



National
College of
Ireland

**DONATE
BLOOD
SAVE A
LIFE**



BLOOD BANK SERVICES

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MSc Cloud Computing

INDEX

Introduction	3
Lean Canvas.....	4
1) Problem	5
2) Solution.....	7
3) Customer Segment	10
4) Unique Value Proposition.....	11
5) Channels	12
6) Revenue Streams	13
7) Cost Structure	14
8) Key Metrics	16
9) Unfair Advantage.....	16
Key Partners	17
References.....	18
Appendix	19

INTRODUCTION

“Donate Blood, Save A Life,” says that donate blood regularly and save a life, not even every-day, then save a life every minute. People in between 17-70 can donate blood in the gap of every 3 months. Blood donation plays important role in our life. Blood donation is not only for saving others life but also for our healthy life too. Blood donation recreates fresh blood in your body and helps to be healthy always.

People can donate blood either in blood banks or in blood camps held by blood banks in the city. There are blood transfusion services for taking blood from a donor and storing of blood. If any local or new person in the city, wants to donate blood, then they need to search for specific blood transfusion service office or any other events. These transfusion service taking blood from a donor and after some testing, they are using those blood for further use or transfer it to hospitals.

Hospital has emergency wards and they need continuous extra blood bags for surgeries as well as delivery. Some popular hospitals have specific wards for blood storage, so they can use blood bags from storage whenever they want. But some hospitals are dependent on blood banks for blood bags. So, they contact the blood bank and take blood bags.

Blood banks have their own schedule for blood donation. They simply give some slots for limited clinics and donor has to go there and donate their blood. If possible, they used to take blood camps during various events in the city. The donor has to call them and ask for blood donation time and place every time.

In Dublin, there is only one service for handling blood, which is “Irish Blood Transfusion Service (IBTS)”. They are working very well for a city like they provide a survey which is helpful for donors before donating blood, they provided some quiz which helps whether you can donate blood or not and many more. But from our point of view, they have to upgrade their service. They are working properly, and their services are good but, in some cases, they have limited services.

So, by keeping these factors in mind, I point out some problems with blood transfusion service and to solve these problems I created some solutions and many more in our Blood Bank Services startup business. In this report, I discussed those things in detail and with some factors which makes my start-up perfect.

LEAN CANVAS

Lean Canvas is a business model canvas which helps to create a fast, concise and effective plan before implementing start-up. It promises for actionable, meaningful, successful and entrepreneur-focused business plan. It creates a model with 9 different parts such as problem, customer segment, solution, unique value proposition, channels, revenue stream, cost structure, key metrics and unfair advantage.

Before starting implementation of my project, I created a lean canvas of my idea which was the first step towards my start-up. It was a theoretical business model which helped me while implementing my project. That lean canvas is as follows:

PROBLEM Hospitals don't know about nearest blood bank for specific type of blood. Blood banks don't have plans to arrange blood camps during various events. People doesn't have system for booking blood donation slot online.	SOLUTION Hospitals can easily know about nearest blood bank and which type of blood they have. Blood banks will get notification with various blood donation events so they can participate for collection. People can book their blood donation slot online with specific time and blood bank.	UNIQUE VALUE PROPOSITION A platform for distribution of blood bags and blood donation with various blood camp events.	UNFAIR ADVANTAGE First mover in the market so all features are unique in this business	CUSTOMER SEGMENTS Blood Banks Hospitals People of 17-70 years age
	KEY METRICS Number of blood banks who came for events. Number of people who used our service		CHANNELS Social Media Personal Email Media Advertisement Word of mouth Recommendation from hospitals and blood banks	
EXISTING ALTERNATIVES Irish Blood Transfusion Service		HIGH-LEVEL CONCEPT Blood Transfusion Service		EARLY ADOPTERS hospitals with emergency services in the city
COST STRUCTURE Wix: € 24.50/month Hospitals : € 30/month Blood Banks : € 70/month Delivery : € 5/blood bag (if require)			REVENUE STREAMS Hospitals : free first 5 blood bags Blood Banks : free first 1 week People : free service Total Expense : €1600 /month	

Fig.: Lean Canvas for Blood Bank Services

1) PROBLEM

The problem consists of things which need to be complete after your business. Finding a problem is the first step in making a business plan properly. Most start-ups fail because they are focusing on money and time instead of knowing exact problem for which they are developing a solution.



