



# **DAMAGED GOODS MONITORING**

## PROTOTYPE CHALLENGE





## Story

Packaging materials with coupled sensors, such as motion, position, temperature, moisture and/or chemicals will allow customers to foresee a damaged good and respond, before it reaches their final customers/consumers.

Once a customer product is manufactured, released from quality inspection and packed. It possible to monitor product handling and storage conditions, and trigger alerts whenever the baseline conditions are changed, for example:

- Warehouse operator or retailer drops or hits a product;
- Storage conditions at service provider's truck: temperature is too high or it is too moisture or even chemicals, in order to check that products are not infected.

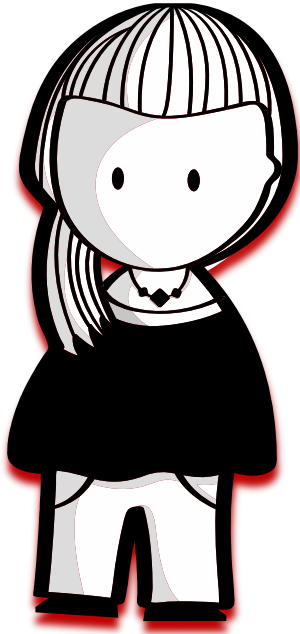
Position sensor would allow traceability, goods were damaged at warehouse location, truck, retailer or consignor. Information captured by the sensors would be sent to customer service team or warehouse manager allowing decision making.

Bluetooth connection will not only work as gateway, but, with the support of a power router, as a battery charger to the sensors<sup>1</sup>. An alert will be triggered, if battery is low.

<sup>1</sup> Technology enabler Ernegous



# Persona



## Laura

Customer Service – Returns Manager

“It would be dreamy if we could predict damaged goods before they reach our consumer hands”.

### About

- 32, divorced, 10 years of working experience in the area;
- Works in multinational electronic company with a portfolio that includes since mobile phones until servers;
- Being the person who deals with our consumers when they are displeased, because of a damaged good is very challenging, the service that we provide is the only thing that may influence on his/her opinion about the brand.

### Responsibilities

- Resolves product problems by clarifying customer's complaint;
- Gets the details about the issues and address them to quality control team;
- Select and explains the best solution to solve the problems;
- Expedites replacements;
- Follows up the service order to ensure resolution;
- Address damaged goods to inspection with the details given by the consumer;
- Gets consumer feedback about the service provided.

### Needs

- I need something that allows me to foresee a damaged good, before they reach our consumer hands. If they are damaged at shipping process, we may charge our service provider, if it is damaged at our retailer's or consignor's then we may come up with actions to avoid new cases, but we will absolutely replace the product before they are sold;
- Many of our products are way too expensive, so every damaged good returned represents high costs to the company, in terms of replacement, new freight, cost to destroy, bad goods, additional services and so on. Together with our marketing area we are willing to pay additional costs to avoid damaged goods and to know exactly, where it happened and who's is responsible.

### Main Goals

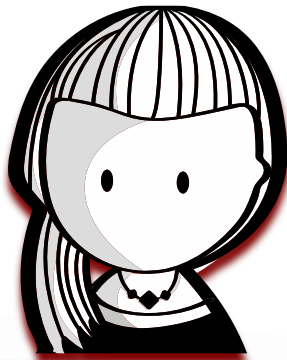
- Returns isn't necessarily a bad thing, in our area consumers may return goods, just because there is already a new version available. Our goal is to provide a better service to our consumers. One damaged good delivered is one too much;
- Decrease our returns number related to damaged goods to almost zero, so we may please our consumers (and maybe I get a promotion and I may focus on making our products more attractive 😊).

### Pain Points

- All our products undergo to a strict quality process after they are manufactured, however we depend on retailers and consignors to sell our products, they might get damaged in the shipping process or under certain storage conditions/handling when they are under their facilities;
- Returns with a reason code related to damaged goods is a lagging KPI, there must be something that we may use that would allow us to avoid damage goods to arrive at our consumers.



