



open**SAP**

TOUCH IOT WITH SAP LEONARDO

PROTOTYPE CHALLENGE

SMART STREET LIGHTS



Story

Every day when I am back from my office and walk from the bus stop to my home, I find that it's very dark on the streets. It's difficult to walk on dark streets and it's not safe.

This is a common problem in many of the cities of developing countries and cause of various accidents and crimes.

There can be many reasons for dark streets like the responsible person has forget to switch it on, the lights are faulty and municipal person is not aware or takes long time to fix it, rain/thunders have broken the electricity wires, etc.

Also, we see that street lights are not switched off, on time, in the morning and it's remains in on state during the day which results in wastage of electricity and money.

It's time to manage the street lights smartly equipped with sensors. The lights should be switch on/off on time for keeping the public satisfied and reducing wastage of electricity. There should be some smart way to monitor or track the issues with street lights and reduce turnaround time for fixing the faults.

The concept can also be applied on highways with less traffic during some hours so that road lights can be switched off when there is no vehicle on the road and automatically switched on before some vehicle comes up. This will save electricity.



John

A citizen

“I like to get the infrastructure of my locality in proper shape all the time”

About

- 35, married, works as a software engineer.
- As a responsible citizen, I would like general infrastructure like roads, street lights, etc. are in good and working condition all the time.



Responsibilities

- I am responsible for using the streets for walking and driving
- I spend time in complaining to municipal or concerned person for switch on/off the lights on time and fixing the issues

Main Goals

- Being general citizen, I want street lights are available on all roads/streets
- Better management of issues on street lights
- Reduce wastage of electricity and use lights energy efficient.

Needs

- I always need the street lights are switched on time as soon as it's dark
- I need the street lights are repaired within a day's time without any hassles
- I need the street lights are switched off in the morning on time to save energy

Pain Points

- When I reach back home at evening, it's dark on the streets as the lights are not switched-on on time
- Every day I find one or the other street light becomes faulty and rain & winds easily makes these street lights faulty
- It's becomes unsafe for my family members to walk on the streets during night
- Complaining Municipal about faulty lights is a lengthy process and it takes weeks to fix an issue










Point of

As a citizen

I need a way to keep the streets lights are switched on/off on time and issues are fixed without any delays so that we can walk or drive on streets/roads safely.



<p>ACTIONS</p>	<ul style="list-style-type: none"> ➤ Walking down the street in evening 	<ul style="list-style-type: none"> ➤ Let's switch on my mobile torch 	<ul style="list-style-type: none"> ➤ Let me call the lights operator 	<ul style="list-style-type: none"> ➤ Let's call the municipal to complain about a faulty street light 	<ul style="list-style-type: none"> ➤ See, the lights are on now 	<ul style="list-style-type: none"> ➤ Reached home 
<p>MINDSET</p>	<ul style="list-style-type: none"> ➤ Oh. It's dark.. and Lights are not switched on yet 	<ul style="list-style-type: none"> ➤ Be careful 	<ul style="list-style-type: none"> ➤ What.. it will be switched on 10 mins ➤ And one main light is faulty in my street 	<ul style="list-style-type: none"> ➤ Oh. Cannot complain now as office is closed now. 	<ul style="list-style-type: none"> ➤ Cool. Finally, I can walk safely 	<ul style="list-style-type: none"> ➤ Ah.. it's home now. I hope someday these lights are managed smartly
<p>FEELING</p>						
<p>TOUCH POINTS</p>	<ul style="list-style-type: none"> ➤ Road/ Streets 	<ul style="list-style-type: none"> ➤ Road/Streets ➤ Torch 	<ul style="list-style-type: none"> ➤ Phone Conversati on 	<ul style="list-style-type: none"> ➤ Phone Conversati on 	<ul style="list-style-type: none"> ➤ Street Lights 	<ul style="list-style-type: none"> ➤ Home



Prototype

SMART STREET LIGHTS

The solution is to equip street lights with the sensors like light sensors, etc. which will emit data like on/off state, faults, luminosity, power consumption, etc.

- Lights equipped with light sensors will be started automatically as soon as it's dark in the evening and switch it off in the morning
- Sensors will send data about the state of the lights to the controlling unit/IoT software
- Lights can be remotely switched on if there is some problem with automatic switch on/off
- Operator can monitor the status of the lights street/road wise and control whole city sitting at one place
- Can be connected the CRM solution for raising complaints regarding faulty lights without visiting the site or waiting calls from the customers
- It can provide status of each complaints and days since it is open
- The status can be monitored real time as soon as the issue with a light is fixed
- The electrician can check the geo location of the light and reach the location quickly if there is any issue to fix.
- Also, it shows the light luminosity of each lamp so that if any light is on but not giving enough light can be checked and a corrective action can be taken.
- Overall power consumption can also be tracked streetwise and patterns can be analyzed
- In case of bad weather, lights switch/off state can be checked real time
- The solution can be extended so that lights can be switched on automatically when there some vehicle/person is there on the road and otherwise keep them in off state to save electricity

Link for prototype screens in Build:

https://standard.build.me/prototype-editors/api/public/v1/snapshots/1a867adf6ff3c4cd0e1e341d/artifacts/latest/index.html#/launch_page