For my start-up, I started with some basic sources to find problems such as:

- 1) Feedback from Irish Blood Transfusion Service
- 2) Feedback from hospitals
- 3) Feedback from donors present in blood banks

From these sources, I get to know about the problems which they are facing and by my customer segments. For my business, I found some key problems which are based on the situation present in the city as well as social problems. After thinking towards my idea, I point-out some problem based on blood bank services:

- People don't have a system for checking nearby clinics or booking slots for blood donation. Every time they must visit or call the blood bank and ask for an appointment. Otherwise, they can use existing IBTS service to find out slots, but they don't have online slot booking system.
- Hospitals don't know about the nearest blood bank for blood bag order or they don't know about storage of blood whether that specific type of blood is present in that blood bank or not. Whenever they need a blood bag, they are calling blood banks and asking for a blood bag.
- Blood banks totally depend on people who can donate blood after coming to the clinic. Very few times, they conduct blood camps and collecting blood bags from camps.

Existing Alternatives: In Dublin, IBTS is existing transfusion service help to store and process blood. They provide service for finding clinics and time for blood donation as per user requirement. They also have some quiz which helps people to donate blood. IBTS is working from 1965 as a national blood supplier. They are providing have testing and tissue service for hospitals. They are the only one who works with blood and provides services related to blood to hospitals.



IBTS committing to the highest standard of service delivery to their donors. There is some difference between our service and IBTS whether some features they are not providing for donors and hospitals but we are providing and those are our unique features.

IBTS	Blood Bank Service
IBTS provides clinics and timing details for donors.	We are providing online appointment booking service for donors.
IBTS provides contents present in blood to hospitals such as bone marrow, etc.	We provide blood bags from blood banks to hospitals.
IBTS dependent on people for blood collection. They don't have management for events.	We are showing donors where and when to donate blood through our website. Also, we are providing events such as blood donation camps to blood banks.

2) SOLUTION

Once you found proper problems for business, then you are ready to define possible solutions to those problems. The solution is the field in which an entrepreneur always passionate about. The solution helps to implement and deploy your “Minimum Viable Product (MVP)” which can be better starting for an excellent start-up.



Here, I mentioned possible problems based on my idea. I decided to create a website as a solution to my problems and that will be beneficial for my customer segments as well. Now we can discuss regarding a solution to those problems.

- People want a technological solution to every problem. So, solution for people is online appointment service for blood donation. I developed a website where they can book an appointment slot online. They don't need to call or go to the nearby clinic. They have the option to select clinic, date and time by their convenience from anywhere.

The screenshot shows a web application for booking blood donation appointments. At the top, there's a 'Back' button and a 'Login' link. The main heading is 'Schedule Online'. Below it, a date range 'Jul. 23 - 29, 2018' is shown with navigation arrows and a 'Today' button. A dropdown menu is set to 'All Staff'. A calendar grid shows dates from 23 to 29, with the 27th highlighted in red. Below the calendar, a 'Monthly view' link is visible. The appointment slots are organized into three columns: Morning, Afternoon, and Evening. The 5:00 pm slot in the Evening column is highlighted in red. To the right, a summary box titled 'Donate your Blood' shows '15 min Free service', the selected date and time 'July 27, 2018 5:00 pm', the name 'Piyush Narkhede', and a red 'Next' button.

Fig.: Appointment Booking Service

- Hospital wants blood bags every day as because they are having an emergency service. By using my website, they will know exact blood storage in blood banks. With this, they will get an extra feature like order blood bag online. This solution is totally online so on the spot, they can see and book a blood bag instead of calling each blood bank and asking about blood storage and bags.