## Point of View




### Point of View

As a member of our Customer Service team I need a way to predict damaged goods before they reach our consumer hands, so I can do the needful to avoid their frustration about our product and our brand.



# UX Journey

ACTIONS	<ul style="list-style-type: none"> <li>➤ Register claim</li> </ul>	<ul style="list-style-type: none"> <li>➤ Get details about the issue</li> <li>➤ Add details at claim's register</li> </ul>	<ul style="list-style-type: none"> <li>➤ Select and explains the best solution</li> </ul>	<ul style="list-style-type: none"> <li>➤ Orders replacement</li> </ul>	<ul style="list-style-type: none"> <li>➤ Follows up service order</li> </ul>	<ul style="list-style-type: none"> <li>➤ Gets consumer feedback</li> </ul>	<ul style="list-style-type: none"> <li>➤ Address damaged goods to quality inspection</li> </ul>
MINDSET	<ul style="list-style-type: none"> <li>➤ Oh, another damaged good</li> <li>➤ Ahhh customer is very angry this time</li> </ul>	<ul style="list-style-type: none"> <li>➤ Humm, same kind of issue</li> <li>➤ Another customer saying, he will never purchase from us again</li> </ul>	<ul style="list-style-type: none"> <li>➤ Looks like he is calming down</li> </ul>	<ul style="list-style-type: none"> <li>➤ Oh, actually he is being very friendly now</li> <li>➤ Looks like today won't be one of hardest ones</li> </ul>	<ul style="list-style-type: none"> <li>➤ These logistics guys take forever</li> <li>➤ How can we please our customer if they are so slow?</li> </ul>	<ul style="list-style-type: none"> <li>➤ Oh, another happy customer</li> <li>➤ I love what I do</li> </ul>	<ul style="list-style-type: none"> <li>➤ This is frustrating, we already know the root cause</li> <li>➤ We should do something</li> </ul>
FEELING							
TOUCH POINTS	<ul style="list-style-type: none"> <li>➤ Back-end system</li> <li>➤ Customer</li> </ul>	<ul style="list-style-type: none"> <li>➤ Back-end system</li> <li>➤ Customer</li> </ul>	<ul style="list-style-type: none"> <li>➤ Customer</li> </ul>	<ul style="list-style-type: none"> <li>➤ Back-end system</li> <li>➤ Customer</li> </ul>	<ul style="list-style-type: none"> <li>➤ Back-end system</li> </ul>	<ul style="list-style-type: none"> <li>➤ Customer</li> </ul>	<ul style="list-style-type: none"> <li>➤ Back-end system</li> </ul>



# MOCK UP

The idea of the application is to have a monitoring tool that will provide the information needed for decision making. Information provided in the monitoring tool:

- 1- Year to date results;
- 2- Year to date traffic light according to the year's target;
- 3- Monthly results;
- 4- Month results traffic light according to month's target;
- 5- Current trend;
- 6- Alerts that will show all the devices which have been damaged;
- 7- Recently viewed with the history of verified devices.

The mock up has been performed on BUILD, study and prototype may be accessed by the links on below.

“Damaged goods Monitoring” study:

<https://standard.build.me/user-research/360c47c0c155c8020e1b00bb/edit/be5d87506957ba590e1db2fd/>

“Damaged goods Monitoring” prototype:

[https://standard.build.me/prototype-editors/api/public/v1/snapshots/360c47c0c155c8020e1b00bb/artifacts/latest/index.html#/launch\\_page](https://standard.build.me/prototype-editors/api/public/v1/snapshots/360c47c0c155c8020e1b00bb/artifacts/latest/index.html#/launch_page)

On the next page there are screenshots of the prototype and possible interaction.

