



Manipal Hackathon

PROBLEM STATEMENT

HEA01: Leasing and pooling of Medical Equipments

TEAM:- VAMOS

Team members:-

Anirudha Dargar
Jayanth Mahadesh
Joseph Braganza
Karan Ladha
Prakhar Singh

RESEARCH AND STATISTICS

Reference :- <https://www.ibef.org/industry/medical-devices>

1. India is highly dependent on imports for medical equipments. Below pie chart for exports depicts it as well.

2. So there is need to efficiently manage the imported equipments.



POTENTIAL IN HEALTHCARE INDUSTRY

INCREASING DEMAND

- * Rising number of medical facilities will boost the demand for medical devices in the market.
- * Various government initiatives such as 'Production Linked Incentive (PLI) Scheme for Medical Devices 2020' and establishing medical parks will augment demand.
- * The medical technology sector in India is projected to reach US\$ 50 billion by 2025.



ISSUE RELATED TO PROBLEM STATEMENT

1. Inefficiency in Supply Chain of Medical Equipment

One of the major reason for high cost is the inefficiency in supply chain of medical equipment. Inaccessibility of right equipment at right cost and right time is due to unavailability of a right platform where the recipient entity and donor entity could communicate with each other.

2. High dependency on major distributor and third-party logistics

Hospitals are overly dependent on distributors and third-party logistics. Their procurement process is inflexible to quickly adapt to a crisis. High dependency on major distributor allows the them to fluctuate the prices according to them as they are the market leader leading to incurring of high charges for medical equipment's.

Dependency on third-party logistics leads to high consultancy charges. They basically act as a broker and demand charges for their information which is needed to get demolished and there is efficient solution for it as well.



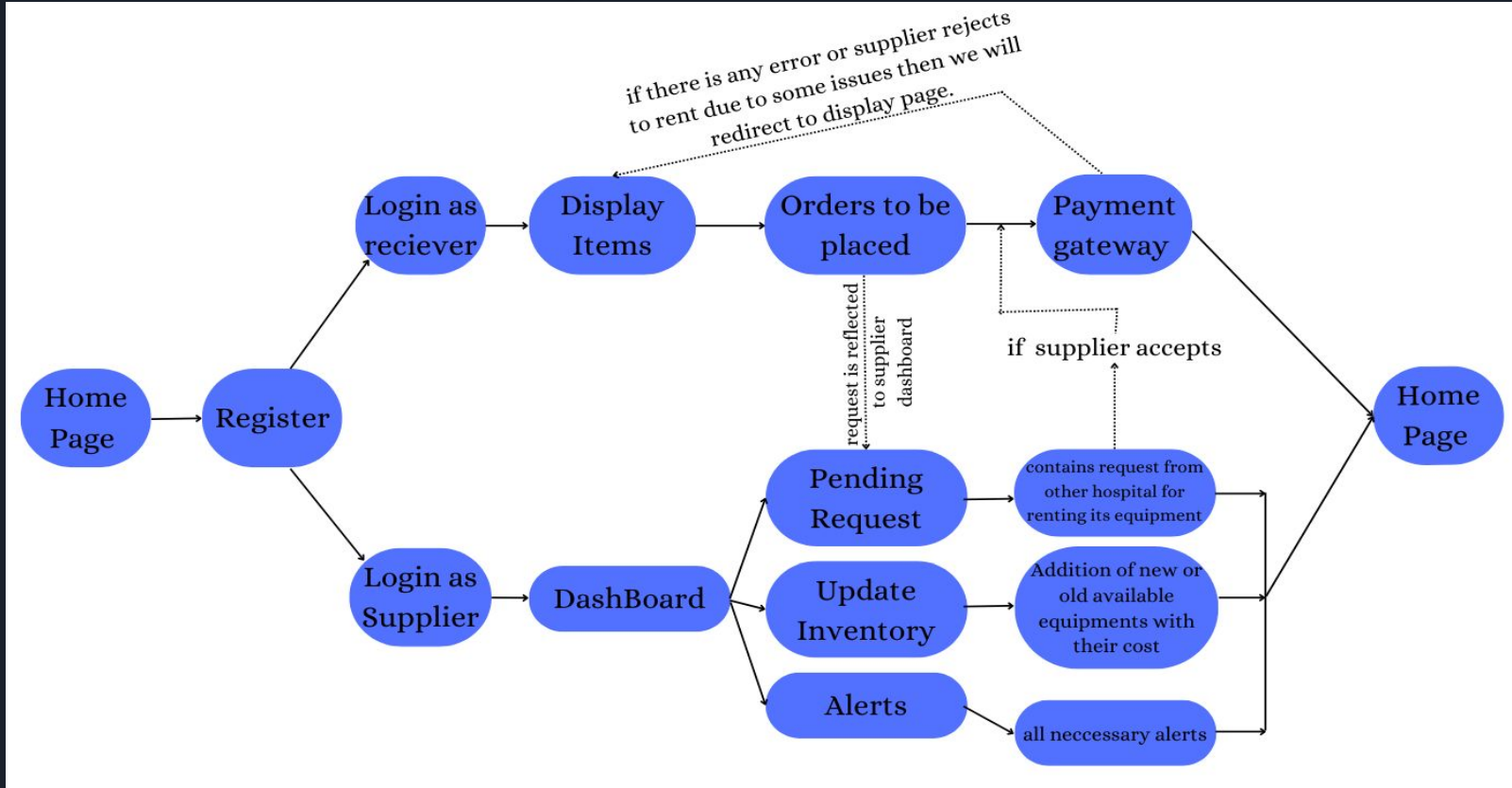
“SOLUTION DEVISED FOR THE PROBLEM”