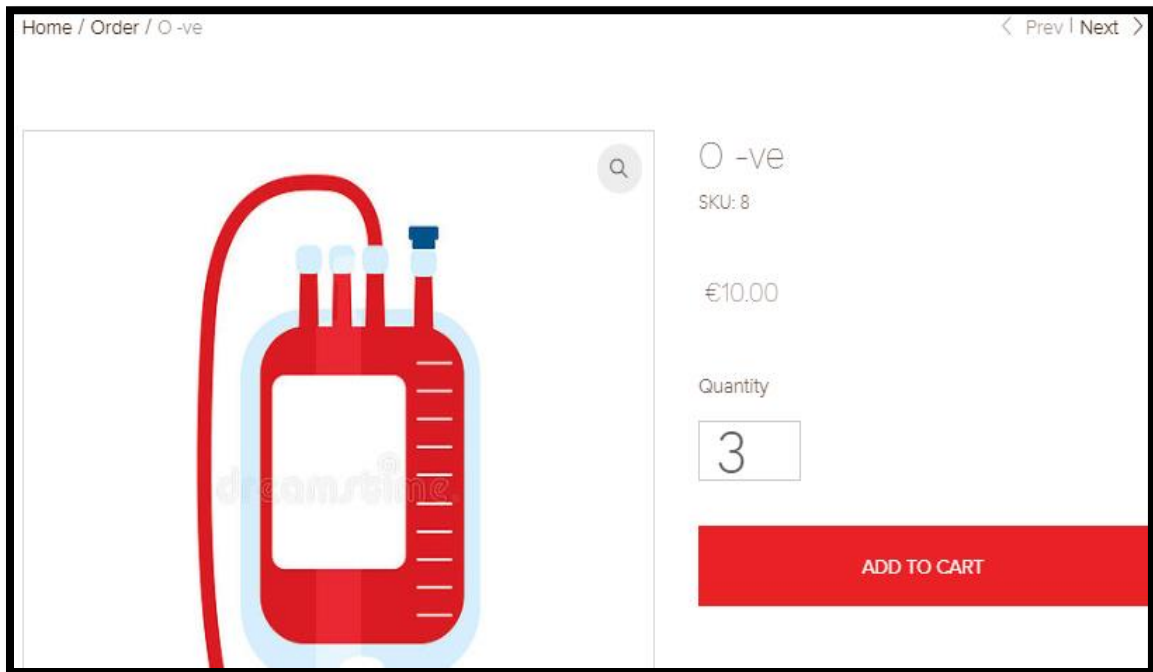


Fig.: Blood Bag Order Service

Most of the times big hospitals have their own department for blood collection. But instead of using those bag they will use my service to book blood bags online and use their own collection at the time of emergency. The hospital can easily order blood bags by registering them on my website. Our service is emergency so that better to use our service. Also, they will advise people to donate blood by using our website so that that blood should be stored in blood banks instead of storing in hospitals.

- Blood Banks in Dublin are totally depending on people who are coming for blood donation. We will arrange blood camps and will give notification regarding blood camps, by using my website, blood banks will come to blood camps and collect blood from donors. Also, they will get time to time notification regarding which donor is coming for blood donation in which clinic with their personal details, date and time.