 Mock Up

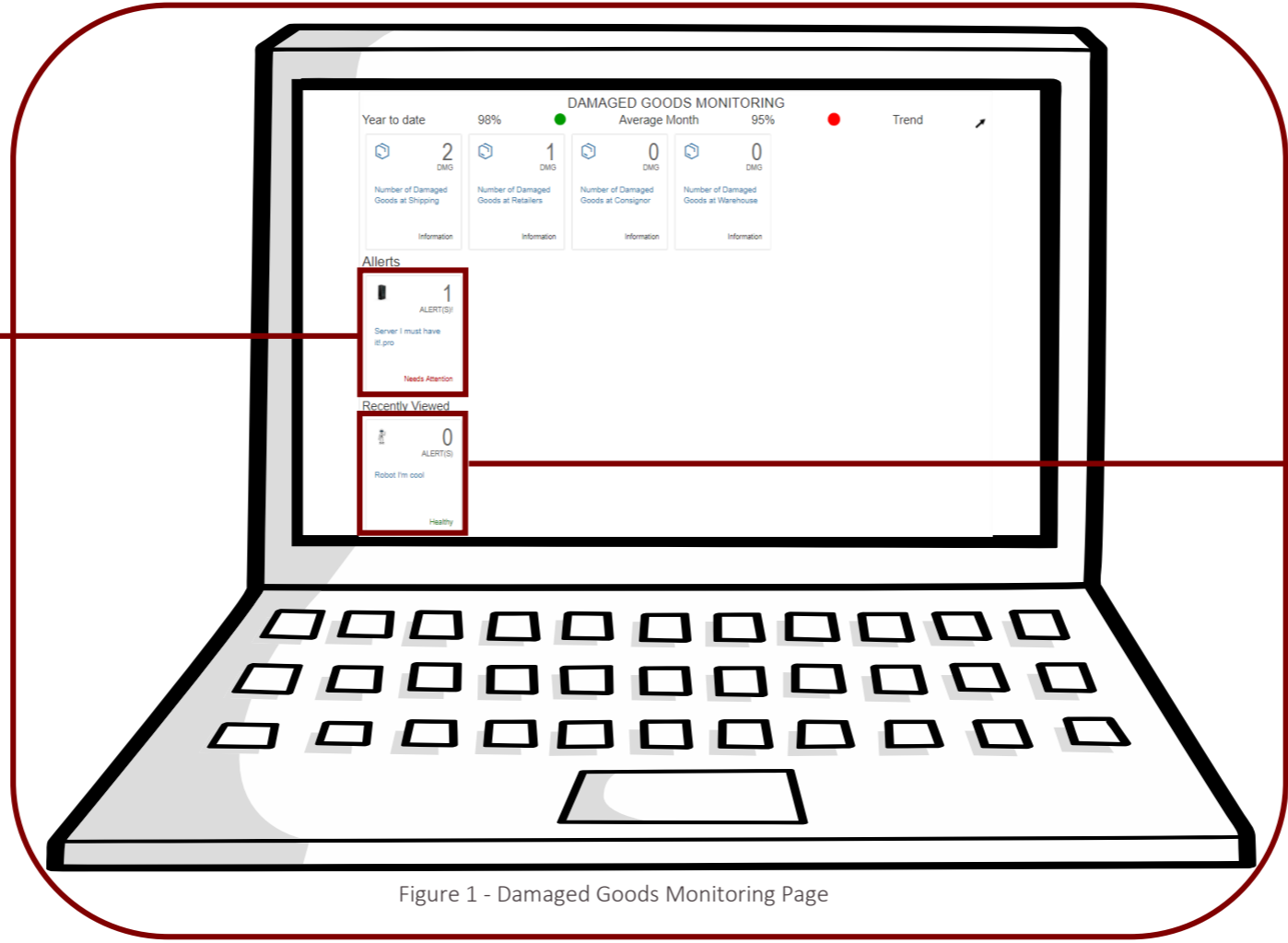


Figure 1 - Damaged Goods Monitoring Page

