The Story: Fire Extinguisher

• In case of emergency Fire Extinguishers can be used to extinguish or control small fires.
• Many times these devices are inoperable because of:
  • Low pressure
  • Unavailability at the designated spot or stolen or vandalized
  • Inaccessible, because it’s path is blocked
• IOT, connected goods can provide the resolution of these problems and aid with inspection, maintenance and testing of these devices as required.
• Help with the compliance of many laws and regulatory standards.
• Overall, connected Fire extinguishers can help in saving precious life as well as property damages.
**Persona:**

**Nottu Peters**  
(Service Technician)

“I like to ensure that my clients are prepared to prevent fire damages and losses and meet their regulatory requirements.”

### ABOUT
- 40, married, 10 years of licensed service technician.  
- Very mobile, moving from one client to another during the day  
- I work with the Client administrator, security and assigned emergency response coordinators.

### RESPONSIBILITIES
- I am responsible for the inspection and testing of fire extinguishers for my clients.  
- I am responsible for multiple clients – offices, manufacturing plants, factories etc.  
- I spend most of my time at client location inspecting fire extinguishers.  
- I keep track of client’s future inspections and proactively coordinate and manage the schedule.

### NEEDS
- I need a cockpit to know the status of all equipment at client locations/geographical locations.  
- I need to know if pressure in the fire extinguisher is dropped from standard pressure set for the device.  
- I need to know if fire extinguisher is removed from it’s location.  
- I need to know if fire extinguisher is accessible for the user in case of fire and is not blocked.  
- I need to know if the fire extinguisher is removed from the client’s office or stolen.  
- I need to test the equipment based on date of manufacturing – Hydrostatic testing/ Recharge/Refill etc.

### MAIN GOALS
- Help client to prevent property damage and loss of life because of small fires.  
- Being the change agent to prepare my client for future emergency situation.  
- Help my client to proactively meet the regulatory requirements

### PAIN-POINTS
- Inability to know the pressure of fire extinguisher periodically. Reading is possible only with manual inspection which is on monthly basis. Risk for the client if equipment is not useful till next inspection.
- Inability to know if fire extinguisher is removed from it’s location or client’s office (theft/vandalized)  
- Inability to know if fire extinguisher is accessible for the user in case of fire and is not blocked.  
- Complex manual scheduling for each equipment’s maintenance and testing– Hydrostatic testing/ Recharge/Refill
## User Experience:
### Inspecting the Fire Extinguishers

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>MINDSET</th>
<th>FEELING</th>
<th>TOUCH POINTS</th>
</tr>
</thead>
</table>
| Check excel sheet to find the fire extinguisher with pending inspection/testing today.  
  Go to client’s location | Don’t know if fire extinguisher at this location really needs any repair.  
  I hope I am carrying enough and correct models, just in case if any repair is required. | 😊      | Excel file in office                  |
| Check/issue current inventory for the fire extinguisher. | After last inspection, how long ago was this pressure so low?  
  This device may not be useful during any fire. | 😞      | Inventory of Fire Extinguishers.       |
| Inspect the fire extinguisher.  
  Pressure is less than the standard set for this model. | I am not carrying correct model. I have to provide a better model till repair is completed. | 😞      | Fire extinguisher to be repaired       |
| Replace the fire extinguisher  
  Take the defective fire extinguisher for repair. | Why do I need to maintain duplicate records?  
  Ahhh! Again this excel file | 😊      | Inspection Card                       |
| Update the inspection card  
  Update the excel sheet for next inspection date. |                                            |         | Excel file in office                  |
Point of View:

As a fire extinguisher service technician

I need a way to

• record the pressure of each fire extinguisher owned or serviced by my company in real time

So that

• fire extinguisher can be recharged/refill/repaired/replaced immediately, instead of periodic inspection (monthly etc.) and

• Client is prepared to prevent property damage and loss of life because of small fires
**Fire Extinguishers:**

Nottu’s Cockpit for zip code: 94304
## Fire Extinguishers:

**Details for** ABC-5.0-CA-94304-00791

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure below 195 PSI</td>
<td>June 25, 2017</td>
</tr>
<tr>
<td>Removed from stand</td>
<td>June 25, 2017</td>
</tr>
<tr>
<td>Access blocked for 1+ hours</td>
<td>June 17, 2017</td>
</tr>
<tr>
<td>Removed from location for repair</td>
<td>June 2, 2017</td>
</tr>
<tr>
<td>Hydrostatic Testing required</td>
<td>May 30, 2017</td>
</tr>
</tbody>
</table>

**Hydrostatic Testing**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 15</td>
<td>Moved from set location</td>
</tr>
<tr>
<td>May 16</td>
<td>Removed from office (Geo-Fence)</td>
</tr>
<tr>
<td>May 17</td>
<td>Removed from office (Geo-Fence) Moved from set location</td>
</tr>
<tr>
<td>May 18</td>
<td>Testing Required (Hydro-Static)</td>
</tr>
</tbody>
</table>

**Near By Devices**

<table>
<thead>
<tr>
<th>Model</th>
<th>Device No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ABC-5.0-CA-94304-00001</td>
</tr>
<tr>
<td></td>
<td>D-2.5-CA-94304-0021</td>
</tr>
<tr>
<td></td>
<td>D-2.5-CA-94304-0035</td>
</tr>
<tr>
<td></td>
<td>ABC-5.0-CA-94304-0039</td>
</tr>
</tbody>
</table>
Summary

By connecting the fire extinguishers and checking their statuses in real time user can:
- Perform on-time service/maintenance/testing
- Ensure accessibility
- Control theft and vandalism
- Compliance with law and regulatory standards
- Prepare for safety in case of fire.

Following components are included in this IOT scenario:
- A story
- Persona
- User experience journey
- Point of view
- Prototype/mockup

Thank You