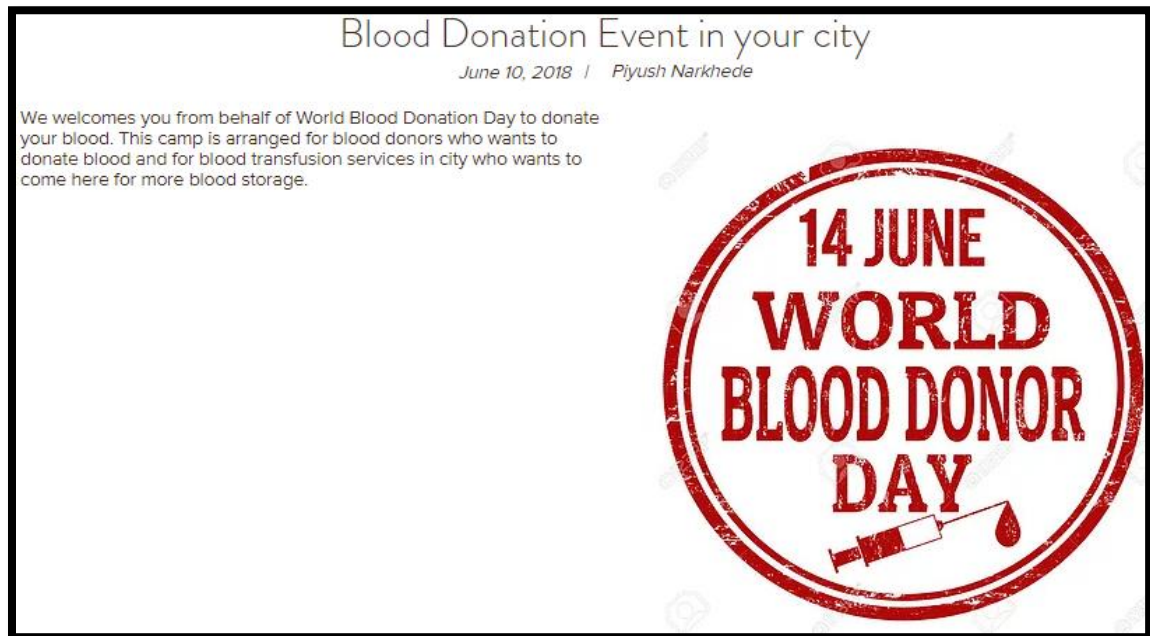


Fig.: Blood Camp Event Service

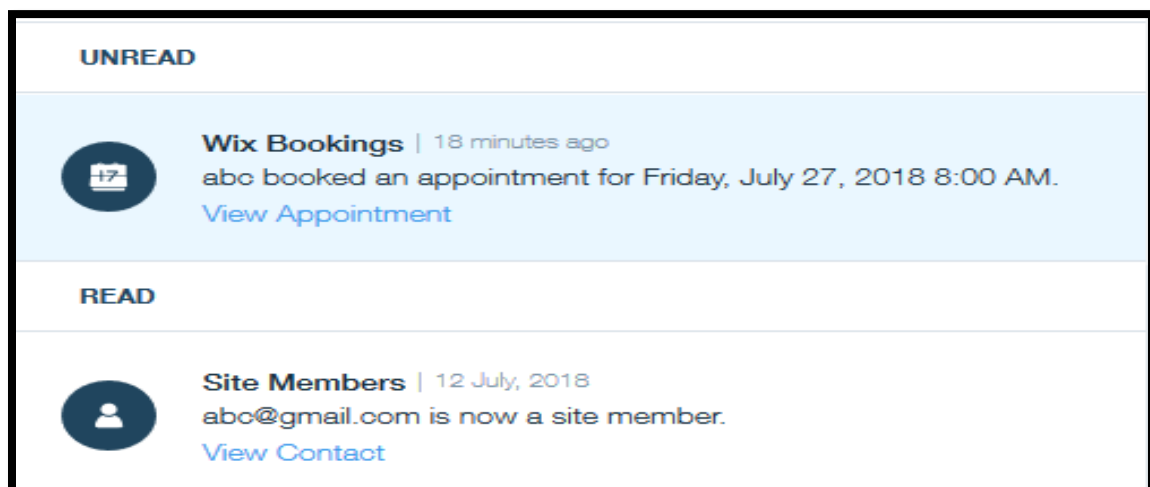


Fig.: Donor appointment notification Service

3) CUSTOMER SEGMENT

Customer Segment is the things who will use our product in the future or for whom we defined problems in lean canvas. It is important to find proper customer segment for our start-up, if we succeed to find appropriate customer segment then that start-up may have better starting and success in future.

