Nucleus

The "**volunteer marketplace**" that connects high school **students** with **health organizations**

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Why and What is Nucleus?

The healthcare industry, such as hospitals and senior care centers are burdened with administrative and non-technical work which takes time away from the healthcare professionals from their actual medical responsibilities. They are desperately searching for volunteers to help them with such tasks. Currently all they can do is post those requirements on their websites and wait for somebody to call them.

- "Bay Area Hospital needs volunteers"
- "Become a volunteer at Good Samaritan Hospital"
- "Santa Clara Senior Home needs volunteers"
- "Summer high school volunteer program at Stanford hospital"

On the other hand, volunteering has become a requirement for high school graduation in more than 20 states and furthermore high school students benefit by showing high quality volunteering work in their college applications. Through serving the community, high school students can learn real world skills and build early networking, which will be useful for their future career and life.

Nucleus is an application with an easy to use interface for the hospitals and senior care centers to organize all the volunteering opportunities. Nucleus will also provide a list of available and verified student volunteers that the hospitals can use for their facilities. Volunteers will earn skills and endorsements based on their contributions, which will be part of digital resumes/certification that they carry along their user profile. Same applies to the providers with respect to the provider reviews and recommendations.

Early Mockups

Following are some of the early mockups for how our application is going to work. We will provide an interface where the hospitals and senior care centers can list all the details regarding their volunteering opportunities.

All the above volunteer opportunities will be linked back to the organization's website.

We will also provide an interface to provide a list of verified and/or trained volunteers for the organizations to review and select. This will remove the wait time between listing an opportunity and waiting for somebody to call them, instead they can select the volunteers for the position themselves.

AVAILABLE VOLUNTEERS

	VERIFIED	TRAINED
1) JANE DOE	☑	☐
2) JOHN SMITH	☑	☑
3) OLIVE TREE	☐	☐

SELECT & ACCEPT

For our high school students, they will have an interface to upload their resume, pick the training programs, and provide other information to get them ready for the volunteering experience.

VOLUNTEER REGISTRATION

UPLOAD RESUME

TIME SLOTS AVAILABLE

VACCINATION DETAILS

TRAINING PROGRAM

Total Addressable Market

Team conducted market research via statistical analysis, phone interviews with health care organizations, survey with high school student and parents, there is substantial demand and supply for health care industry to hire high school students are volunteers

On the Demand side
- 1 Million volunteer hours per year in the state of California need by health care sector alone
- 4 Million volunteer hours per year across USA need by health care sector alone
- 10 Million volunteer hours per year in across USA need by health care sector and other sectors like education, law, small businesses

On the supply side
- State of California requires 40 hours volunteer service across 4 years of high school, avg 10 hrs per year per student, There are 1.7 million high school students enrolled in California for the 2021 to 2022 school year. This add up to total supply of 17 million high school volunteer hours in California
- 20 states across USA require volunteer service for high school graduation, There are 15 million high school students enrolled across USA for the 2021 to 2022 school year, we estimate total supply of 100 million high school volunteer hrs
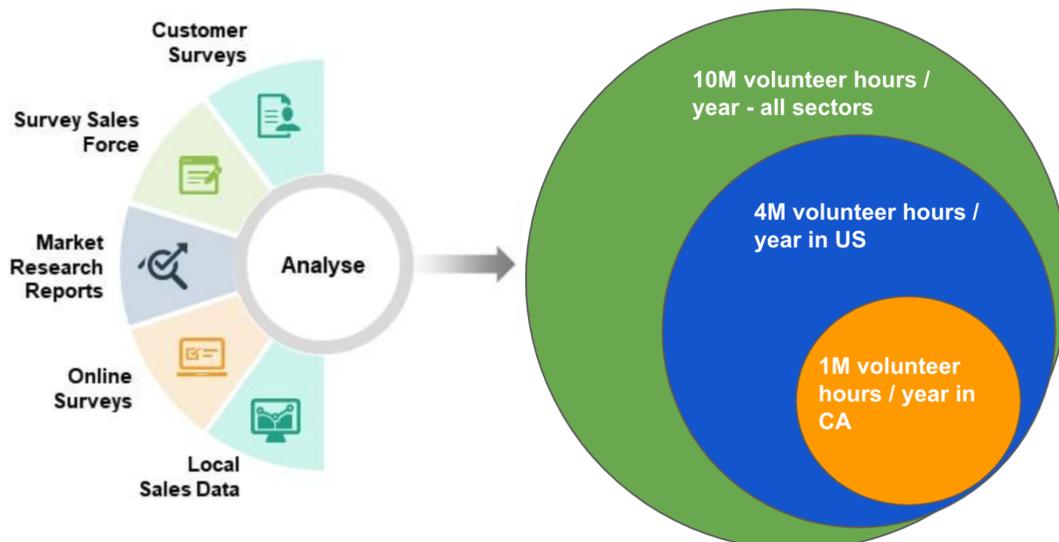
Market Strategy