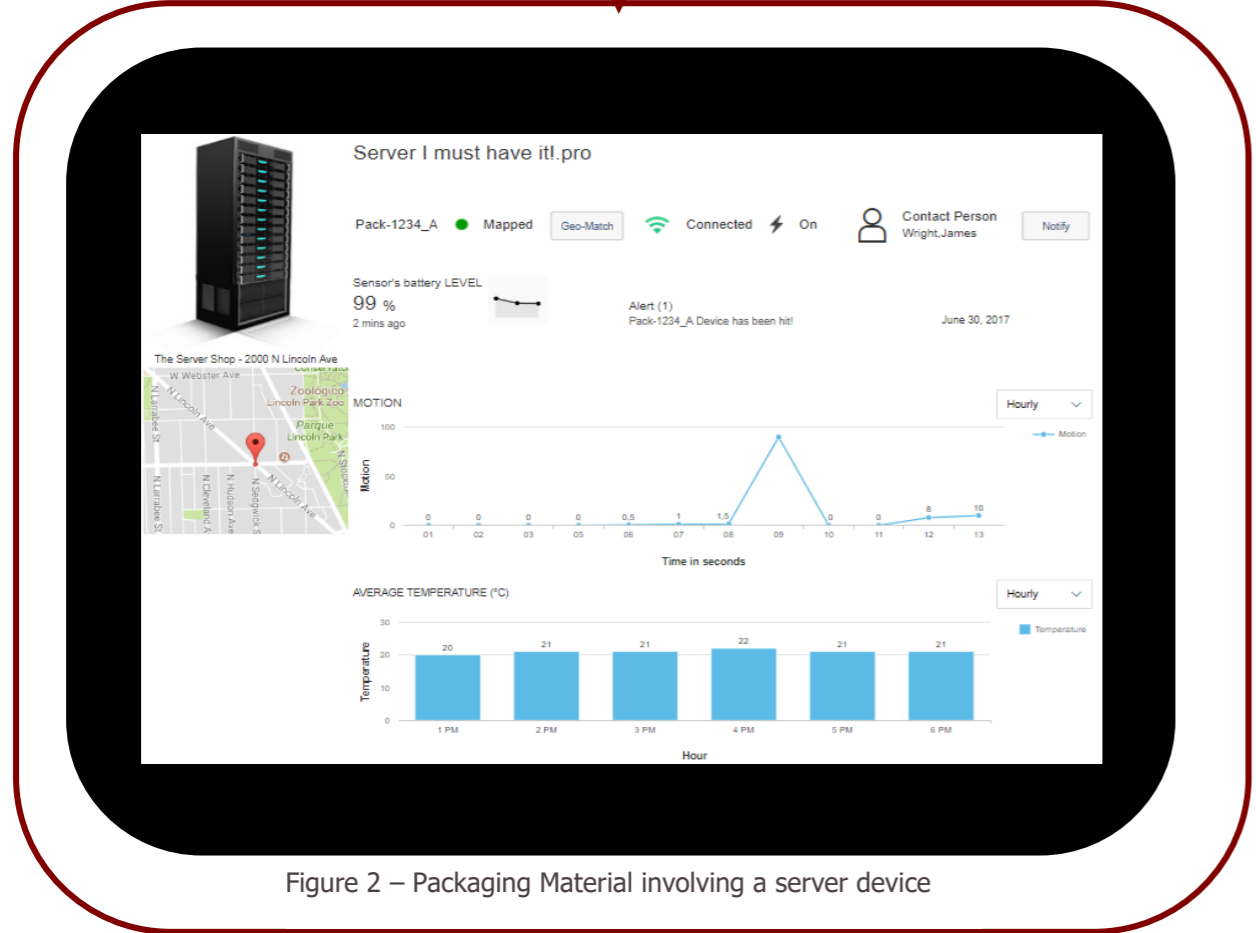


Figure 2 – Packaging Material involving a server device