For my start-up, I found total three customer segment who can use my website. These segments are based on problems and solution which I mentioned in the last section. Those customer segments are as follows:

- **People:** By UK law, age between 17-70 years old can eligible for blood donation. So, those people can use my website for blood donation.
- **Hospitals:** Hospitals which depends on blood bank for blood bags, they can use my website for purchasing blood bags.
- **Blood Banks:** For donor management, donor appointments and blood camp events, blood banks will use my website.



People
(Age: 17-70)



Hospitals



Blood Banks

Early Adopters: From my view, hospitals and blood banks will be my early adopters. Because one of the news by the Irish Times, mentioned that last year, there was no storage of O^{-ve} blood, and they faced lots of problems. So, blood bank will use our application and will go for blood camps for more blood bags. Hospitals want blood bags every day because of emergency services, so they can use my website to buy blood bags unlike their old process of calling a blood bank and ask for bags.

4) UNIQUE VALUE PROPOSITION

Every start-up has been Unique Value Proposition (UVP), otherwise, their business will be either copy someone or people won't use that product because of a similar product which is developed by someone else before them. UVP is the unique feature in your product which customer segments want, and it should not be developed before us.

In this case, I have mentioned problems, solution and customer segments which are totally related and proper liked with each other. As a first in a market, there are no products available like which I developed. IBTS is available as an existing service but as compared to my service, they don't have features which are present in my product or website.

As UVP, I have some features that are unique for my customer segments. My website is the platform for blood transfusion service along with online blood bag order system and blood donation appointment booking with various blood camp events.

High-Level Concept: As a business, there should be a concept based on a specific domain. My start-up is based on **Blood Transfusion Service** with some other domains such as **Online Purchasing and Appointment Booking**. And at last, I also have blood camp **Event Management** as a service for my customers.



5) CHANNELS

Channels are the medium through which our product is traveling towards the customer. Effective channels play role in company's value proposition which is efficient, cost-effective and fast. Every business needs channels to advertise them in a different way. For a start-up, it is important to select a correct channel to show their product to their customer segment in proper format and should be pointed out important features in it.



Some conventional sources which I selected for my products are:

- Recommendation from Irish Blood Transfusion Service.
- Suggestion from Blood Banks
- Word of mouth
- Suggestion from hospitals

Only conventional sources are not sufficient for any start-up business. So, I found some non-conventional sources for my business such as:

- **Social Media:** Social Media is the easiest way to show our product to customers. A single advertisement is flying over thousands of people in a minute.
- **Personal emails to hospitals and blood banks:** It is important to contact our customer segments by personal emails. So they will get to know our exact purpose and importance of our product. It is easy to convince our customer by personal mail than sending the public advertisement.
- **Media advertisement:** Media advertisement will be helpful to the donor. Because every person is not following social media some people are unaware of social media platforms, so it is better to advertise by the media.

6) REVENUE STREAMS

The revenue stream is the most important factor in the business model. Our business is a business if there is a revenue in their model. “We don’t live for oxygen, but need oxygen to live”, revenue is the same for business. It is starting with customer segments; we need to point out our customer to find revenue streams. It is also important to see evidence for monetizable pain for our product.

My product is having some free trials for my customers and subscription cost for some customers. As we can see, for **people**, our service is totally free because they don’t need to pay for the appointment and searching for events. For **hospitals**, they will get a free trial for first 5 blood bags, then they need to pay some charges behind for every blood bag. For **blood banks**, they will get a free subscription for a week, then we will charge for each appointment, event and blood bag order service.

Our subscription is for monthly basis, €30/month for hospitals and €70/month for blood banks. If any blood bank is not having delivery service, then they need to pay extra €5/blood bag because blood bag needs a special type of delivery service, unlike regular delivery.



