Touch IoT with SAP Leonardo

gopenSAP

Prototype Challenge

CONNECTED GRID OUTAGE MANAGEMENT SOLUTION
The distribution utility manager wants to monitor all the electrical transformers in a city so that he can manage the power electricity grid distribution business simpler. He wanted to track the real time health of all the transformers in a city, their locations, live parameters monitored such as temperature, current, voltage etc. on a geographical map, so that he can assign a repair crew member to resolve the issue on the open notification.

The manager also wants to know the historical information to all the parameters being monitored to analyze the root cause of the transformer failure and to predict the future outages. He also wants analytical dashboards which helps in the decision making process. However, the manager wants to make his decisions as per the smart data available i.e. live sensor data, historical sensor data, device metadata and CRM information available through SAP Connected Goods cloud-based solution designed to maximize the value of transformers (a mass market equipment).
David White
Distribution Utility Manager

I am a strong planner and problem solver who can readily adapt to change, works independently and also able to judge multiple priorities and meet tight deadlines without compromising quality.

Responsibilities
- Ensuring smooth electricity distribution
- Repair & Maintenance of Utility Assets
- Manage operations department budget of 3 million annually
- Developing preventative maintenance program and checking quality assurance programs
- Administering and reporting the power outages

Main Goals
- Conceptualize and implement a comprehensive Outage Management Program
- Identify cost saving measures
- Minimize customer complaints
- Evaluate transformers inspection reports and address immediate maintenance needs.

Pain Points
- Uncertainty around when an electrical transformer might trip/breakdown
- Difficulty in analyzing the historical data of the assets
- Not clearly able to identify the location and reason of the fault
- Assets breakdown prediction not available to react quickly

Needs
- I need better visibility to my electrical network by tracking the real-time health of all the transformers
- I need to know the root cause analysis of all the transformer faults
- I need to assign nearby repair crew member to the open notifications and track the status
- I want to analytics to predict power outages in my city to inform all customers beforehand
- I want a list of all breakdown by location and fault type and customer service facilities
As a power distribution utility manager, I need a real time solution to monitor the health and performance of transformers in a city so that I can make smarter decisions to plan the maintenance and save cost and time.
<table>
<thead>
<tr>
<th>Actions</th>
<th>Mindset</th>
<th>Feelings</th>
<th>Touch Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager checks emails/chats &amp; review previous day’s close of business status</td>
<td>“Let me check what’s going on today”</td>
<td>Cautious</td>
<td>Laptop Mailbox Reports Colleagues</td>
</tr>
<tr>
<td>Selecting the transformers and analyzing their current health, historical data</td>
<td>&quot;So these are the transformers with abnormal live readings&quot;</td>
<td>Surprised</td>
<td>Telephones Tasks List</td>
</tr>
<tr>
<td>Performs detailed forecast of an outage analysis by looking at transformers with abnormal parameters</td>
<td>&quot;Let me check out what &amp; when went wrong&quot;</td>
<td>Smug</td>
<td>Live Parameters being reported from Computers</td>
</tr>
<tr>
<td>Evaluating current conditions and making recommendations</td>
<td>&quot;Oh is there a breakdown? &quot;Let me connect notify a nearby repair crew&quot;</td>
<td>Frustrated</td>
<td>Websites Maps Telephone</td>
</tr>
<tr>
<td>Notifying crew members for maintenance activities</td>
<td>&quot;I know he has all the skills and tools to fix as soon as possible&quot;</td>
<td>Hopeful</td>
<td>Telephone</td>
</tr>
<tr>
<td>Analyzing the breakdown reason &amp; impact after the maintenance activities are done and informing customers of power restoration via email/SMS</td>
<td>“Is all good” “are we on time” “Are we cost effective”</td>
<td>Confident</td>
<td>Computer Reports</td>
</tr>
</tbody>
</table>
Build Link:

https://standard.build.me/prototype-editors/api/public/v1/snapshots/8f9e4ea4df0c2add0e1a5abc/artifacts/latest/index.html#/launch_page

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