TOUCH IOT WITH SAP LEONARDO
PROTOTYPE CHALLENGE

IOT PROTOTYPE ON CONNECTED BLOOD BANK
Healthcare Industry always struggle to provide a seamless availability of Blood and Organs for patients with immediate requirements of Blood transfusions or Organ replacement. Although technology indeed has made a marked shift in the way things operate in recent years but I believe with IOT, it would change the way things have been working until now. All Hospitals and Healthcare Organization can have a connected system which gives the available Blood types, Expiry dates, Location, Temperature at which it's stored. The same applies for Organ donors, its availability dates etc. In current state of affairs, where at one location, thousands of liters of donated blood getting wasted every day, there is acute shortage of blood units for various medical procedure someplace else.

IOT will change the face of the way business was conducted in this space since each Healthcare system can see the availability, types, which all Blood types has more demands or has scarcity, and if required request rare blood type from nearby connected Healthcare organizations/donors, all at real time. Also notifies concerns Person when the threshold limit is reached for each blood type. With real time monitoring of the storage temperature, managing demand/supply real time, wastage can be minimized.

With a Donor pool, its location and details maintained in the system, Donor of required blood types can be viewed & reached in real time by their locations, availability too using Notifications in scenarios of urgent requirement of specific blood type.
Persona

Explain the needs, goals, and pain points addressed

Mellisha
Blood bank Manager in a Major Healthcare Chain

Being in a crucial position, I am always busy dealing with Workplace needs, communicating with various people to meet the demand and supply chain in the minimum time.

About
- 38 year old, 17 years of Industry Experience in the Blood bank department
- Key person to be reached out in case of crisis situations in Blood bank, also for daily operations and decision making situations.
- I work with the Chief Facility Officers, Doctors, Nurses.
- My work involve lots of communication within Hospital staff and outside.

Responsibilities
- I am responsible for proper operation of Blood bank.
- I would be responsible for meeting any demand on Blood units, keeping demand and supply chain
- Operational efficiency of blood bank also
- Maintaining the Donor pool

Main Goals
- Maintaining optimal demand supply to be able to meet any crisis situation effectively
- Maintaining a optimal Donor pool with updated contact details.
- Operational efficiency of bank with minimum wastage and pilferage
- Seamless communication channel with all connected Blood banks and Donors...

Needs
- Need to have a system which can enable meeting any demand effectively
- To be able to contact all interested Donors and Blood bank in a time efficient manner to meet any emergency situation
- To be able to monitor blood bank’s operational KPIs like maximum and minimum temperature, pilferage, outages in real time and take action effectively ...

Pain Points
- Don’t have the facility to check live availability of Blood Units in nearby locations
- Don’t have a system, which can notify Donors within nearby locations for a urgent demand in units.
- No real time monitoring of storage conditions of blood units like temperature, pilferage, expiry
Point of View (PoV)
User + need + insight/why

Point of View

As a Blood bank Manager
I need a way to be able to meet all the Blood Units requests at my Hospital and also nearby Healthcare facilities, should be able to have a projection and quickly reach available Donors as well as soon possible Also I need a way to monitor the storage condition at real time

so that I achieve an optimal operation efficiency and would be able to deal any crisis situation so as to provide optimal support to Patients and Doctors during emergency
UX Journey
Describe Actions, Mindset, Feelings and Touch points

Actions
What actions and activities does the Persona take while going through the journey to achieve their goal?

Mindset
What is on the Persona’s mind while taking the actions of their journey?

Feelings
How does the Persona feel each step of the journey? In the template you can color code the different bars. If all 4 bars are colored the persona is super happy, whereas if the persona is upset only one bar is colored.

Touch Points
What touch points does the Persona have? Those can be, for example, tools, channels, devices, conversations, and so on.
**User Experience Journey Template – Example: Getting coffee from a coffee shop**

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>MINDSET</th>
<th>FEELING</th>
<th>TOUCH POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶ Gets a new request for 100 units of O+ blood type</td>
<td>▶ Ahh...a new request, need to act fast</td>
<td>⚡</td>
<td>▶ Blood Bank Order list</td>
</tr>
<tr>
<td>▶ Checks online inventory for available units</td>
<td>▶ Ohh...we only have few to cater to this request!</td>
<td>☹️</td>
<td>▶ Inventory</td>
</tr>
<tr>
<td>▶ On shortage, calls nearby blood banks</td>
<td>▶ Need to inform, it's sad we can't meet the need right away</td>
<td>⚠️</td>
<td>▶ Nearby blood banks</td>
</tr>
<tr>
<td>▶ Informs concern request medical personnel to find some alternate arrangements</td>
<td>▶ More task, need to check if I can meet this demand from outside</td>
<td>😞</td>
<td>▶ Medical Personnel</td>
</tr>
<tr>
<td>▶ Fills in the requisition form and places the request of the available</td>
<td>▶ Let's fill the request, if we get lucky, it's a win-win situation</td>
<td>😃</td>
<td>▶ Online system to request from outside</td>
</tr>
<tr>
<td>▶ Releases the available units to the concerned medical personnel</td>
<td>▶ At least let me send the available units ASAP</td>
<td>😎</td>
<td>▶ Medical Personnel Store</td>
</tr>
<tr>
<td>▶ Creates a new request for getting the O+ blood units to meet the shortage and to maintain certain optimal limit set</td>
<td>▶ Conveys concern dept to get in touch with interested donors or blood banks</td>
<td>✅</td>
<td>▶ Donor management team</td>
</tr>
<tr>
<td>▶ Gets the required blood units through requested channels</td>
<td></td>
<td></td>
<td>▶ Blood bank store</td>
</tr>
</tbody>
</table>

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Prototype
Prototype screens for an IoT application to solve your PoV

Goal of Prototype Challenge
The prototype of Connected Blood banks leveraging IOT is done using SAP BUILD and the URL of the published project is provided below.
The intended goals in this prototype are:
1. All Connected Blood banks can communicate with each other in case of crisis demands in blood/platelet units in real time.
2. Active & interested Donors also can be notified at real time to meet any crisis situation.
3. Blood bank’s operation conditional and pilferages can be monitored at real time and concerned persons can be notified in case of sub-optimal operational conditions like max and min temperature etc.
4. This also would give a real time picture of spoilage and pilferages in real time by showing the Bloods units getting expired thereby curbing wastage of this precious blood units since the snapshot can allow to take decision if they can be transferred to some other Healthcare facility having high demand

URL of the Published project in BUILD
https://standard.build.me/prototype-editors/api/public/v1/snapshots/b5cfb09f1b1b8daf0e2060a6/artifacts/latest/index.html#/launch_page