship management, all of which are activities critical to its survival. The disarray of information technology (IT) served to reduce visibility within the organization, increasing the risk of a breach and posing a threat to cybersecurity, which was already weakened due to malware and vulnerable access points (Knight, 2021). Knight also discovered that the DIC was wasting valuable resources on manual, redundant processes and outdated reporting mechanisms, representing an estimated loss of two million dollars per year (ITBusiness, 2019; Knight, 2021). It was obvious that a big change was necessary for the DIC to improve day-to-day operations and realize its longer-term objectives.

Following Knight's guidance, the DIC undertook the task of integrating its hundreds of established processes into a single, centralized hub through Microsoft Dynamics 365 (MS

Dynamics). Over the course of four years, the DIC has used MS Dynamics to customize applications for each department and unify the data of its many disparate information systems into a shared, cloud-based solution. This yielded many short-term benefits for the organization, such as ease of communication across departments, simplified triage and scheduled maintenance, and increased health and safety for both workers and clients (NTT Data, n.d.). A self-service client kiosk was implemented as part of the DIC's technological transformation. It provided clients with an alternative way to access the resources they needed; scheduling medical appointments, booking showers and beds are a few examples of the twenty-five available options (Knight, 2021). The DIC's process improvements to date have enabled it to provide a higher quality of care to its clients. Using IT to deliver additional support systems will help the DIC further this capability.

The DIC has come a long way in a very short time, facing many changes and challenges, but the technological transformation is a journey of continuous improvement. The DIC is far from realizing the full value of its investment; the pursuit of objectives crucial to its long-term success remain unsupported by IT. When developing potential solutions, it is necessary to bear in mind their disruption to the organization and consider the impacts on the end user. Ultimately, the DIC's bottom line are its people, and supporting technology must empower and benefit those who make its work possible.

II. Relevant Facts and Key Issues

The emergency shelter faces a high variance in demand. Some of the demand fluctuations are predictable, with the busiest times in the mornings and evenings, and demand decreasing at the end of each month. Other causes of high demand, such as wet weather, cannot be foreseen as

easily. With demand volatile and difficult to forecast, staff scheduling becomes complex. Scheduling managers must determine how many employees and volunteers are needed at a given time of day and how many volunteers have promised to come in. If the shelter experiences a surge while understaffed, it is unable to provide quality care to the people that need it. However, if the shelter is overstaffed, the valuable time of workers may be wasted.

The work of the shelter would not be possible without its 5,000 annual volunteers, but with only seven staff members available to train and manage them, and the accompanying liability risks posed to the DIC, it is important that volunteers are chosen with care (Knight, 2021). Nonprofits can be held responsible for the actions of volunteers who abuse their position, which not only hurts clients but also the organization (Nussbaum, 1992). Similarly, volunteers who fail to show up for their shifts add to existing scheduling difficulties and scarce resources are wasted. The best volunteers are reliable people who turn up for their scheduled shifts and may even possess related skills, training, or volunteer experience, all of which serve to save valuable staff time and reduce risk. In order for human resources (HR) to minimize risk and capture value, the application process must be thorough. This is double-edged, however, because a long and difficult application process may deter prospective volunteers and harm the organization (Alfes et al., 2016).

Staff are kept busy throughout the day with meetings, case work, and client advocacy. Though there must be periods of excess capacity during the day, week, or month, there is plenty of follow-up documentation to be done. The stressful workload means high turnover at the shelter, causing disruption to management and administration (Knight, 2021). With so many new and changing faces, communication is impeded and the likelihood of errors increases. High turnover leads to the loss of organizational memory, meaning that an organization's past

experience cannot be used for decision-making since it exists primarily in employees, lending support to data-driven decision making for the shelter (Akingbola, 2006). Staff's time is not being used effectively, especially due to an estimated 40% of HR's time devoted to faxing and photocopying (Knight, 2021). In order to create robust schedules and attract high-value volunteers, HR must eliminate manual, time-wasting processes and optimize its use of downtime.

Case Analysis

III. Problem Description

The DIC needs a solution that will help the HR department attract high-value volunteers and efficiently allocate its human capital while being cost-effective, integrable with existing IT infrastructure, and easily adoptable by its users.

