**F A I R P L A N E**



Smart waste management for metropolitan cities

**Based on ten customer interviews and observations from the Fairplane Guided City Tours team**

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# Entice

**SCENARIO**

**Collecting, sensors, disposal, maintenance.**

How does someone initially become aware of 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

**Personalized suggestions**

**Personalized**

**Personalized recommendations**

**appears in the user profile**

**disposal**

**Prompt for review**

**Leave the garbage**

**Experience the**

**Meet the guide & group**

**Arrive at location**

**recycle**

**Re-use**

**Truck route**

**Collecting of garbage**

**Start purchase of a bin**

**View detail on a single visit**

**Browse available location**

**Choose a city, dates, and number of people**

**Visit website or app**

**Garbage**

What does the person (or group) typically experience?

A garbage overflowing with both degradable and non-degradable

A customer navigates to the city garbage section of our website or app

The garbage collector types a city, dates, and the number of bins which will

The garbage collector sees available bins dates, city, and number of people

After seeing a bin , the customer clicks or taps to view more. They see information about what and where the bin will be collected

After deciding to go on bin, they click the Purchase button

Collecting of waste from different place

Minimize of truck root

Reusing things

Recyle things).

Using their own means of transportation, the customer makes their way to the location at the scheduled time.

participants meet the guide and other people who have joined the same

The garbage collector brings the group around the area, explaining things as they go

The guide wraps up the empty garbage and everyone heads their separate ways

One hour after the garbage collected

Disposal of waste

The completed data appears on the "past experiences" area of a customer's profile with a few details on where the group went

Participation in the informs our backend recommendation systems, which the customer may experience via better personalization

The customer receives an email 14 days after their bins are filled with personalized recommendations for other tours

Again collect the bins when full

## Interactions

Post-purchase screens website, iOS app, or Android app

The smart bin is ideal for busy location such as campuses, etc…

Route planning for waste collection

Interactive bin map including street view

Database of citizen reports

Overview of scheduled and executed routes

Detailed data base of bins

Avoid landfill

Avoid green House gas emissions

Save money

Less emission fuel use and traffic congestion

Reducing in a number of waste collection needed by up to 80%

Pollution free environment

Good health

Smart phone apps to track waste and help us developing eco friendly habit

Fill level details send by messages

Using technology and data to create more efficient smart waste system

Interacting using sensors

What interactions do they have at each step along the way?

The customer looks for the group or guide, often from a distance as they walk closer

Reuse, recycling

**People:** Who do they see or talk to?

Save time

and consume energy

**Places:** Where are they?

**Things:** What digital touchpoints or physical objects would they use?

## Goals & motivations

Disposal of waste without polluting the soil or atmosphere

Help me see ways to enhance my new ideas

Help me see what I could be doing next

Help me see what I've done before

Instead of plastic use eco-friendly or bio-degradable products

Fewer health risks

Health standards better

Composting of degradable waste

Avoid landfills

Provide hygienic

Disposal of solid liquid and gaseous substance

Help to reuse or recycle such as paper , glass and so on

Efficient and economic solid waste storage

Provide hygienic

Preventing and combating the hazard

Healthy environment

Help to control pollution

At each step, what is a person’s primary goal or motivation? (“Help me...” or “Help me avoid...”)

## Positive moments

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

Less usage of manpower

Healthy environment

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We think people like these recommendations because they have an extremely high engagement rate

People like looking back on reuse

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### Clean environments

less use of plastic

### Current payment flow is very bare- bones and simple

Reuse of things

Prevention of disease

### Avoid smelly

People generally feel refreshed and inspired

## Negative moments

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

According to the a author there may be s several disadvantage

such as increasing cost of bin

Three different level of sensor has be to be placed. Also rough action and usage of the user may cause damages to the sensors

### There are a number of hazards with poor management of waste at on event

### The practices are not done uniformly

#### Though waste management creates employment it only has the ability to produce low-quality jobs

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#### Daily basic collection of garbage will make the streets look unpleasant and unhygienic leaving excess debris on the streets to rot up.

In the area where these management units are present, it is noticed that the groundwater gets affect

It is not even practiced globally, as the global level consists of curbing oil spills, ocean disposals and decreasing the tree felling.

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### Sanitation crews visiting empty trash bins generates unnecessary costs

This is also true since the resulting recycled product cannot be expected to have a durable quality

## Areas of opportunity

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

Source reduction and recycling and turning waste into resources ,composting

Animal feeding , Reuse , fermentation ,landfills incineration

Stop overflowing of dustbins along roadsides and localities

### Using sensors to detect bin fills

Using mobile application to track dustbin ,saves time and consumes energy

#### Improve efficiency of dustbins

#### Reduce the number of bins required – decluttering and improving the street scene.

Drive down our carbon emission – by doing to bins that still have plenty of space in them.

Help to create a cleaner , safer more hygienic environment and enhanced operational efficiency while reducing management costs ,resources.,

Series of wireless ultrasonic sensors that detect fill level