Our methodology exists for the sole purpose of making needed medical equipment available to the healthcare industry. Our platform ensures each customer receives the very best option for them. A smooth interface(**website as a platform**) & exceptional customer service is maintained while operating with integrity.

“ OUR PRIME FOCUS AND FEATURES HAS BEEN IN
FOLLOWING SLIDES ”

1. SIMPLICITY

The below flowchart depicts the architecture and the various features of the website, which are easy to use and changeable accordingly.



2. CREATIVITY AND UNIQUENESS

A) The integration of following features makes its unique and easy for user to interact:-

1. Providing various filters. The filters are based upon cost, distance (case of emergency), no. of equipments, rating of the supplier. **MERGE SORT** algorithm is used to perform following filters

Receiver Form

Select filter

Emergency ☐ Rating ☒ no of Equipment ☐

Hospital Name

Category

Equipment Name

Quantity

Due Date

B) Will be onboarding both renting of new equipments as well as old reusable equipments with lease calculation.

→Displaying both the options for every equipment.

NELLCOR N-85 PULSE OXIMETER



PRODUCT DESCRIPTION The Nellcor N-85 Pulse Oximetry Monitor delivers exceptional pulse oximetry performance even during low perfusion and signal interference. The included specialty spO2 sensors help expand the clinician's patient care options. This monitor is for use in a variety of settings including EMS, transport critical care, operating room and sleep labs. The Nellcor N-85 features accurate monitoring even with weak pulse signals and high humidity environments. It is customizable and scalable to meet specific hospital and patient needs.

Rent Old

Rent New

renting a new equipment on market price

rent an old equipment whose
cost evaluation has been done
in next ppt



“PARAMETERS FOR EVALUATING VALUE OF USED REUSABLE MEDICAL EQUIPMENTS”

1. **TIME USED**:- Since every device has a shelf life, which vary from device to device.It depends upon both internal(component interactions or degradation) and external (manufacturing, sterilization, shipping and storage). For more refer to:<https://j-pacmedical.com/establishing-shelf-life-of-medical-devices/>
2. **DESCRIPTION BY USER**:- The User who is willing to rent or sell the old or used equipment must give its description. According to the description our **certified EXPERT Panel** would provide a rating , according to which value of the used product will be evaluated.
3. **SUPPLY AND DEMAND OF PRODUCT**:- As demand increases, supply gets scarcer, and prices tend to rise.
4. **VALUE OF PRODUCT IN CURRENT MARKET**:- We can get the current market value of the medical equipment from the internet.

c) Maintaining the past records of user and also reminding(alerts) regarding the lease/rent period completion.

Displaying Past Orders of a Receiver:-

Past orders

Equipment name	Hospital	Quantity	Cost
Oxygen Cylinder	rit2	20	2000
Oxygen Cylinder	rit3	20	2800
Oxygen Cylinder	rit3	20	2800
Oxygen Cylinder	rit1	5	3500
GE DINAMAP PROCARE 400 MONITOR	rit1	10	2400
GE DINAMAP PROCARE 400 MONITOR	rit1	14	2400
GE DINAMAP PROCARE 400 MONITOR	rit1	5	2400

In case of alert, it would be shown here in navbar

Contact 

Alert

Past Orders

D) Completely Integrating the payment procedure using **Stripe** api

Below is an example of a successful transaction:-

Hostpital Name :mani5

**Equipment Name :GE DINAMAP
PROCARE 400 MONITOR**


Cost :100000


Quantity :5


Total Cost:500000

[Proceed for payment](#) [Back](#)

The invoice of your details


Card number
1234 1234 1234 1234 

Expiration CVC
MM / YY CVC 

Country
India 

[Pay now](#)

Adding card details


Payment Successful
• Trasaction ID - 8952563744569
[Home](#)

Successfully done using
stripe



REVENUE MODEL

“Our revenue model is B to B (Business to Business)”

Our source of revenue includes:-

1. Revenue from different-different digital advertisements.

Refer for more:-<https://www.google.com/adsense/start/>

2. Small Percentage of amount during the transaction from both the reciever and supplier.

Refer for more:-

<https://www.upstreammarketing.net/building-a-b2b-business-blog-step-14-making-money-with-your-blog/>



MARKETING STRATEGY

1. Through various digital Advertisement.
2. Investing in social media marketing.
3. Word of mouth from suppliers and customers.

FUTURE IMPLEMENTATION:-

→We can put a QR on every device that has been leased and pooled. As soon as QR is scanned details of transaction and name of our website will be displayed.

THANK YOU