IV. Current System

Volunteer coordinators are able to check how many volunteers are registered for certain shifts. The number of needed volunteers is based on historical data and the ratio between coordinators and volunteers. Following the current system from the DIC, prospective volunteers are able to view upcoming opportunities online, filtered by individual or group, location, and availability (see Figure 1).

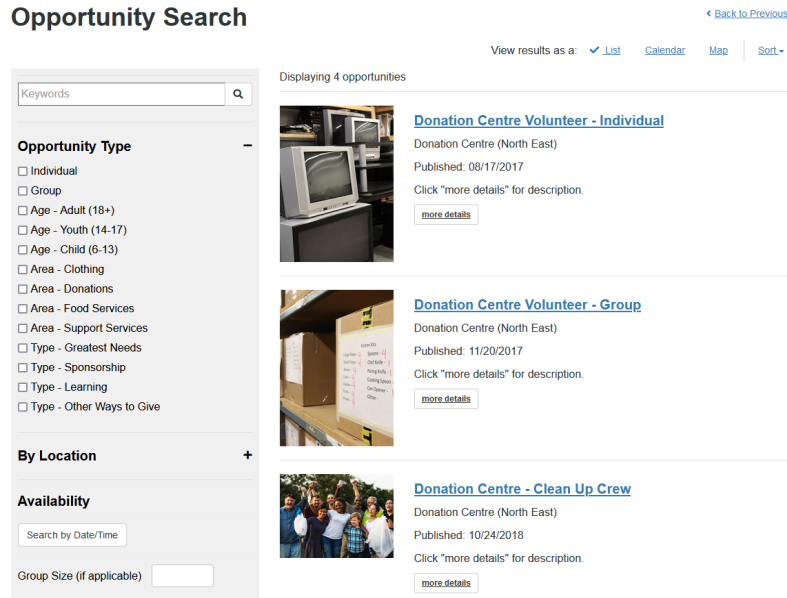


Figure 1 - Volunteer Portal “Opportunity Search” (https://volunteer.samaritan.com/custom/516/opp_search)

Our group identified several pain points for prospective volunteers using the current system. If “more details” is clicked, the user is taken to a separate page that displays the dates and times of recent opportunities in a stacked list, with the most recent shown first (see Figure 2). The problem is that many recent shifts are no longer available due to the 24 hour cut-off period needed to screen volunteers before their shift, meaning that users must scroll down in order to view open opportunities. A calendar view is also available, which provides a significantly better summary of upcoming opportunities (see Figure 3). Unfortunately, for users, the hyperlink to toggle the view is unassuming and easily glossed over.

Donation Centre Volunteer - Individual [Donation Centre \(North East\)](#)

This volunteer role supports the day-to-day activities at our Donation Centre, including the storage, distribution, management and inventory of all donated items. If you have strong customer service, communication, and organizational skills - and don't mind a little heavy lifting - this volunteer opportunity is for you!

PLEASE NOTE: This opportunity has a 24 hour cut-off for sign up. This is in place so our team is well prepared for your volunteer experience.
Minimum age: 14

Schedule Shifts

707 Schedule Shifts available! [hide schedule slots](#) [Show in Calendar](#)

DEC

08

WED

Donation Centre Volunteer - Individual

9:00 am - 12:00 pm

Donation Centre Volunteer - Individual [more](#)

Address: 3640 11A Street NE Calgary, AB T2E 6M7

Contact Info: Engagement Coordinator

Free parking is located on the south side of the building. We are able to accommodate bus parking. Donation Centre is located at 3640 - 11A Street N.E.

Vehicles parked on our premises are left at your own discretion as the Calgary Drop-In & Rehab Centre will not be held responsible for lost, stolen or damaged property.

This shift is no longer available

DEC

08

WED

Donation Centre Volunteer - Individual

1:00 pm - 4:00 pm

Donation Centre Volunteer - Individual [more](#)

Address: 3640 11A Street NE Calgary, AB T2E 6M7

Contact Info: Engagement Coordinator

Free parking is located on the south side of the building. We are able to accommodate bus parking. Donation Centre is located at 3640 - 11A Street N.E.

Vehicles parked on our premises are left at your own discretion as the Calgary Drop-In & Rehab Centre will not be held responsible for lost, stolen or damaged property.

