

openSAP

TOUCH IOT WITH SAP LEONARDO PROTOTYPE CHALLENGE

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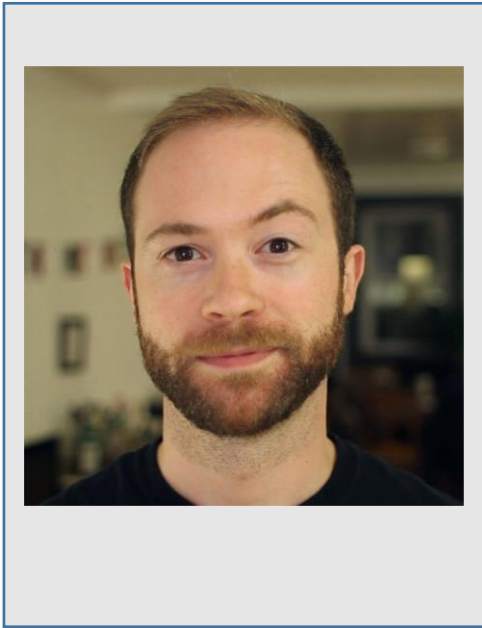
Story

Solar power is considered one of the best sources of renewable energy today. Solar power plants need to be monitored for optimum output. Monitoring faulty solar panels, connections, accumulated dust on panels, etc. which lower output and affect performance is the major work in a solar power plant maintenance.

We can use a centralized IOT based solar power plant monitoring system where sensors (voltage/current sensor) fitted in solar panels which will constantly monitor the solar panels, as of how much power output is being generated and transfer the data to the IOT central system server over the internet (Wi-Fi). The user (power plant maintenance manager) via an effective GUI can monitor faulty solar panels. This would aid in quick decision making in need of repairs/replacement of solar panels or connections.

The solar power industry can highly benefit from the above if implemented efficiently.

Persona



Mike

Solar Plant Maintenance in Charge

Quick, active, organized

About

- 35, married with a kid with 6 years in solar power plant engineering and maintenance
- Need to monitor the power output for the whole power plant
- Also have to make quick decisions on needs of repair/replacement of panels and connections
- Work with technicians and engineers; stay active all day keeping a balance between energy efficiency and work comfort of all peers.

Responsibilities

- Routine maintenance of panels, which mainly include cleaning
- Decision making in need of repair or replacement of faults in panels or connections
- Analyze data of power production, consumption or cost for repair incurred
- Prepare monthly and annual report of above.

Needs

- Automatic detection of low-performance or faulty point/part
- Subsequent quick decision making on how to resolve the issue
- Increased power output performance of the solar plant as a whole
- Data analytics recorded in system efficiently

Main Goals

- Accurate monitoring of power output from each sector of the plant
- Quick decision making if a fault is encountered
- Accurate report preparation on maintenance, repairs and their respective costs incurred.
- Keeping in mind the work comfort of all peers.

Pain Points



- I can only monitor a fault when a complaint is raised against low power supply
- Detection of the fault point/panel is too much time taking
- The above subsequently delays repair/replacement of the faulty part
- I record all analyzed data on pen and paper

Point of View

As a solar power plant maintenance in charge I need a way to centrally monitor and track faults at all solar panels or connections and record analyzed power output and cost data in the system in an efficient way

so that the faults on solar panels can be tracked and then resolved in quick time and allow me to prepare accurate maintenance report preparation, thus bringing up the performance of the solar plant as a whole

UX Journey

<p>ACTIONS</p>	<ul style="list-style-type: none"> > Enter plant office > Look into routine maintenance 	<ul style="list-style-type: none"> > Encounter complaint of low power output > Prepare to search for the faulty point 	<ul style="list-style-type: none"> > Delegate technicians for the work > Wait for actual fault point to be tracked 	<ul style="list-style-type: none"> > Once tracked, make decision to repair/replace > Instruct technicians how to repair/replace 	<ul style="list-style-type: none"> > Test if the issue is resolved > Test if the output is as expected 	<ul style="list-style-type: none"> > Prepare report on the latest work and the costs incurred on it
<p>MINDSET</p>	<ul style="list-style-type: none"> > Let's start the day! > Hope, the routine jobs are being taken care of 	<ul style="list-style-type: none"> > Oh! No, have to take care of this soon > Will have to find out where the problem is 	<ul style="list-style-type: none"> > Which team shall I deploy? Team of how many? > Hope, we can track the faulty panel soon 	<ul style="list-style-type: none"> > Thank god, let's fix this real quick > Repairing might not work in that case we'd replace the panel 	<ul style="list-style-type: none"> > Seems all is fine now > Required voltage output restored 	<ul style="list-style-type: none"> > The panel repaired is quite old and might need a replacement soon > Total cost incurred today was \$100
<p>FEELING</p>						
<p>TOUCH POINTS</p>	<ul style="list-style-type: none"> >Routine maintenance log 	<ul style="list-style-type: none"> >Complaint from consumer over email/phone 	<ul style="list-style-type: none"> >Team of technicians and engineers 	<ul style="list-style-type: none"> >Team of technicians >Tools 	<ul style="list-style-type: none"> >Testing tools 	<ul style="list-style-type: none"> >Report book >Maintenance log

Prototype

PROTOTYPE LINK:

https://standard.build.me/prototype-editors/api/public/v1/snapshots/2340080db011d3460e1d0711/artifacts/latest/index.html#/launch_page

PROTOTYPE SCREENS:

