IMAGINE IOT
PROTOTYPE CHALLENGE

SMART MONITORING PATIENT
Every hospital over the world are structured in similar ways, there are many patients placed in their respective hospital area according to each kind of pathology, clinical status of patient or another criteria.

This story is focused in the “Intensive Care Area” of any hospital, but it is also extensible to whatever area of whatever hospital.

“Intensive Care Area” of my hospital is the area where health professional (Doctors, Nurses, etc.) are attending to patients who need to be monitored in real-time at every time because they are very sick, if these patients have any health problem, then many health professional have to be work very quickly and efficiently, because patient lives depend on a short time. We need technology for detection devices and an efficient workflow of involved workers.

Patients are monitored through some devices for to measure them constant vital such as “Body temperature”, “Blood pressure”, “Oxygen saturation in blood”, “Beats per minute - Hearth rate”, “Breathing rate” or “Glucose rate” and much more. Nurses need one efficient system where to collect all these data for each patient and a system to notice, what patient needs, to correct doctor or whatever other health professional, these flows must be very fast.
Persona

Bea
Nurse

“I have to get monitoring for many patients in real-time, which is very hard”

About

- 31, single, 8 years of nurse experience
- Monitoring vital constant of patients through devices that are very different from each other
- Is the first person who detects health problems of patients
- Alerting doctors urgently

Responsibilities

- I am responsible for monitoring every patient
- I am responsible for giving treatment to every patient
- I am responsible to notify the doctor depending on the type of problem, even I have to decide who doctor or kind of doctor.

Needs

- I need to walk around the floor monitoring each patient searching for health problems
- I need to see and to analyze the several displays of each device connected to patient
- I need to call to respective doctor for save the life of patient

Main Goals

- Monitoring every patient at real-time using a common place where all information is located and structured. That’s the key for agility in nurse monitoring
- Faster detection of health problems for our patients through agile notifications
- Quick and agile notifications for doctors and others health professionals, that’s key for save lives of our patients

Pain Points

- I waste a lot of time walking in the floor while I am monitoring the patients
- I waste time searching for notifying to the doctor who have to treat the patient according to their pathology
- It is hard to collect data of each patient along all day for every day that patient is in floor
Persona

Kike
Doctor

“Nurses call me when it has been a long time since the illness worsens”

About

- 42, married, 15 years of clinical experience
- Performs daily monitoring of patients
- Emergency interventions when patients are in danger, sometimes patients have to surgery very urgently

Responsibilities

- I am responsible for monitoring some patients once a day or more time
- I am responsible to tell the nurse that treatment have to take my patients
- I am responsible for treating my patients in short time when they are in critical situation, even sometimes I must to operate urgently

Main Goals

- Monitoring every patient at real-time using a common place where all information is located and structured by patient
- Quick and agile notifications when my patients are in dangerous status

Needs

- I need one placed where every data of every patients are displayed at real-time
- I need be notified in very short time when my patients are in dangerous status
- I need to have historical data of all patients for every day that patients is in floor so we can to analyze their health status

Pain Points

- I waste a lot of time walking in the floor while I am monitoring the patients
- It is hard to collect data of each patient along all day for every day that patient is in floor
As a Nurse I need a way to know what health status of each patient is so that I have to get monitoring from each patient searching for health problems through devices displays.

As a Nurse I need a way to know what medicine I must to provide to each patient so that I read the treatment of patient and give it.

As a Nurse I need a way to notify doctor when patients are in dangerous status so that I have to call to respective doctor.

As a Doctor I need a way to know what health status of each of my patients are so that I have to get monitoring from each of my patients searching for health problems through devices displays or speaking with nurses.

As a Doctor I need a way to be notified urgently when patients are in dangerous status so that I need be notified by nurses in a very short time.

As a Doctor I need a way to know what evolution of each patient is so that I need to collect many data of their vital constants.
# UX Journey

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>MINDSET</th>
<th>FEELING</th>
<th>TOUCH POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Go to monitor to a patient</td>
<td>- He looks fine - His vital constants look fine</td>
<td>😊😊😊😊</td>
<td>- Look at patient</td>
</tr>
<tr>
<td>- Monitoring patient</td>
<td>- Each device display is different and have to walk around floor</td>
<td>😊😊😊😊</td>
<td>- Look at all device displays</td>
</tr>
<tr>
<td>- Detecting any problem</td>
<td>- Hearth rate is high, something wrong for this patient</td>
<td>😞😞😞😞</td>
<td>- Look at heart rate sensor display</td>
</tr>
<tr>
<td>- Hearth doctor must to be notified</td>
<td>- I call to respective doctor by phone</td>
<td>😞😞😞😞</td>
<td>- Mobile phone or hospital interphone</td>
</tr>
<tr>
<td>- Doctor goes to analyze problem of patient</td>
<td>- Doctor analyze health problem by electrocardiogram</td>
<td>😞😞😞😞</td>
<td>- Electrocardiogram</td>
</tr>
<tr>
<td>- New treatment for patient</td>
<td>- Doctor says to patient what is new treatment - Nurse gives treatment to patient</td>
<td>😞😞😞😞</td>
<td>- Record in system new treatment for patient</td>
</tr>
</tbody>
</table>
Prototype

Prototype link:
https://standard.build.me/api/projects/7a9c182214503e3b0cd1fc74/prototype/snapshot/latest/index.html#/14773886577281473_S0

<table>
<thead>
<tr>
<th>Patients</th>
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</tr>
</thead>
<tbody>
<tr>
<td>BOX 1</td>
<td>Helen Lindes</td>
</tr>
<tr>
<td>BOX 2</td>
<td>Eliza Pataly</td>
</tr>
<tr>
<td>BOX 3</td>
<td>Cristián Ronakko</td>
</tr>
<tr>
<td>BOX 4</td>
<td>Brigadier Pfeil</td>
</tr>
<tr>
<td>BOX 5</td>
<td>Mali Soló</td>
</tr>
</tbody>
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</table>

| Body Temperature | 36.5°C (Normal) |
| Blood Pressure   | Stable          |
| Oxygen Saturation| 98%             |
| Heart Rate       | 81 bpm          |
| Glucose Rate     | 112 mg/dL       |