7) COST STRUCTURE

The cost structure estimates the detailed expense and burning rate require for implementing the product. Instead of giving false cost structure and fail our start-up, it is better to give some basic cost structure at starting phase and after some months or year, update this cost structure to grow business and profit as well. This is only one field which entrepreneurs have to keep update after specific time for his successful start-up. It is divided into parts like subscription cost, profit, marketing, customer support, and many more.



The cost structure for our website including profit:

Contents	Cost
Website Development	€ 1000 /month
Customer Support	€ 100 /month
Event Management*	€ 500 /event
Delivery charge*	€ 5 /blood bag

*optional, only for a limited segment

Website Development: For website development, we are not using any separate engineer for developing a website. Simply by using Wix, we can integrate our business on the website. Only in €24.50/month, they are providing unlimited bandwidth, 30GB storage, customized the environment, advertise vouchers, and many more. So, it is better to use Wix and totally it will cost approx. € 1000/month because only Wix is not sufficient, with that we need a domain and some customer support line with some employees to handle those services.

Customer Support: We need to provide some customer support for delivery and appointment purpose. Events and appointment features are present on the website but for extra features, the customer can use customer support anytime. So, the final cost of that is € 100 /month.

Event Management: For event management, we need to provide some refreshments and some place for blood donation camps. Sometimes, we will get free food and space but many times we need to pay for everything, so approx. € 500 /month expense will be suitable. As compare to all events, these are very less and that's why it does not cost more amount for our business. Blood banks will come for blood bag collection, so they have their own chairs and etc things which they need for blood bag camp, we only need to arrange a place and food if possible.

Delivery Service: For some blood banks or hospitals, they have their own delivery service for blood bag transfer. But many times they need that service as well. So, I will provide that service if they want. For delivery for a blood bag, that delivery guy needs to take care of blood bag and that bag should be used in a cold container. Total cost for delivery is more than regular delivery, it is approximately € 5 /blood bag.

So, finally for each customer segment price should be varied and flexible.

Customer Segment	Price	Discount
People	€ 0	€ 0
Hospitals	€ 30 /month subscription	First 5 blood bags free
Blood Banks	€ 70 /month subscription	The first-week free service

Our start-up is limited for one city hence those expenses are very less. After some months or year whenever we want more sources and branches I will update those things in my plan. Our profit will be depending on future blood bank orders. If customers start to use our application, order rate will increase and on basis of order, we will get more profit as per cost structure.

8) KEY METRICS

Key metrics is minimum success criteria and most important assets for our business. Successful entrepreneurs are not thinking about high profit always, they start their planning with minimum profit and investment. We need to have a goal but in a limited area, which will help to focus our product and be in the market for a long time with an excellent success rate. Likewise, I started my planning for a start-up with limited for one city.



As a start-up, my key metrics are people who are using our website for booking appointments. Their feedbacks are really helpful to stay in the market. Also, blood banks who are getting notification regarding events and online blood bag order system, their experience regarding events and blood bag delivery service are important for us. Hospitals are using blood bag order service in our website. So, for a better experience, we need to provide proper service for our customers will be happy forever.

These all things will be helpful to evaluate our progress towards success and may be used to define new cost structure and features in the future.

9) UNFAIR ADVANTAGE

Unfair advantage is the competitive advantage which is not easily copied by others. It will help us to be unique and successful in our future business. As compare to my product, as a first mover in the market, most of the features in my product are unique. So, nobody copies my features in their product. If they want to create service like mine, they either they need licensing from my side or they need to join my business to start new branches in different cities so it will be profitable for me to grow business with successful way.

KEY PARTNERS

Key partners are needed for a start-up. Partners always help to be on track for new business. As a start-up, making more partner will be responsible for more connections, advertisements and to be financially able for business.



