BAGMO PVT LTD

We are developing a Bloodbag monitoring device which can help blood storage centre to make safe and adequate amount of blood in health facilities in rural India.
Problem

- Poor availability of blood in rural India.
- No individual blood bag monitoring.
- Lack of skilled manpower.
- Wastage of precious blood.
Background

- Nearly 830 women die per day of preventable causes related to pregnancy and childbirth.
- Postpartum haemorrhage (PPH) contributes to 30% of maternal deaths in India.
- Blood transfusion is identified as one of the eight key life saving functions in comprehensive emergency obstetric care.
- Anemia cases also need blood transfusions in critical stage.
- After year 2000, govt. initiated BSC
- Many bottlenecks are there to run BSC - identified during survey
Blood Transfusion - Life saving Numbers

1 blood donation can help save the lives of up to 3 people.

Every 2 seconds, someone in the U.S. needs blood.
Drawbacks

● Poor availability of quality assured blood

● No individual blood bag monitoring

● Wastage of precious blood

● Lack of skilled manpower
Bagmo - A decision support system

- to ensure quality assured blood availability
- to implement hemovigilance practice
- to reduce the blood wastage
PRODUCT

Blood bag registration & scanning

Monitoring Cloud system

Alert & reports trend analysis

BSC

MBB
CURRENT STATE & TRACTION

- **Prototyping and validation**
  - BIRAC 5 Lakh
  - Birac BIG 47 Lakh
  - Installed 1 center

- **Piloting**
  - Birac SIBRI Grand 25 Lakh
  - Installed 3 center & 10 more processing

- **Impact assessment report and productization**
- **Marketing / tech transfer**
- **Product sales**
To study the impact of the technology in blood supply chain.

Upcoming Installations
To study the impact of the technology in blood supply chain.

BSC
Installed in 1 Blood storage centre and 2 more are in the stage of commissioning.

Blood Bags’ quality is monitored and tracked its usage.

Adverse Event Detected
Which was not identified by the existing system.

Bagmo Device Installation Data Generated

3 BSC
679 Blood Bags’
10 Upcoming Installations
1 Adverse Event Detected

9 Months’ of total usage of device in Blood supply chain
Business model & Market

- Approximately a market size of INR 200 cr (India)
- Customer segment: Hospitals & Blood bank
- Revenue stream: Direct selling and price per bag
- Currently installed in 3 blood storage centers & 10 more upcoming installation
- Vein to vein tracking or donor to patient tracking is possible with the system.
- Complete traceability and accountability in the system.
- Can work in a resource poor setting without much investment in infrastructure.
- Ability to scale up to predict and forecast the usage and trend analysis of blood bag usage and hence make sure that always the optimum blood will be available.
- The proposed technology is a patent applied technology.

## Competitive Landscape

<table>
<thead>
<tr>
<th>Features</th>
<th>BiologID, France</th>
<th>Terso Solutions, US</th>
<th>SATO America, US</th>
<th>Bagmo, India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Bag monitoring</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Information system</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Temperature mapping of individual blood bag</td>
<td>Information not available</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Tag reusability</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Cloud connectivity</td>
<td>Information not available</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Supports Blood storage centre</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Availability in India</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Price</td>
<td>Information not available</td>
<td>Information not available</td>
<td>Information not available</td>
<td>INR 75,000 per storage point</td>
</tr>
</tbody>
</table>
Exit Strategy

- Exit for Angel investment in 3 years.
- Breakeven in 4 years time.
- Exit at the time of tech transfer.

Financial Projection

<table>
<thead>
<tr>
<th>Year</th>
<th>Income (in INR Lakhs)</th>
<th>Expense (in INR Lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Prototyping and validation)</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>2 (piloting and productization)</td>
<td>0</td>
<td>60</td>
</tr>
<tr>
<td>3 (impact assessment report and productization)</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>4 (marketing / tech transfer)</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>5 (product sales)</td>
<td>10</td>
<td>20</td>
</tr>
</tbody>
</table>
Funding Requirements & Plan

Required Fund: 30 Lakh (Equity investment fund) - 12 months

Productization (20L)
- Design for manufacturing
- Identification of vendors
- Ready for
  - Mass manufacturing
  - 1/10 th of Current BOM

Marketing (10L)
- Marketing for early adopters
- PR activity regarding impact generated
- Expected Revenue: 10L and 2L per year
Current stage and Plan

● Current stage
  ○ Ready for early adopters with beta prototype
  ○ Pilot study has started and in 12 months impact study will be prepared.

● Impact Results are important for targeting Government - will take time to get results, behavioural change is there

● Private customers are required for sustaining and Marketing has started

● Product needs to be prepared for certification and mass manufacturing

● Expected outcomes
  ○ Ready for mass manufacturing with 1/10 th of BOM as compared to current design
  ○ Expected to get 5 paying customers with an average revenue of 10L and yearly revenue of 2 L from them also 50 Leads who will become customers in a year.
THE BAGMO TEAM

Team Lead
M.Tech Clinical engg (IIT Madras)
Experience in NHSRC, cold chain consultant for UNICEF

Mentor
Transfusion medicine
CMC Vellore

Project Lead
Bio-Medical Engineer

IoT Developer
Electronics and Communication Engineer

Public Health Consultant
MPH from SCTIMST
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Market Size

Hospital
23582 Hospitals
2 units minimum

Market
Per Device - 50K
Expectolume - 1.8 B

TAM
Volume - 47164
Average volume - 2.3 B