Touch IoT with SAP Leonardo
Prototype Challenge – Internet of bugs pest control
The agricultural sectors are constantly confronted with pests that attack the health of fruits and/or plants. In order to control them, several methods of measurement are generated. One is through insect traps placed on the lemon plants. With the monitoring of the catches is intended to detect in a timely manner the presence of insects harmful for the trees by deducting based on the number of insects caught, its population oscillation, its geographical distribution determine the level of infection in a given area.

Placing laser sensors inside the traps can be counted for these types of insects and can achieve a precise census without having to relieve in situ.

With these sensor traps we are able to see in real time 2 factors:
- Number of specific insects present in each area
- Propagation and Displacement of the pest

Based on these determinations the Integrated Crop Manager can plan the fumigation accurately and on time.
Nicolas Sitca
Integrated Crop Manager

“I like to maintain all the lemon trees healthy with less budget in a sustainable way, I want to spend more time analyzing indicators, taking strategic definitions and learning new things about lemon crop.”

About
- 32 years, married, 4 years farm sanity coordination experience.
- I have to keep control of the pest propagation and make more sustainably the fumigation activity.
- Very mobile, moving from farm to farm during the day.
- I work with the Chief Farm Engineer, Fumigators, pest monitor team.

Responsibilities
- I am responsible for the pest control on all lemon plants fields in Tucuman province for this company.
- Depending of the season I spend all day traveling field to field, but I also do work in my office, on the computer.

Main Goals
- Being the person who makes the healthiest lemon on the company, I have to keep the balance between improving plague control efficiency and make the less harmful environment fumigation.
- Better management of actual insecticide inventory procurement.

Pain Points
- Can’t see precisely where the pest is.
- We have the pest information after the propagation.
- I waste a lot of insecticide doing fumigation useless.
As an Integrated crop Manager

I need a way to get all the information in real time regarding the lemon tree health for plan accordingly the pest control.

So that the fruits will be healthier.
<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>MINDSET</th>
<th>FEELING</th>
<th>TOUCH POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>User goes to lemon plantation in order to make the pest control</td>
<td>Early morning, let's try to find all those tramps</td>
<td>Early morning, let's try to find all those tramps</td>
<td>Maps</td>
</tr>
<tr>
<td>Check the map tramp</td>
<td>I hope all the tramps location have been pointed with precision... let's walk!</td>
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<td>Maps</td>
</tr>
<tr>
<td>Finds the tramp and checks one by one the results</td>
<td>What do we have here? Looks like some mud and half leaf... I hate when the tramp run out of bait</td>
<td>What do we have here? Looks like some mud and half leaf... I hate when the tramp run out of bait</td>
<td>Maps</td>
</tr>
<tr>
<td>Bugs counting and register the quantity on spreadsheets</td>
<td>Ok, 1,2,3... Ok, I'll take note of this... hey what's the tramp number? 52 or 5S?</td>
<td>Ok, 1,2,3... Ok, I'll take note of this... hey what's the tramp number? 52 or 5S?</td>
<td>Spreadsheets</td>
</tr>
<tr>
<td>Locate on the map the fumigation plan and give instruction to fumigator</td>
<td>Ok I hope to find the location, I'm really concerned about the excessive insecticide application</td>
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<td>Tramps</td>
</tr>
<tr>
<td>Go back to office with all information and register the results on a map and excel so then analyze the pest density and movement</td>
<td>Ok, I'm done! Now let's see how this pest is moving...</td>
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<td>Tramps</td>
</tr>
</tbody>
</table>

FEELING:
- Green: Positive
- Yellow: Neutral
- Red: Negative

TOUCH POINTS:
- Maps
- Spreadsheets
- Tramps
- Bugs
- Map
- Fumigator
**Funnel Tramp, Prays citri**

0901-FFL2C4 AR

Plague Supervisor: Nicolas Actis

Live status quantity of bugs (prays)

459

2 min ago

- **On/Off Status**
  - ON
  - OFF

- **Quantity of bugs in tramp / hour**

La Cocha, Tucuman province, Argentina
-27.761745, -65.6358137

The laser sensor is running at a high temp
Jun 15, 2017

The laser sensor has no luminosity activities
Jun 12, 2017

The laser sensor is unplugged from power
Jun 10, 2017

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Object page