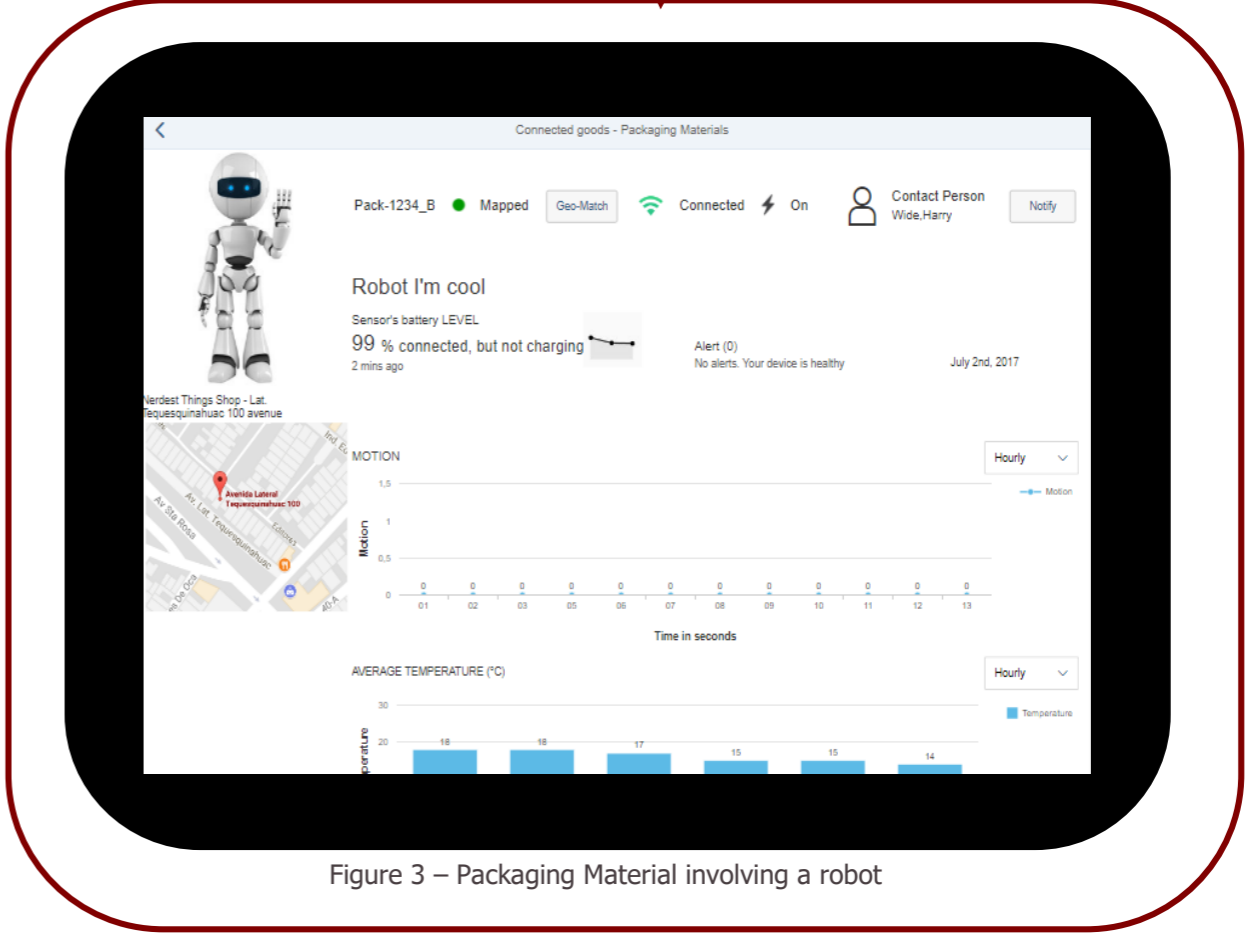


Figure 3 – Packaging Material involving a robot