Our initial target in the first year is the Bay Area in Northern California. We will start with 25 major hospitals and 100 senior centers. Based on our interaction with the volunteer service department with some hospitals like Good Samaritan Hospital, Kaiser Permanente Hospital, El Camino Hospital, we learned that each hospital is on average seeking for 20 high school volunteers at any day of the year. Coincidentally senior centers have the same average sought high school volunteer number as hospitals do.

As volunteering is a requirement for high school students to graduate, Bay Area high schools with the highest graduation number have become our initial target. These high schools include:

- Lowell High School, San Francisco. — **98% graduation** (2774 students)
- Mission San Jose High School, San Jose. — **98% graduation** (2063 students)
- Lynbrook High School, San Jose. **— 96% graduation** (1942 students)
- Monta Vista High School, Cupertino. **— 98% graduation** (2193 students)
- Saratoga High School, Saratoga. **— 99% graduation** (1289 students)
- Henry M. Gunn High School, Palo Alto **— 96% graduation** (1936 students)

The total addressable market (TAM) in California is 1 million volunteer hours per year. In the first year, we are aiming to hit 150,000 volunteer hours. Based on our targets above and the national average of 4 hours per week for each high school student, we can claim success in our first year if we can get 30% of opportunities from our providers filled with 6% of high school students through our application.

In the next 3 years, we would like to remain focused on California state. After the first year alone, we will continue expanding to all hospitals and senior centers in the Bay Area, while at the same time expanding the coverage to all other areas in California with the goal to hit 1 million volunteer hours Total Addressable Market (TAM). Upon successful expansion throughout California, we will continue the expansion to all the regions in the US and subsequently explore other sectors outside hospitals and senior centers.

Competition

In the competition landscape, we see 2 axes representing the quality of services (conventional posting/applying to volunteer matching and placement) and profiling (static to networking). The identified competitors are United Way, American Red Cross, Volunteer Match, and Golden. The first 3 competitors are operating on static networking where opportunity providers and volunteers just look at the app as black box to post and find volunteer opportunities respectively. Among 3, United Way is the only competitor that does the volunteer matching and placement. The opposite side of static networking is social networking, in which we see 1 competitor: Golden, which offers conventional posting and applying). Only Nucleus as of this write-up offers volunteer matching and placement in the social networking realm.

This gives Nucleus a strong momentum to win as with the combination of volunteer matching/placement and operation in the social networking realm, users will get the excellence of overall volunteer matching and execution experience.
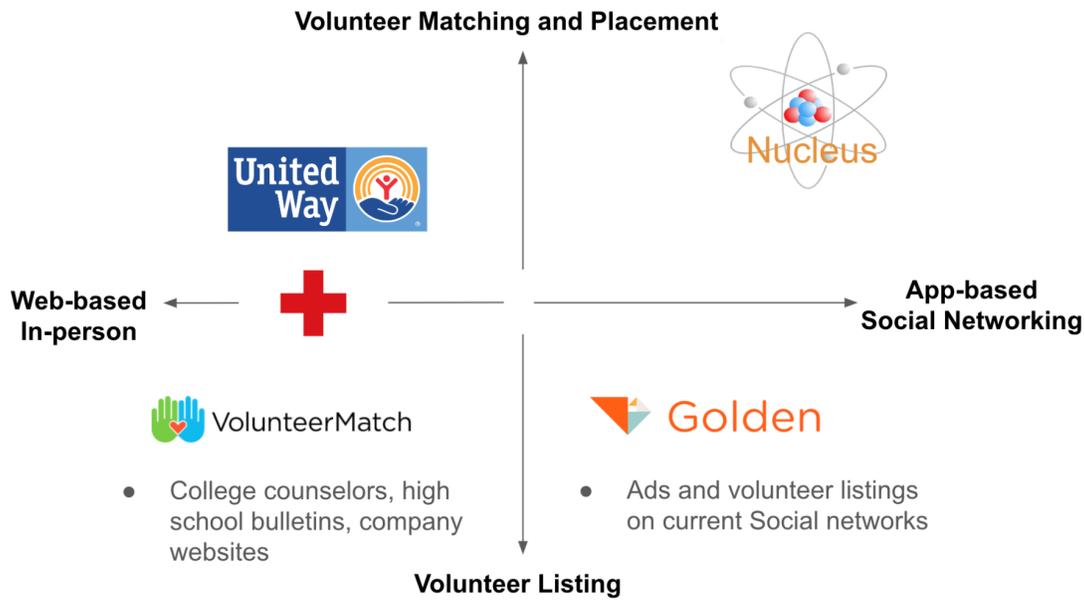
Technology

Our focus will be on providing technology that will focus on matching the exact needs of hospitals and senior care centers with the interests and personalities of high school students. We plan to provide a personal assessment test to the high school students to learn more about them, which when paired with other data such as their resume, their college applications, the hospitals will give us that perfect match.