This shift is no longer available

DEC

09

THU

Donation Centre Volunteer - Individual

9:00 am - 12:00 pm

Donation Centre Volunteer - Individual [more](#)


Address: 3640 11A Street NE Calgary, AB T2E 6M7

Contact Info: Engagement Coordinator

17 openings

[Sign Up](#)

Figure 2 - Volunteer Portal “Opportunity Details” (https://volunteer.samaritan.com/custom/516/opp_details/3075)



[Volunteer Home](#)
[Search](#)
[Donate](#)
[Login](#)

Opportunity Search

[Back to Previous](#)

View results as a: [List](#) [Calendar](#) [Map](#) [Sort](#)

Displaying 171 shifts for Dec 1st - Jan 7th.

Keywords

Opportunity Type

By Location

Availability

Date/Time Range

Start Date

End Date

start time to end time

Group Size (if applicable)

Day Week Month

December 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

Figure 3 - Volunteer Portal “Opportunity Search - Calendar”

(https://volunteer.samaritan.com/custom/516/opp_search?sortByAttribute=date&sortPredicate=publishDateUtc&sortRecordType=slot&view=calendar)

Once a user has clicked “Sign Up” for their preferred shift, they are prompted to login or create an account. Returning volunteers access and view events in the same way and the only difference is the initial sign up process for new volunteers. User accounts help HR distinguish new from returning volunteers and track their engagement with the organization. A new user is asked to provide basic personal information and agree to a personal liability waiver. However, the waiver link does not lead to a working page (see Figure 4). This may deter potential volunteers who are not comfortable agreeing to a waiver they cannot read. It is harmful to the DIC for the same reasons, especially because homeless shelters work with vulnerable populations and must prioritize insurance; it cannot avoid liability for volunteers that are not fully informed.

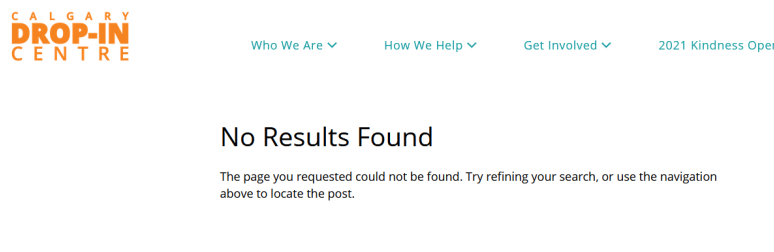


Figure 4 - Volunteer Portal “Liability Waiver” (<https://calgarydropin.ca/volunteerpolicy>) Retrieved Dec 7, 2021.

Users have come to expect convenience from their use of information technology, but the current volunteer portal is anything but convenient for users and scheduling managers alike. Displaying unavailable shifts first may deter prospective volunteers by sending the inadvertent message: *we have all the help we need*. The inability to see the big picture when searching for available shifts is frustrating for users seeking to give their time. An inaccessible waiver goes against the DIC’s own objective of reducing its liability and is an obstacle for new volunteers, who may not proceed to sign up. In a similar vein, the basic personal information collected during account creation leaves much work for the HR department, who then have to complete the screening process manually within a short 24-hour window.

The DIC has an established scheduling system for employees who, unlike volunteers, cannot choose their own schedule. With the nature of the current system in place for regular employees, we will narrow our focus on the scheduling of volunteers.

V. New System Requirements

The HR department needs a system that will address three key issues. The first and most important is the optimal use of staff time. The volunteer application process would ideally be as automated as possible. Prospective volunteers should be able to sign up for shifts, provide required documentation, and schedule training sessions through a system that is fully integrated with the shelter's existing employee scheduling software. HR staff needs an easy and efficient way to inform volunteers that their shift request or scheduled training session has been approved, that they are needed at the shelter if they are available but unscheduled, or that they have received a strike for missing a shift without proper notice.

