TOUCH IOT WITH SAP LEONARDO
PROTOTYPE CHALLENGE

TEMPLATE FOR
SUBMISSION REQUIREMENTS

Template Description
This is a template that can be used for the Prototype Challenge included as part of the openSAP course "Touch IoT with SAP Leonardo."
In the pharmaceutical industry the internal laboratories (Analytical laboratory and Microbiology Laboratory) use different agents to test the different API (Active pharmaceutical ingredients), raw materials and finished goods. These agents are storage mainly in bottles not more than one liter and keep under control for one person using a spreadsheet or a logbook (paper).

The stock control of these agents is critical but many times we run out of stock and this event causes a delay in all the process in the laboratory and also in the release product process that has impact in the final customer.

The stock control process is time demanding because requires a continuing monitoring of quantities and update of forms that keep the stock, this process has not value added and is error prone for manual activities.

Using IoT we can monitoring the storage cabinet and every single bottle with agents to control the stocks and trigger purchase requisition in the moment that the sensor detects critical level, in that we release the user of a manual activity we improve the lead times to replenish the material and integrate all the solution with the current systems for example SAP ERP.
LORRAINNE
Stock controller in the lab

“I am disciplined and focused on outstanding execution”

About

• 36, married, 10 years of microbiology experience.
• Being the person responsible for the correct and effective operation of micro laboratory. I am the liaison between the lab and logistics operations (Planning, purchasing, production).
• Decision maker, Problem solver, I need to be a step ahead.
• I work with the Planners, Purchasing groups, production managers and Product quality managers

Responsibilities

• I am responsible for the correct and effective operation of micro laboratory
• I am responsible for keep our stock, controlling quantities, lead times and budget.
• I spend more than half of my time in the office, but I also have multiples meeting with different people across the organization
• I prepare the purchase requisition for materials and agents in the laboratory

Main Goals

• Optimize our way of work.
• Use the technology that we have to improve our way of work.
• Our system should be an effective tool and not a boring and slaving task.
• Continuous improvement using new technologies.

Needs

• I need to know in real time the amount of stocks that we have in the laboratory and the responses time that we can offer with that quantities
• I need to automatize repetitive task, and replace time consuming activities using our systems and tools to spend time in analysis and decision making.

Pain Points

• Several times we run out of agents because we have a lack of information about stocks
• We have not an integration between the stocks in the lab and the purchasing planning
• Run of stocks has impact in production and final goods and have a negative impacts in our KPI
Point of View (PoV)
User + need + insight/why

Point of View

As a stock controller in the laboratory

I need a way to improve and automatize the way that we control the stocks and the way that we integrate the stock information with the planning process and the purchasing process so that we can rely the stock control in sensors and trigger the purchasing process using real time information reducing the lead time and avoiding the risk of run out of stock in the lab
### User Experience Journey Template –

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>MINDSET</th>
<th>FEELING</th>
<th>TOUCH POINTS</th>
</tr>
</thead>
</table>
| • Arrive to the Microlab  
  • Review performance last day  
  • Prepare task for the day | • “Another day, another dollar”  
  • I need to be clear with all the assignments  
  • Focus in micro-management | 🙃 | • Review KPIs day before  
  • Team workload and assignments  
  • Review e-mail (Important notifications) |
| • Check the stock for reagents  
  • Evaluate the stocks against the test that requires consuming | • Doing this stock control is boring  
  • I am sure there is a better way to do this  
  • “better systems and tools” but I am doing this manually | 😞 | • Spreadsheet stock control  
  • Microlab information system |
| • Update the spreadsheet with the stocks  
  • Prepare weekly planning meeting | • I need more time to think and planning that doing stock controlling  
  • Do we have enough agents to do the test? | | • Spreadsheet stock control  
  • Spread sheet stock control |
| • Daily meeting with production, procurement and Release products | • We need to do the right things even when the right thing is the hard thing. | | • Daily meeting with production, procurement and Release products |
| • Review and approve test results  
  • Check stocks | • I need to change the way that I am doing the stock control  
  • IT should help me with this. | | • Review and approve test results  
  • Check stocks |
| • Create purchase order for reagent  
  • Close the day | • Ok a problem less, agents in route | | • Create purchase order for reagent  
  • Close the day |
Prototype
Prototype screens for an IoT application to solve your PoV

Object page

Intelligent cabinet

The different reagents are storage in the cabinet. Every bottle that is used as a container for the agent has a sensor.

The cabinet has different plates that has connected to a scale, the sensor checks the difference in weight and can determinate the volume storage.

When the volume (weight) reach a security level, the sensor trigger and alert that will be transform in a purchase order in SAP.