This matching algorithm will then be constantly enhanced with feedback provided by both the high school students and the health organizations.

Our second and equally important focus will be in providing all the necessary training programs for the high school students in order to excel in the volunteering positions. These training programs can include things such as HIPAA, customer service, and necessary administrative training. Along with this, we will also provide a volunteer onboarding program that will introduce them to the key responsibilities, the staff they would work with, and all the other need-to-know information.

Business Models

Nucleus will offer a Tiered Solution to our customers based on level of service.
   a. Basic Package: This package offers matching of volunteer profile to the job description provided by the customer using proprietary adaptive AI solution developed with deep insights. The package will be offered at $5 per hour per service rendered by a volunteer hired through Nucleus.
   b. Premium Package: In addition to the Basic package, this package offers vetting of the volunteer by a trained HR professional. In addition, the selected volunteers will be offered customized training suited to the opportunity. This package will be offered at $8 per hour. This offering will be made available beginning Year 3 of Operation.

Financial Projections

Exhibit 1 below presents our Financial projections for the first 10 years.

During the first 5 years of operation, Nucleus will stay focused in the healthcare arena and expand primarily through expanding operations into more regions and capturing more students to enroll with Nucleus for volunteer opportunities. In these first five years, we expect to be profitable by Year 2 and grow rapidly as can be seen in Exhibit 2.

Beginning Year 6, we intend to expand into other sectors that have volunteer needs that include Museums, Libraries, Food Banks, Parks and Recreation Services, etc.

Conclusion

Nucleus is bringing a disruptive solution that is aimed at easing identification of the volunteers for corporations while enabling the volunteers to earn valuable experience in real life environments and developing as next generation leaders - this solution offers an app with an easy interface to select volunteers and volunteering opportunities. Nucleus's business model has a Basic Package that will use AI to match volunteers to job descriptions and a Premium Package where the volunteers will be vetted by a HR professional and is trained to match the needs of the position.

Exhibit 1: Financial Projections

Tiered service: $5 per hour (first 2 years - Basic Service), $8 per hour (Premium service - 50%)										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Volunteer hours served	150,000	1,440,000	2,880,000	4,320,000	11,520,000	23,040,000	34,560,000	46,080,000	55,296,000	69,120,000
# Regions	1	5	10	15	20	20	20	20	20	20
Capture rate (students)	12.5	12.5	12.5	12.5	25	25	25	25	30	30
Makets	1	1	1	1	1	2	3	4	4	5
Revenue (Basic - $5/hr)	$ 750,000	$ 7,200,000	$ 7,200,000	$ 10,800,000	$ 28,800,000	$ 57,600,000	$ 86,400,000	$ 115,200,000	$ 138,240,000	$ 172,800,000
Revenue (Prem - $8/hr)			$ 11,520,000	$ 17,280,000	$ 46,080,000	$ 92,160,000	$ 138,240,000	$ 184,320,000	$ 221,184,000	$ 276,480,000
Revenue ($M)	$ 0.75	$ 7.20	$ 18.72	$ 28.08	$ 74.88	$ 149.76	$ 224.64	$ 299.52	$ 359.42	$ 449.28
Operational Expenses										
Headcount										
Area Sales Managers	1	5	10	15	20	20	20	20	20	20
Management	2	3	5	5	5	8	10	10	15	15
Development Staff	2	5	5	5	5	8	10	12	15	20
Salary & Fringe	$ 0.75	$ 1.95	$ 3.00	$ 3.75	$ 4.50	$ 5.40	$ 6.00	$ 6.30	$ 7.50	$ 8.25
Other OpEx	$ 1.00	$ 2.00	$ 3.00	$ 3.50	$ 4.00	$ 4.50	$ 5.00	$ 6.00	$ 8.00	$ 10.00
Net Income	$ (1.00)	$ 3.25	$ 12.72	$ 20.83	$ 66.38	$ 139.86	$ 213.64	$ 287.22	$ 343.92	$ 431.03

Exhibit 2: Nucleus Profitability Growth (all in $M)