Our key partners are as follows:

- **Irish Blood Transfusion Service:** My product is totally based on blood transfusion service so IBTS is my key partner. They are providing me with some quiz for donors and some blood-related information and blood storage for my website.
- **Delivery Service:** I need a delivery service for delivering blood bags to customers by special delivery service. So, one of the delivery service from the city is my partner.
- **Hospitals:** Some big hospitals are my key partner where they are recommending to use my service to people and they are helping me with advertising my product.



Fig.: Blood Bag Delivery Vehicle

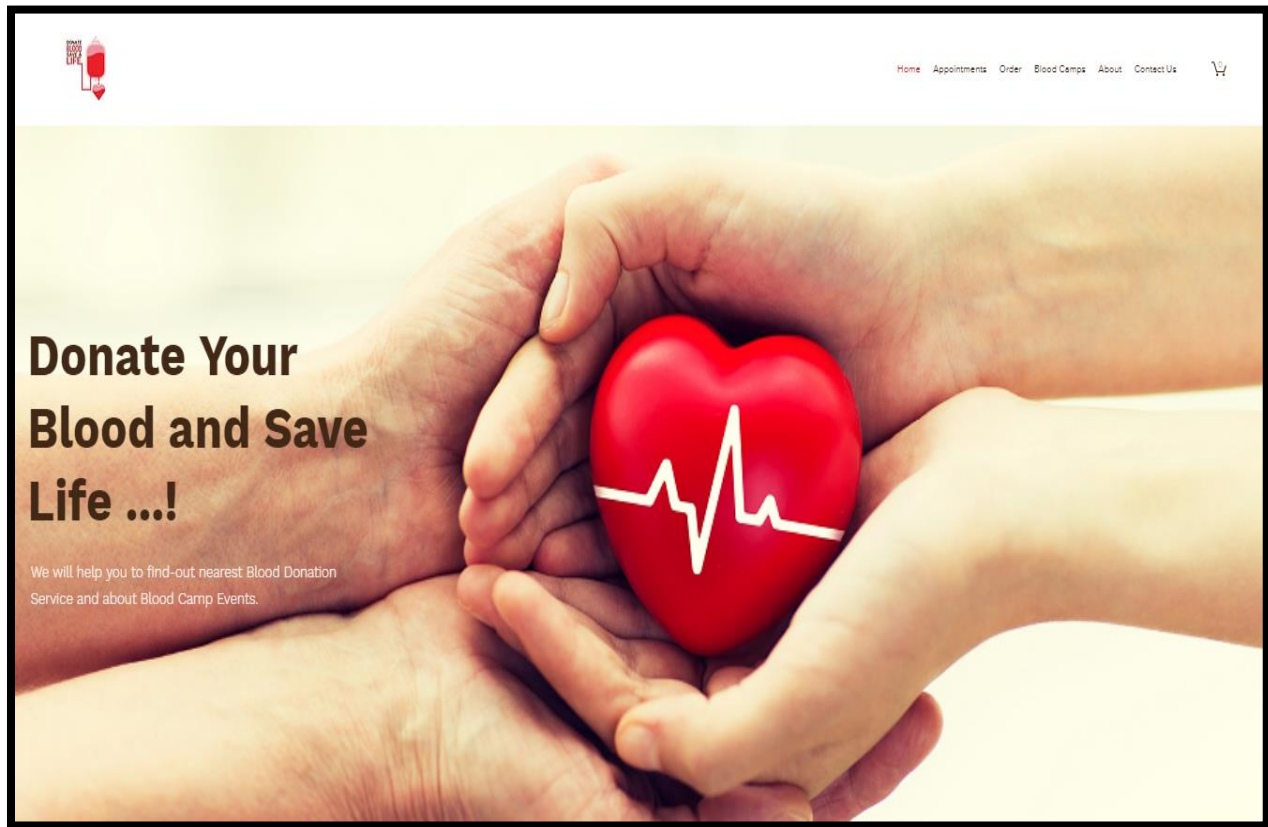


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APPENDIX

My website with all features and solutions given in the report with landing page.



URL: <https://psn30595.wixsite.com/bloodbankservice>