openSAP

IMAGINE IOT
PROTOTYPE CHALLENGE

PEDAL2WORK

Tanmay Verma
Story

TransBengaluru is a major player in transport services in Bengaluru. Pedal2Work is a division of TransBengaluru Inc. with an aim to encourage people to use bicycles as a mode of transport for daily commute. Pedal2Work has about 40 bicycle pickup/drop points in Bengaluru where locals pick up bicycles, pedal to work and leave the bicycles at a drop point nearest to their destinations.

Storyline

Currently Pedal2Work works on paper with locals registering using paper forms. Pedal2Work wants to make the whole process streamlined with the introduction of a responsive mobile application which is easy to use for the customers as well as the administration.

The Regional Facility Manager is interested in knowing how sensors could be used to tackle the issues of tracking the bicycle location, the availability of bicycles to customers and the ridership density. Also the solution should be able to alert the manager in case of maintenance and repair required for an asset and thus he/she should be able to take decisions and actions based on the alerts.
Persona

Chris
The Perfectionist

“I believe technology is the key to most of our real life problems.”

About

- 29, Cricket Enthusiast. Fitness freak.
- Being the person who takes decisions related to improving customer service, I am constantly looking out for new solutions.
- Works with pick-up/drop center managers, customers.

Responsibilities

- I am responsible for taking decisions on the technologies to be used for our service.
- I am responsible for planning of number of bicycles to be allocated to each pick-up center.
- I am responsible for ensuring great customer satisfaction.
- I am responsible for ensuring constant growth in ridership.

Needs

- Customers can take a bicycle from one point and leave it at a designated point near their destination.
- Reduce the cost of local commute.
- Free customers from the task of buying and maintenance of bicycles.
- Get daily insights of the ridership and be able to take decisions.

Main Goals

- To look into the challenges faced by local people during daily commute and to come up with new and innovative solutions.
- To come up with the new business model for Pedal2 Work.
- To make use of sensors and technologies to improve the service.
- To give my contribution to the development of Bengaluru city.

Pain Points

- They cycles are not traceable and their maintenance is purely dependent upon the user.
- How to identify the borrower of bicycle.
- How to keep track of incidents and complains.
- How to plan for bicycle allocations to centers on the basis of ridership.
As a regional facility manager,

I need a way to come up with a solution to promote bicycle ridership in my city so that people can use them for daily commute without worrying about buying and maintenance.
UX Journey
Describe Actions, Mindset, Feelings and Touch points

Actions
Chris has to go through lot of reports and customer registration forms to get information about the customer identification information, customer preferences.

Mindset
Chris feels that the current process is too time consuming and hence new technologies can help.

Feelings
Currently Chris goes through lot of unhappy moments as the decision making is not quick and he has to go through lot of information in form emails, paper based reports and suggestions from pick-up / drop point managers.

Touch Points
Customer registration forms, complaints through emails and messages, excel reports, meeting s and discussions with pick-up / drop point managers.

New Application will use:
1. GPS location sensors in bicycles to track the location.
2. Air Pressure sensors to give information about tyre pressure.
3. Sensors in locks, front & tail lights to give information about bicycle health.
4. Odometers to track the travel distance.
5. Biometric sensor in bike handle to get the finger-print of rider and register the same. This will help to get information about the user of the bicycle.
6. Sensors at pick-up / drop points to count the cycles and broadcast the information to main server.
### User Experience Journey Template – Managing the Pedal2Work

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>MINDSET</th>
<th>FEELING</th>
<th>TOUCH POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Looking for a report on the cycle usage. Getting details of customer and his / her route choice.</td>
<td>I have to go through the customer registration forms to get details</td>
<td></td>
<td>Customer Registration Forms</td>
</tr>
<tr>
<td>Ensuring that only the registered customer is using the bicycle.</td>
<td>I have to match the photograph of the customer at the issue site.</td>
<td></td>
<td>Manually match the photograph of the customer.</td>
</tr>
<tr>
<td>Ensuring the location of the bicycle.</td>
<td>I don’t have any facility to ensure that the bicycle is on the correct designated route.</td>
<td></td>
<td>No way to track</td>
</tr>
<tr>
<td>Getting real time reports of incidents and maintenance issues</td>
<td>I need to rely on calls from customers.</td>
<td></td>
<td>Calls / messages or emails from customers.</td>
</tr>
<tr>
<td>Customer support. Intimating the customer about the availability of bicycle.</td>
<td>I need to look into the customer schedule and intimate via call or message</td>
<td></td>
<td>Customer registration form. Message/ Call to customer.</td>
</tr>
<tr>
<td>Planning of the route ridership and increasing / decreasing the bicycles</td>
<td>I need to look into the monthly reports.</td>
<td></td>
<td>Monthly reports. Take decision on the basis of monthly reports.</td>
</tr>
</tbody>
</table>

**TOUCH POINTS**

- Customer Registration Forms
- Manually match the photograph of the customer.
- No way to track
- Calls / messages or emails from customers.
- Customer registration form. Message/ Call to customer.
- Monthly reports. Take decision on the basis of monthly reports.
Prototype