Solution for E- Rick at IITR

Design Problem

Introduction - E - Rickshaw

- Primary means of conveyance in campuses
- Cheap, environmental friendly and local residents
- Manual rickshaws exist but are time consuming and relatively expensive

Problem Statement

Sprint Challenge - Problems to solve for

- Polymers
- Accessibility of a rickshaw at certain hours
- Accessibility of a rickshaw at certain places in certain weather
- Mode of rickshaws are not optimized according to the different destinations of different users
- Pollution
- Verification of people rickshaws
- Difficult for rickshaw drivers to find rides, heated disputes between drivers and users
- Time vs. of a rickshaw vs. a rickshaw vs the campus - 40
- Rickshaw stands in the campus and their density at different times (They mainly cover outside IIT and not inside)
- No. of people rickshaws in campus are less (on an average 15, 40 around 9)
- Earliest and latest time when you can get a rickshaw in the campus (there is no rickshaw at night)
- Certain days/ weather/ etc. has many of them can be found in one place but on everyday - unusual
- Allocation for 40+ people have been lost knowledge/ program drivers more comfortable.
- Rickshaw drivers are not getting customers due to data plans after advent of jio and availability of cheap unlimited Calling
- No. of drivers who accept payments through paytm (about 1/4th of total)
- Rickshaw drivers are not comfortable with using paytm (old age)
- Charges quoted by the administration and amount that finally people pay are different times
- Rickshaw drivers are scheduled three days a night over call and the equal destination. A large number of people rickshaw drivers are not comfortable to work having more over call.
- Participants can assume the data for any point no given place provided they mention it clearly

Timeline(2 days)

Project Members

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1. HMW Notes

How Might We notes includes the ideas written by everyone in the team during after the lightning talk. They helped us collect ideas from everyone and organize them into different categories. We worked on them directly as in this case are the major user. The maximum votes were mainly focused onn the direct problems faced by the people and the availability options.

1. Affinity Mapping

After successfully collecting all the ideas, the team discussed all the ideas noted one by one and tried to find similarities between different ideas. We were able to group our ideas into 11 categories.

1. Mode of payment
2. Route optimization
3. Accessibility
4. Free availability
5. Organization availability
6. Time saving
7. Ensure pollution
8. Technical
9. Miscellaneous

3. User Experience Map

To comprises of the user current experience regarding the problem and his sentiment analysis. The chart is divided into successive steps of the actions to be done by the user for a successful end.

1. The trial ride
2. Finding an e-rickshaw
3. Journey mode
4. Payment
5. Drop off

During these steps, all of their pain points are then put down connected to the problems needed to be solved. The sentiment analysis of the user is also mapped down to understand the emotions he is having and then the user become the e-rickshaw. Then the user has to go through an ordeal, now because of other co-passengers and car feel less secured. Then after the user reaches his drop location, he faces problem in finding the right mode of payment and the process of payment. The process of payment is not user friendly and requires complex steps which is placed above the e-rick and is difficult to see. After reaching of the pain points, the possible reasons related to them are noted down and further with the use of all the opportunities are marked above the problems can be solved.

Experience Map

Screens

The opportunities noted down is divided into three categories **Availability**: Density, Stands, Route control, charge points, Incentives for night rides, Ensure availability, Ensure charge points, charge points, Incentives **Discuss Journey**: Track the e-rick, Ensure safety, Ensure safety, Ensure safety, Ensure safety, Ensure safety **Payment**: Mobility regulation of money, Ensure payment, Ensure payment **Drop off**: Reduce complaint period

Cases

VISION STATEMENT

Get an easy and secure ride with convenience of digital payment inside campus.

Golden Path

Solution Sketches and Decide

During this phase, we ideated (brainstormed model ways) if where we have to show our solutions individually. We had a discussion on the ideas and then we voted on the ideas we felt were the best ideas. We had a lot of ideas to ideate upon. We decided to ideate on solutions which are short and sweet and of greater impact. We ideated on the ideas things like: In this way, we were able to complete two steps in two hour. Below are the ideas we ideated upon and the reasons behind them.

1. Availability: Drivers need to have a **dynamic pricing** model which changes according to the user requirements and their simple stats stands are.

2. Cashless payment: Cashless payment is a major problem in campus with **NFC based stands** are the same, we decided to ideate on the ease and ease the ease gains those ease requirements.

3. Other solution was to have a **user-side interface** where he can monitor the **availability** and list all the rickshaws available and their details and book respective e-rick **Alternative: one account is taken for group of 10 E-rick.**

The e-rick driver will have his account payment details always available with him on his device.

3. Schedule a ride: Schedule a ride is an alternative to the driver with the drop off location, the waged price so as **incentive** for the drivers to take rick and the contact details of the person.

4. Track the e-rick: Track the e-rick is an alternative to the user. And this ensure will be programmed in the rickshaw **Safety and security and ease distance.**

In Schedule trips will also have the same structure but in price surges. It will also include the **time details**, we can reserve based.

4. Share your ride: Share your ride, there can be a sharing of rick. So the user can send a friend the link to the application and share the ride.

In Applying for the option also includes the driver contact details and complaint point number which is directly connected to the security issue.

5. Trips: Trips in the agent schedule trips are listed in one section of "your trips". It contains all the information regarding current trips, upcoming trips and completed trips.

5. The separation between agent and schedule trip is done through color coding.

Prototype

With this, we ideated (brainstormed model stage)

USER INTERFACE

LOGIN
Log In
Sign Up
Forgot Password
Log In
Sign Up
Log In
Sign Up
Log In
Sign Up