HR needs to be able to see, at a glance, how many staff and volunteers are needed at a given time of day, how many volunteers have signed up for that shift, and how many volunteers are available to come in should shelter demands surge unpredictably. It is also important for HR to know the proportion of those volunteers who are adequately trained and screened for a given shift, especially during a busy time when staff are unlikely to provide much supervision. Presumably, HR would like some "margin of error" in scheduling, in the event that a staff member calls in sick or a volunteer fails to show up for their shift; HR must be aware of their staffing requirements as far in advance as possible and receive alerts if these remain unmet. It may be helpful to have a semi-automated scheduling system that can be modified and approved

by managers. An analytics tool that could aid in forecasting staff requirements uses historical demand and weather data.

The third issue facing the HR department is the need to assess and identify the volunteers who can add the most value to the organization. These are reliable people who turn up for their scheduled shifts and may even possess related skills, training, or volunteer experience. Another element HR needs to consider in their choice of volunteers is reducing the organization's liability risk. Liability will presumably be reduced with volunteers that require less training. However, there is still a need for a mechanism that can identify the potential risk of volunteer roles, with respect to the nature of the role, as well as volunteers who pose a significant risk to the organization, either due to no-shows or their likelihood to abuse their position. Staff must also be in the habit of articulating clear expectations and responsibilities to volunteers.

VI. Alternatives

Since the shelter has had success with its self-service kiosk for clients, our team explored a similar system for volunteers. The volunteer self-service system would combine the existing online volunteer portal with some elements of the self-service kiosk. For example, after a new volunteer selects a preferred shift and creates their account, they will be prompted to complete a short survey containing questions about their preferred role and commitment level. Research has shown that volunteers who suit their roles are more engaged, leading to higher retention rates for the organization (Akingbola, 2006). A survey would provide the HR department with an overview of a prospective volunteer's fit within the organization and allow it to assess the value of a prospective volunteer at a glance. An individual's answers to key indicator questions would allow HR to assess their risk to the organization and further inform their role. This method

follows the advice of Forsyth (1999) in adopting a “layered” approach to volunteer risk management (see Figure 5). Short-term or one time volunteer opportunities are typically low risk as volunteers are not working around vulnerable people, reducing the need for supervision. An example of a “first layer” volunteer opportunity would be the donation centre at the DIC. By contrast, longer commitments that require a volunteer to support staff in the provision of services must be accompanied by thorough screening, supervision, and periodic evaluation (Forsyth, 1999).

Layer of Necessity	Assessment of Needs	Recruitment	Risk Management Audit, Interviewing, and Screening	Orientation, Training and Monitoring	Retention and Recognition
#1	<ul style="list-style-type: none"> identification of tasks and number of volunteers 	<ul style="list-style-type: none"> target groups of people mass promotion and advertising 	<ul style="list-style-type: none"> risk management audit phone interview minimal screening direct referral 	<ul style="list-style-type: none"> task specific training “on the job” 	<ul style="list-style-type: none"> names entered into database for future events admission to event letter of thanks
#2	<ul style="list-style-type: none"> identification of skills is required 	<ul style="list-style-type: none"> more specialized recruitment needed methods may include mass promotion and targeted recruitment 	<ul style="list-style-type: none"> risk management audit face to face interview optional screening as determined by nature of volunteer position 	<ul style="list-style-type: none"> short orientation task specific training ongoing training as required spot checks 	<ul style="list-style-type: none"> ongoing supervision verbal recognition public recognition annual recognition
#3	<ul style="list-style-type: none"> identification of skills, qualifications, and specific tasks 	<ul style="list-style-type: none"> very specialized targeted recruitment presentations to potential groups 	<ul style="list-style-type: none"> risk management audit face to face interview extensive screening 	<ul style="list-style-type: none"> position specific orientation and training prior to volunteer assignment ongoing supervision, training, and evaluation spot checks 	<ul style="list-style-type: none"> identification of motivations and planning determine most effective methods public & annual recognition

Figure 5 - “The Layers of Necessity Model”. Forsyth, J. (1999).

For volunteer roles where a background check is required, the self-service portal would prompt volunteers to submit the required information and consent to the background check.

According to a nonprofit journal, seven in ten organizations outsource the volunteer screening

process to a third party who can provide the service faster, more accurately, and in compliance with evolving regulations (Zwetzig, 2016). This could likely be integrated with the portal in the same way that a car's history report can be integrated into most buy and sell websites.

