



open**SAP**

# **TOUCH IOT WITH SAP LEONARDO**

## **PROTOTYPE CHALLENGE**

**SMART FIRE EXTINGUISHERS**



# Story

## Summary

One of Human Resources top concerns is the safety of all people working on-premises, may it be employees, contingent workforce or simply visitors.

## Storyline

In this context, HR appoints a number of full-time employees having a background either in Army, Scouts or similar discipline as safety guides to respond to emergency situations/disaster events (earthquake, flood, fire, terror threat etc.) and guide safely all individuals in the building. Thus, a safety guide has as additional duties to periodically perform inspections of exit paths, lead people safely out to place of gathering in case of evacuation exercises or incidents or react before professional experts (fire department, police, etc.) arrive.



# Persona

## Greg

Full-time network engineer, appointed safety guide by HR

“I am a team-oriented person that takes quick decisions to react to urgent situations.”

### About

- 33 years-old, single, 8 years of network engineering
- 4 years of network design, 4 years of network operations
- Served as Green Beret in Army, Reserve Marine Forces
- As a safety guide role, I lead some 150 people

### Responsibilities

- Dividing time 30% at field, 70% at office
- I am responsible for the timely and orderly evacuation of the building of all people in the area assigned to me
- Developing alternate exit paths after evacuation exercises

### Needs

- I need to find the most effective exit path for my people
- I need to ensure that all people in the area have evacuated the building within acceptable time in case of emergency
- I need to know the status of fire extinguishers
- I need to know if any people have been trapped in certain locations (restrooms, kitchen, warehouses etc.) in case of emergency

### Main Goals

- Inspect signs of exit, fire extinguishers etc.
- Monitor and report any obstacles in exit path
- Guide and assist people with disabilities
- Evaluate results in evacuation exercises against planned

### Pain Points

- I have to manually inspect fire extinguishers
- I have to scan every room in the area for trapped people
- I do not know the location of people with disabilities
- I have to complete manually forms on evacuation incidents



## Point of View

As a safety guide appointed by my company to lead employees, contingent workforce and visitors in building evacuation exercises and incidents

I need a way to ensure that all fire extinguishers are located at their proper place, are filled by more than 80% and their content has not been expired

so that I can protect all workforce by putting out safely a fire in the building as soon as possible.

## User Experience Journey of Safety Guide periodic inspection of exit path

<b>ACTIONS</b>	<ul style="list-style-type: none"> <li>➤ Arrive on-premises</li> <li>➤ Time for monthly inspection</li> </ul>	<ul style="list-style-type: none"> <li>➤ Start inspection</li> <li>➤ Start clock</li> <li>➤ Walk the pre-defined exit path</li> </ul>	<ul style="list-style-type: none"> <li>➤ Get down the staircase</li> </ul>	<ul style="list-style-type: none"> <li>➤ Go to place of gathering</li> <li>➤ Stop clock</li> <li>➤ Return to office desk</li> </ul>	<ul style="list-style-type: none"> <li>➤ Fill insp. sheet</li> <li>➤ Report findings to HR</li> </ul>
<b>MINDSET</b>	<p>'Ah it's that time again' 'I will have a ton of backlog work when I get back to work'</p>	<p>'The fire extinguisher in the first floor is reaching expiration date'</p>	<p>'This handrail is loose, I better report it to Facility Management'</p>	<p>'I finished on time and also have findings to report'</p>	<p>'I have to manually fill and send reports'</p>
<b>FEELING</b>					
<b>TOUCH POINTS</b>	<ul style="list-style-type: none"> <li>➤ Inspection sheet</li> </ul>	<ul style="list-style-type: none"> <li>➤ Exit doors</li> <li>➤ Ramps</li> <li>➤ Fire extinguishers</li> <li>➤ Safety kits</li> <li>➤ Timer</li> </ul>	<ul style="list-style-type: none"> <li>➤ Stairs</li> </ul>	<ul style="list-style-type: none"> <li>➤ Town square</li> <li>➤ Office desk</li> <li>➤ Laptop</li> </ul>	<ul style="list-style-type: none"> <li>➤ Mail</li> <li>➤ HR</li> </ul>




# Prototype

## Solution


As Internet of Things technologies allow, we can embed sensors into existing fire extinguishers or procure only smart ones from now on. Thus, all contextual information regarding building blueprints, location and content of fire extinguishers, inspections, refills and financial data may be blended in order to provide a holistic view to all users responsible for safety of human capital. A mock-up object page of a typical fire extinguisher follows as it could be viewed hypothetically inside SAP Connected Goods solution.

# Object Page

SAP
Connected Goods



45 Karaoli-Demetriou str.,  
1<sup>st</sup> floor, staircase left,  
Hoiargos, Greece



### Portable fire extinguisher

352-789-AX7 ● Mapped 📶 Connected ⚡ On Facility Management: Call 3500 [Notify](#)

**Content level (Dry powder)**

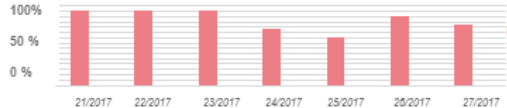
82 %

15 min ago

Content expires in 3 months, 2 days  
Device has been used before 17 days  
Content reaches lower allowed limit  
Consider replacing with heavy-duty


July 12, 2017  
July 11, 2017  
July 11, 2017  
July 8, 2017

**CONTENT LEVEL (Dry powder)**




**USE**


PLANNED EXERCISE



**Environment average Temperature (in °C)**



**INSPECTIONS**



Weekly

Hourly

Daily

Weekly

Monthly

Yearly

---

Weekly

Hourly

Daily

Weekly

Monthly

Yearly

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Weekly

Hourly

Daily

Weekly

Monthly

Yearly

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Weekly

Hourly

Daily

Weekly

Monthly

Yearly

