IMAGINE IOT
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 "Imagine IoT."
Story

Make a case and tell your story.

Summary –

“SmartAgri” is a project which will help farmers save water and provide alerts for fertilizers requirement to increase crop productivity and use resources efficiently.

Storyline –

The project aims at providing

1. Water – The sensor in the farm ground would first check every "X" hours, the lower water level threshold to trigger the water sprinkler module (WSM) in the central processing hub located near to the farm. The WSM will first check the weather forecast for the day and if the day is going to be dry then start the water sprinklers for a predefined time to water the farm. If there is rain forecast then calculate the water requirement by considering the amount of rain forecasted and the required ground water level for farming. If the calculation requires water sprinkling then activate the sprinklers for the required time based on calculations else delay the water sprinkler till the next sensor cycle. This will result in preventing water wastage especially at water scarce regions. Supervisor can also run a report to check all sensor information and the sprinkler near the sensor for specific water requirement and activation.
2. **Fertilizer** – The sensor in the farm ground would check every day for the lower chemical level threshold to trigger the fertilizer request module (FRM) in the central processing hub located near to the farm. The FRM would then check the farm inventory on the availability of the required fertilizer based on pre-defined chemical composition rules. If the stock is available then it will alert the farm supervisor to action on the fertilizer requirement on the required day. If the stock is unavailable, the FRM will check the availability at all of the farm’s integrated fertilizer provider (i.e. SAP ECC) for stock requirement and estimated dates and provide a report to the supervisor for further purchase requisition. This will eventually save time of fertilizer procurement without delay and result in crop productivity.
Persona

Explain the needs, goals, and pain points addressed

What are personas?

Personas are fictional characters based on real data to represent user types. They are extremely useful when considering goals, desires, and limitations of your IoT prototype’s users and can help guide design decisions. Personas put a personal human face on otherwise abstract data you have about your users. Once you have completed your IoT prototype’s introductory story, you should try to engage potential users of your IoT prototype to understand their use case reality.

How to create a persona?

Try to document as much information as you can about your persona. What are the characteristics of the users who will use this IoT prototype? What are their tasks in their job? Who do they work with? What are their goals in the context of the scenario covered by the IoT prototype? What do they want to achieve? What are their main needs and pain points? Based on these insights, create a persona for your IoT prototype and keep in mind the following question: Does my persona clearly and credibly represent my IoT prototype’s target users?

Templates

Please find below a filled out template for you to get an idea on how to create a persona. We also have provided an empty version of that same template. Please have in mind that you don’t have to use our template! We also want to encourage you to come up with your own approach for sharing details about your persona, if you prefer.
Persona Template – filled out

Mr X
The Supervisor

“I like to get things done efficiently to help crop productivity by saving water and using resources (e.g. fertilizer...) effectively.”

About
• 40, married, 15 years of supervising experience
• Proactive and like to use technology at the fullest in making agriculture smart
• I work with the farm owners and suppliers

Responsibilities
• I am responsible for reporting and managing the procurement process.
• I spend more than half of my time in the office, but I also do work in my office, on the computer.
• I visit the farm every day for inspection

Main Goals
• Increase crop productivity
• Save water without compromising on farm needs.
• Efficient procurement process

Needs
• I always need know how much water is needed and at which part of the farm.
• I need to know the weather forecast to activate the sprinkler accordingly.
• I need the ability to check fertilizer consumption and make procurement process effective, easy and efficient

Pain Points
• The farm is too big for manual inspection
• Water is a scarce resource and need efficient planning considering rainfall to eliminate wastage
• Need an advanced procurement process for fertilizer
• Effective resource management for enhancing crop productivity
Point of View (PoV)
User + need + insight/why

How do Point of View (PoV) statements help you?
Once you have created your persona, you may have found a long list of needs. If you design for all those needs, you’ll end up with an overly complicated solution! We recommend you focus and address each separately, by creating a Point of View (PoV) for each important need of the persona.

Let’s have a look at how to create a Point of View (PoV):
1) Write down the user and his/her need. You will get that information from your filled out persona template.
2) Write down the why/insight associated with the need.

Here are some tips:
Focus on the stories that keep you up at night. If you’re stuck, extract a POV from your favorite idea. Then go further. Use emphatic language. Don’t design for everyone; choose one need, one insight.

Example:

As a **Mother**, I need a way to **prepare vegetables my children will eat** so that **their nutritional needs are met**.
Now try it on your own:

Point of View

As a Supervisor

I need a way to decide when and where to water my farm and when to procure fertilizers

so that crop productivity is at maximum.
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 – Daily activities

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>ACTIONS</th>
<th>ACTIONS</th>
<th>ACTIONS</th>
<th>ACTIONS</th>
<th>ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Get into the farm.</td>
<td>Activate the sprinklers for watering</td>
<td>Login to the computer with Supervisor account</td>
<td>Check fertilizer stock</td>
<td>Create Sales Order</td>
<td>Fetch the stock</td>
</tr>
<tr>
<td>2. Inspect which areas need water and fertilizers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MINDSET</th>
<th>MINDSET</th>
<th>MINDSET</th>
<th>MINDSET</th>
<th>MINDSET</th>
<th>MINDSET</th>
</tr>
</thead>
<tbody>
<tr>
<td>It’s a large area to inspect</td>
<td>How many sprinklers I need to activate ....</td>
<td>Need to conduct routine checks and fetch reports</td>
<td>How do I decide for stock.... Check how many left...</td>
<td>How many should I order....will it be enough...</td>
<td>Place the stock in the designated bin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FEELING</th>
<th>FEELING</th>
<th>FEELING</th>
<th>FEELING</th>
<th>FEELING</th>
<th>FEELING</th>
</tr>
</thead>
<tbody>
<tr>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOUCH POINTS</th>
<th>TOUCH POINTS</th>
<th>TOUCH POINTS</th>
<th>TOUCH POINTS</th>
<th>TOUCH POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm</td>
<td>Sprinkler</td>
<td>Computer Application</td>
<td>Stock Application</td>
<td>Sales Application, Approvers</td>
</tr>
</tbody>
</table>
Prototype
Prototype screens for an IoT application to solve your PoV

Goal of Prototype Challenge
As part of the Prototype Challenge, you are required to submit a mockup or set of mockups. While the minimum requirement is that you submit only one mockup, it is recommended that you submit at least two mockups so as to illustrate more effectively the user experience (e.g., the first mockup could represent the screen that the user is presented with initially, and the second mockup could illustrate a possible scenario of what happens based on interaction with the first screen).

Mockup Guidelines
Your mockup or set of mockups can be hand-sketched or can be created in other ways (for example, using templates in BUILD). The choice is yours. Hand sketching (drawing) can be an easy way to get started. See here for a quick guide on how to create hand sketches and see here for hand sketching templates to get started.

Creating Prototypes with BUILD
In case you decide you want to use the BUILD tool (which is optional) to create your IoT prototype, see here for a step-by-step guide which will help you to get started with BUILD.
You can use this space to insert your mockup(s):

https://standard.build.me/api/projects/699a734ad2a1d9f00cd1d751/prototype/snapshot/latest/index.html#/14773793727998302_S0