An online self-service kiosk could also improve volunteer retention by enabling targeted communication with previous volunteers. A volunteer who has worked in the kitchen or donation centre would receive alerts when similar opportunities emerge. Automated push notifications could be used to recognize a volunteer's contribution, such as thanking them for two years of faithful service. However, this alternative would likely require developing an app due to its complexity, representing an estimated cost of over \$200 000 USD if a developer is hired (Dogtiev, 2021). This is a time consuming and expensive activity that would disrupt the organization and that users may struggle to adopt. Furthermore, prospective volunteers who are looking for a short-term commitment may feel that they are being scrutinized too closely, especially because they are offering their time for free. Our team concluded that while this alternative has its appeal, its costs outweigh its benefits.

Our second alternative solution is a text message system. When there are available shifts, it automatically sends mass texts to everyone who consented to text messages. The volunteer has a specific response to accept or decline the shift. They can also text to let the HR know if they need to leave early or if they might have another commitment to attend to. Like the common system, it is first come, first serve. It allows for a conversation and understanding of the willingness and availability of the volunteer. In terms of communication, this is ideal for the coordinator because they can gauge a prospective volunteer's fit. If the centre is short-staffed, the coordinator can look through a list and know each individual's circumstances and send out a request accordingly. Unfortunately, there are many volunteer opportunities. There is no text

cooldown or maximum volunteer hours as sometimes the volunteer may want to volunteer a few days in a row. This leads to an excessive amount of text messages and it is inefficient as it can be time-consuming. Additionally, not everyone has unlimited texting and thus, it might create a problem. Considering that the volunteer profile is large, it will take an immense amount of time just communicating with each volunteer over text messages and is therefore, a repetitive and exhaustive process. This alternative, while easy to use, may not be easy to control. It would lead to disorganization, miscommunication, and misunderstandings if not properly handled.

A third alternative is to develop a calendar system and integrate a weather view into the calendar for the HR manager to view. This eases the scheduling process for the HR manager by allowing them to plan ahead for demand surges caused by weather fluctuations. This alternative would support the HR employee by presenting them with the data needed to make scheduling decisions in a visual way that is easy to understand, and would help retain organizational memory even if scheduling managers turn over rapidly. With volunteer shift sign-ups integrated into this view, HR can determine if the shelter has adequate staffing for a given day, and prioritize posted opportunities according to the number of volunteers needed at the shelter. Since HR has to fill many different volunteer roles, volunteers are assigned an “intensity class” based on their level of training and are matched to roles accordingly. Thus, a student who volunteers casually will be matched to low-risk roles like the kitchen or donation centre, allowing trained staff and volunteers to work closely with clients in high-risk roles. However, since volunteers are reliant on signing up and showing up for their shifts, the accountability of volunteers can become a concern. The volunteer coordinator often does not get the opportunity to have direct contact with new volunteers, which presents a potential risk. Furthermore, by comparing the “signed up” list to the “showed up” list, HR can tell who the more reliable volunteers are and schedule them

