TOUCH IOT WITH SAP LEONARDO PROTOTYPE CHALLENGE
Shopping in a supermarket is often annoying. Example: As a Customer standing in front of the rack, you search for a product. And if you found what you’re looking for, often round 2 of searching starts: where is the price to the product? In the worst case you can now start searching for the supermarket employee, with the hope he has the right price information. Also known by some of us: Standing in front of the rack with the belief that you have no more peanut butter at home. And at home? Yes, two more full glasses of peanut butter.

The next generation of shopping will be based on IoT technology. Based on the inventory and status of a fridge and pantry systems, always knowing what we already have at home and what we will need, this will be the basic of our grocery-list. With the information based on a smart IoT solution in our fridge and pantry system we have an Inventory list. Based on this we get a basic shopping list, which the user can form through a mobile application for his next shopping tour in the supermarket. A smart Trolley System can have access to these shopping lists and can guide the costumer to the goods, based on the ground plan and installed beacons in the supermarket. Every good, that was put into or removed from the trolley, will be registered, calculated and updated to the shopping list on the smartphone. Further the app can give informations about price, ingredients and so on to the costumer.
Persona

**Nick Miller**

“I am an employee for Electrical and Computer Engineering in a big company. My job is really time consuming and I have not much time for regular shopping in the supermarket. In my free time I go mountain climbing with my girlfriend Jane and I love cooking.”

**About**

- 34, lives together with his girlfriend, he has passion for all new things around computing and IoT stuff.
- He takes the shopping for himself and his girlfriend.

**Responsibilities**

- He takes the shopping for himself and his girlfriend.
- Cooking, especially for Jane.
- Planning the next mountain climbing tour.

**Main Goals**

- Reduce Shopping Time.
- Easy shopping in supermarkets.
- Fast & easy payment options.
- Overview of goods at home.
- Automatic created shopping list.

**Needs**

- See which foods are at home anytime & anywhere.
- Shopping list with goods that he really needs.
- A possibility to find the products quick inside the supermarket and additional Informations.

**Pain Points**

- Buy unnecessary goods.
- Checking the goods at home.
- Searching for products in the supermarket.
- Searching for supermarket employees to get price or detail Information about the products.
- Waiting in a line for the payment transaction.
As a busy employee with passion for cooking, I would like to be able to spend more time for cooking and less time in the supermarket. I need a way to reduce my shopping time and make the shopping simple, so that I only buy things which I really need and can reduce food waste.
### User Experience Journey Template – empty

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>MINDSET</th>
<th>FEELING</th>
<th>TOUCH POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Create Shopping List</td>
<td>Hopefully not forget anything?</td>
<td>☺</td>
<td>Shopping list</td>
</tr>
<tr>
<td>➢ Check fridge &amp; pantry</td>
<td>Ahhh where is the Olive Oil, and where is the cheese?? I can’t find the Coconut-Milk... Ohh there is some Spaghetti hmm is not on the list but .. I take someone...</td>
<td>🙄</td>
<td>Fridge</td>
</tr>
<tr>
<td>➢ Enter Supermarket</td>
<td>Okey... what is the price for this Olive Oil</td>
<td>😞</td>
<td>Shopping list</td>
</tr>
<tr>
<td>➢ Search Goods</td>
<td>Ohh that is too expensive I’ll take another</td>
<td>:(</td>
<td>Employee at the supermarket</td>
</tr>
<tr>
<td>➢ Check Price</td>
<td>So now I forgot the eggs, where are ....</td>
<td>😞</td>
<td>Trolley</td>
</tr>
<tr>
<td>➢ Load trolley</td>
<td>Ohh god so long queue and the other cash register is closed...</td>
<td>😞</td>
<td>Trolley Price tag (on the shelf)</td>
</tr>
<tr>
<td>➢ Check Shopping List</td>
<td>Ohh no there are problems with card reader as well...</td>
<td>😞</td>
<td>Goods Trolley</td>
</tr>
<tr>
<td>➢ against trolley</td>
<td></td>
<td>😞</td>
<td>People of Peoples</td>
</tr>
<tr>
<td>➢ Wait in the que to pay</td>
<td></td>
<td>😞</td>
<td>Casher</td>
</tr>
<tr>
<td>➢ Pay at the cash register</td>
<td></td>
<td>😞</td>
<td>Trolley Credit card</td>
</tr>
<tr>
<td>➢ Loading trolley</td>
<td></td>
<td>😞</td>
<td>Goods Trolley</td>
</tr>
<tr>
<td>➢ And go home</td>
<td></td>
<td>😞</td>
<td></td>
</tr>
</tbody>
</table>
Prototype

Prototype screens for an IoT application to solve your PoV

Link to Build Prototype
https://standard.build.me/prototype-editors/api/public/v1/snapshots/a3a871c0c2ff4cdc0e176911/artifacts/latest/index.html#/launch_page

Start the Launchpad for connected goods

On the Launchpad you can click on the fridge or pantry to see the status and the inventory

Click on fridge and then on the Button “Content of the refrigerator”

You see the content of all goods insight of the fridge with status is “required” “yes” or “no”

Navigate back to the Launchpad with button “<” on the top left corner.
Next click on the “grocery list” from the Launchpad. The grocery list will be open as follow.

The grocery list has three buttons “Needed”, “Inventory Fridge” and “Inventory Pantry”. Button “Needed” will display the grocery list for you next shopping tour. This list will create automatic based on the inventory of the fridge and pantry. With the plus button on the lower left corner you have the choice to add additional goods to the “Needed” list. The price and status will be update from the connected shopping cart, so far you give the trolley access to the grocery
list over your smartphone by Bluetooth or Wi-Fi. With the other inventory List, you always see at live time the inventory of the fridge or pantry.

If you click on the entry in the “Needed” List, you will see a image of the ground floor of the connected supermarket. With the information of your position (blue point) and the position of the goods (green points) and the current selected one (pink point) based on your shopping list. The position of products will be located by Wi-Fi and Beacons.

When you place a product into the shopping cart than you will see Product and price information about this product under the image. This will be happening by the Barcode Scanner of the shopping cart. The shopping cart knows all the goods that are inside and calculates the sum. You can go direct to the special checkout area where the shopping cart sends the complete price to a registration station. The registration station will send a payment prompt to your smartphone over the shopping cart. This can be accepted automatic by your smartphone with Apple Pay or Android Pay.