CLEAN & SMART RESTROOMS

Open SAP – IOT Prototype Challenge
Story

Ops manager has the task to make sure all restrooms managed by his maintenance outsourcing firm is kept in pristine condition always, to be used by its patrons. The mission of his organization is to upkeep clean restroom facilities managed by smart processes, lean crew, efficient utilization of resources, whilst making no comprise to quality.

The manager needs to know the list of facilities under his purview, its resources, location, usage pattern & stock level (soap, tissue rolls, hand towels, etc). He is tasked to maintain these restroom facilities with the help of his crew of sanitation professionals, cleaning & restocking supplies, transportation & cleaning equipment.

He needs to manage cost, human efforts as well as consumables. At the same time, he cannot leave any of the facilities undermaintained. He needs to keep watch of any out-of-stock, out-of-service equipment. Unforeseen outages of facility (plumbing issues or damaged resources) needs are to be attended with high priority and right professionals. Communication to customers is key in these instances.
John Davis  [Operations (Ops) Manager]

“Keeping the restroom facilities clean & operational, with an efficient crew is my goal. Quality of work is non-negotiable…”

- 40, process oriented, 15 years in facility management. I work out of my firm’s HQ
- I have to keep the cost low, efficiency high & undeterred commitment to quality
- I spend most of my time on computer manually recording and tracking key process indicators, on phone with crew, firefighting outages & customer calls.
- I work with sanitation crew, buyers (for supplies), plumbing contractors and customers

Responsibilities

- I am responsible for setting restroom stock thresholds
- I am responsible to come up with optimal maintenance windows for facilities, make schedule for crew
- I will have to work with contractors in case of plumbing / equipment outage & service
- I am tasked with process and resource optimization

Main Goals

- Keep the restroom facilities clean & functional all the time
- Optimal resource utilization - human efforts, travel time of crew, restroom resources (soap, hand towels, tissue rolls, etc) & cleaning supplies

Needs

- To know all restroom facilities & their location
- To know usage patter (Peak & off-peak usage)
- Know stock levels in each restroom at any given time – why to restock & when not to.
- To know when facility has issues

Pain Points

- No data points on usage of each facility
- Sometimes facilities run out of supplies (soaps, tissues). Other times, half used tissues rolls and hand towels are replaced with fresh ones (else stock might run out before next service window)
- Equipment outages are notified manually – delay in response
As an ops manager, I would like to have real time data on restroom usage, equipment/supply status at the restroom and crew status, so that I can plan logistics & crew utilization optimally while keeping cost low and restrooms in pristine condition.
## User Experience Journey - A day in Ops Manager's life

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>MINDSET</th>
<th>FEELING</th>
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</thead>
<tbody>
<tr>
<td>Start the day. Review backlog.</td>
<td>Start the day. Review backlog.</td>
<td>😊</td>
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<tr>
<td>Review Daily planning chart &amp; Crew roster. Amend daily planning chart if required</td>
<td>“Can cleaning crews handle work load for the day?” “Can their efforts be optimized?”</td>
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<tr>
<td>Receive customer call on maintenance delay or restroom service disruption</td>
<td>“Oh, this needs attention ASAP”</td>
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<tr>
<td>Call Sanitation Crew / Call plumbing contractor for remediation</td>
<td>“How soon a crew or contractor reach the site?” “Let’s get this fixed”</td>
<td>😐</td>
</tr>
<tr>
<td>Review crew utilization &amp; Restroom maintenance history.</td>
<td>“How good are we at our work?” “Is my crew being utilized efficiently?”</td>
<td>😐</td>
</tr>
<tr>
<td>Identify areas of improvement, efficiency and cost optimization</td>
<td>“How can I improve customer satisfaction? Crew utilization” “If only I had more data and insight on usage patterns”</td>
<td>😐</td>
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</tbody>
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<table>
<thead>
<tr>
<th>TOUCH POINTS</th>
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<tbody>
<tr>
<td></td>
<td>Computer, Work log, Reports</td>
<td>Planning Chart, Crew roster</td>
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</table>
Mock Up – Landing Page / Dashboard view
Mock Up – Detailed View Page

Study: https://standard.build.me/user-research/f14b5130ea8a52fe0e1d5ce6/participant/e37774539f0f2fb00e1f2af1