Smart Waste Management System for Metropolitan Cities

Customer Journey

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SCENARIO

Browsing, booking, attending, and rating a local city tour

Entice
How does someone initially become awareof this process?

Enter
What do people experience as they begin the process?

Engage
In the core moments in the process, what happens?

Exit
What do people typically experience as the process finishes?

Extend
What happens after the experience is over?

Steps
What does the person (or group) typically experience?

- Collect garbage
- Separate Waste
- Alert message send to control room
- View details on trashcans
- Download or login the web application
- Monitor the filled level of bins
- Update the sensed data to database
- Workers are send to clear the bins
- Separate collection and sorting
- Expanding the recycling industry
- Reliable collection and better landfill sites
- Extensive Uncontrolled dumping
- Prevention
- Preparation of reuse
- Recycling
- Fully digital and easy infrastructure
- They feel clean management system
- Clean India

Interactions
What interactions do they have a teach stepalong the way?

- **People:** Who do they see or talk to?
- **Places:** Where are they?
- **Things:** What digital touchpoints or physical objects would they use?

- all human produce solid waste
- garbage bin overflows monitoring by the ultrasonic sensor
- checking the status of sensor
- sensing the level of bins
- Website to monitor the trashcan
- analyze status of dustbin
- internet is necessary to use the web app
- The device may send wrong information
- feel easy to monitor the waste
- it reduces the fuel cost for travelling
- sensor can be damaged when collecting garbage

Goals & motivations
At each step, what is a person's primary goal or motivation? ("Help me..." or "Help me avoid...")

- clean India
- make waste free environment
- protection of public health
- development and improvement of clean technology
- reduce recycle and to reuse
- create pollution free environment
- the environment to support the economic development and superior quality of life
- waste can be liquid or gases
- each type has different methods of disposal
- each type has different types of management
- industrial, biological waste or organic and biomedical waste
- its reduce the dangerous effect
- a big part of waste management deals with municipal solid waste
- well maintained area

Positive moments
What steps does a typical person find enjoyable, productive, fun, motivating, delightful, or exciting?

- become a smart city
- enhance safety
- reduce man power
- effective way to keep the clean city
- optimization of resources
- quality control improvement and monitoring
- exchange of waste
- shipping to the point of use
- reduce harm full waste water
- zero waste
- reduce the use of packaging material
- protect the environment
- increase the fertility of the soil

Negative moments
What steps does a typical person find frustrating, confusing, angering, costly,or time-consuming?

- Jobless
- increasing cost of the dustbin
- soil contamination
- water contamination
- air contamination
- human damage
- harm towards animal and marine life
- loss of habitats
- in case of any short circuit
- sensor affect by water
- In case of any malfunction
- some cloud warning issue

Areas of opportunity
How might we make each step better? What ideas do we have? What have others suggested?

- smart waste bins
- waste level sensor
- AI recycling robots
- garbage truck weighing mechanism
- pneumatic waste pipes
- solar powered trash compacters
- E-waste kiosk
- recycling apps
- waste management program
- sustainability development