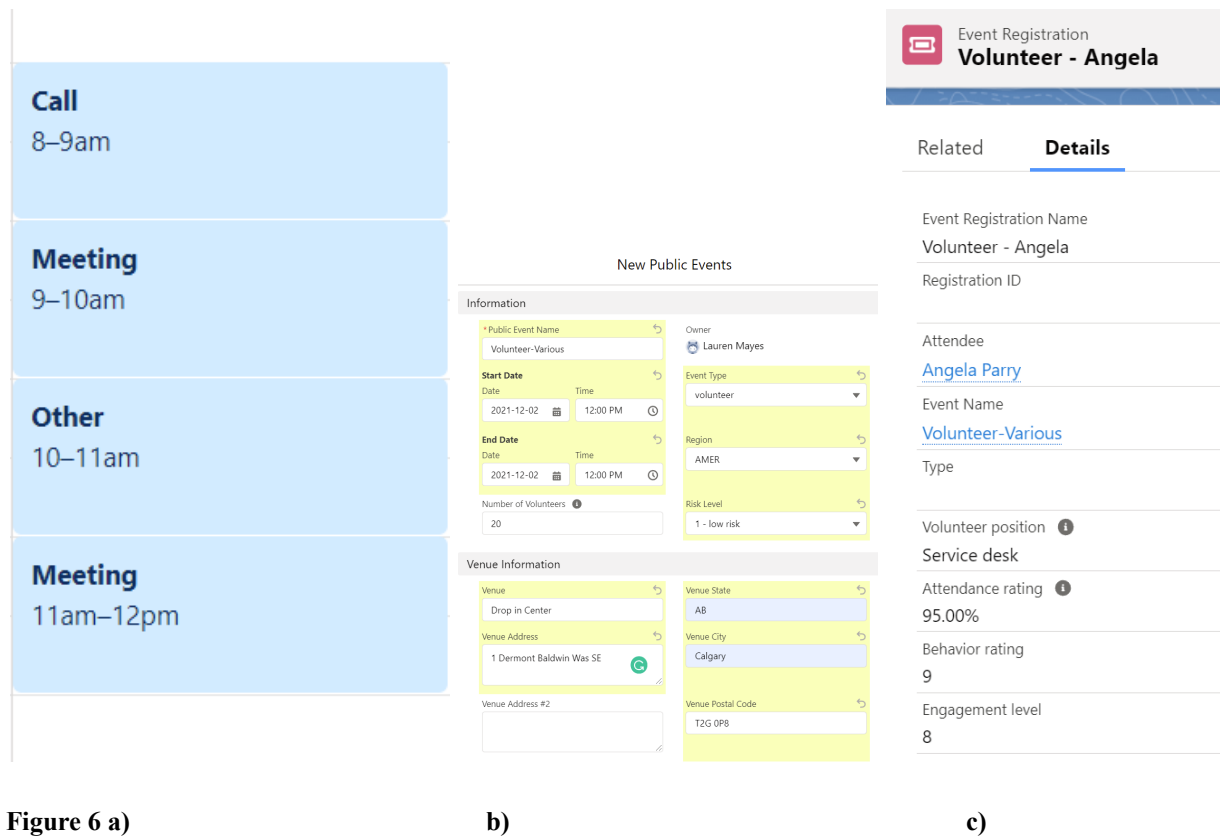
more frequently. When the centre faces an unexpected event, for example, someone taking a sick day or when the weather is unexpectedly terrible, HR can contact the list of available volunteers. The weather and waitlist system fixes the pains of the current system and it helps avoid short staffing. However, the volunteers retain the right to decline. The method of contact can be determined in the profile settings and users can change their preferences anytime to allow for more convenience. HR should also prepare to meet demand in poor weather by overscheduling volunteers, who may struggle to fulfill their commitment due to transportation and other delays. The new implemented system is easy for volunteers to use and is customizable on the coordinators side.

Solution

VII. Designing the Solution

After considering our options, we believe that creating a CRM system with calendar and weather integrations is the best choice. The calendar would allow better event management by being able to automate event creation and sign ups. A simple algorithm could be used to estimate the number of volunteers needed based on historical demand data. This solution also addresses the concerns regarding fluctuating volunteer demands due to weather changes. With weather forecasts integrated into the calendar, HR can be made aware of suggested changes to the number of volunteers based on changes in the weather. For example, if it was forecasted to rain, the algorithm would suggest 20% more volunteers because historical demand shows that 30% more clients arrive on a rainy day. This solution covers our first two system requirements. The third requirement would come from implementing the solution in a CRM software like Salesforce. Through this, we can manage user information, such as police checks and training information.

Salesforce is a modularized software solution that can be combined into a full enterprise operations management system, eliminating the need for multiple systems.



The HR manager, like every other employee, is able to manage their time in the integrated calendar. They can schedule and share common business practices like meetings, put aside time to do their personal work, and view their future scheduled shifts and holidays. They can also share this calendar among their colleagues to coordinate between them, strengthening team dynamics.

The HR manager is able to create public events that get sent out to all users. They can set up recurring events or individual events. They are able to customize the number of people that can sign up, see “Number of Volunteers” in Figure 6b. This field would be auto-populated with the recommended number of volunteers adjusted by an algorithm that predicts how many people would be needed. Ideally, the algorithm would have access to historical data of the number of

clients at the shelter and the number of volunteers needed. This data would be collected and filtered by the internal BI team in class. We can then factor in the weather conditions, such as heavy rain, cold snaps, and heatwaves. These conditions can have their own modifiers such as cold snaps needing 20% more volunteers. This is calculated and then auto-populated based on the dates provided. This field can also be changed by the HR organizer if needed. This allows for more automation, returning time to the HR team and enabling greater involvement with the volunteer screening and onboarding process.

Lastly, the HR manager would be able to review the volunteers that sign up. Being consistent with treating volunteers like employees, HR needs a way to measure their performance and, should need be, have grounds to relieve them. When reviewing the volunteers, the three main indicators, as proposed by the Volunteer E-business Considerations (VEC) team in-class, is their punctuality, how they behave while working, and their engagement level. The attendance rating would be the ratio of shifts they turn up for out of shifts they sign up for. The behaviour rating would start at ten and would change based on feedback gathered by HR from employees and clients. The engagement level, further developed by the VEC team, would be a tried system that would award committed volunteers with higher leadership roles, gifts, and benefit incentives.

Contact
Ms. Lauren Mayes A

Event Registrations (2) New

Event Registration: Event Registration Name

[new_event](#) ▼
[Volunteer-Lauren](#) ▼

[View All](#)

Opportunities (1) New

[Safety training](#) ▼
 Stage: Qualification
 Amount:
 Close Date: 2021-12-03

[View All](#)

Files (0) Add Files

[Upload Files](#)
 Or drop files

Figure 7

In the Volunteers' view, they would have their own home page. Here, they can view upcoming events they have signed up for as well as available training opportunities, educational videos, or files they need to submit. At the bottom, there is a place where they can store their files, which can also be seen by HR for verification.

Volunteer-Various
12-6pm

2021-12-02, 12:00 PM ✕

End Date	Venue
2021-12-02, 6:00 PM	Drop in center
Public Event Name	Number of Registrations
Volunteer-Various	1

[More Details](#)
Edit
Delete
▼

Figure 8

New Event Registration

Information

* Event Registration Name ↩

Registration ID ↩

* Attendee ↩

✕

* Event Name ↩

✕

Dietary Needs ↩

▼

Registration Fee ↩

Type ↩

▼

Volunteer position 1 ↩

Available	Chosen
Kitchen - clean	<input checked="" type="checkbox"/> Kitchen - cook
Service desk	<input type="checkbox"/> Kitchen - serve
Janitor	

Figure 9

The events posted by HR appear in a public calendar, visible to all registered volunteers. From here volunteers can see the basic details for the event such as its start time, end time, location, and how many volunteers can sign up. Special considerations can also be made, such as what position they would like and allergies, which can be changed based on the event type. Volunteers can also choose what type of availability they prefer, going, not going, or they can go on the waitlist and they will be notified when a spot opens up.

The sign up sheet is highly customizable, simple to use, and easily modified for different events. The sheet allows volunteers to be heard by HR and gives them more control over their work. Creating an inclusive environment is important to retaining volunteers.

Name	Ms. Angela Parry
Account Name	<div>▼ Address Information</div> <div>Primary Address Type ⓘ</div> <div>Mailing Address</div> <div>Current Address ⓘ</div> <div>Address Verification Status ⓘ</div> <div>Address Override ⓘ</div> <div><input type="checkbox"/></div>
Title	Volunteer
Department	
Birthdate	1998-10-14

Figure 10

Volunteers are able to edit their basic personal information like preferred name, age, address, and pronouns. They can fill in their contact information, such as a phone number and email address, so that they can be contacted by HR when new events are posted, or if they are on the waitlist and spots open up. Email notifications can remind volunteers of upcoming shifts and prompt them to opt-out if necessary before the 24 hour cut-off mark.

Our solution meets the system requirements identified from the case and has clear benefits for the organization, including increased visibility and control, which not only allows HR to identify high-value volunteers but to manage the risk undertaken by the organization. It returns valuable time to the HR team by automating redundant processes and involving prospective volunteers in the onboarding process. By using data to drive scheduling decisions, our solution combats some of the issues resulting from high turnover in management and administration and effortlessly rebuilds organizational memory. Salesforce is integrable with a multitude of systems, reducing paper waste and saving money for the organization. Our solution is intuitive and can be easily adopted by its users. Best of all, the system itself is inexpensive and can be modified to suit the evolving needs of a nonprofit organization.

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