Smart Waste Management System for Metropolitan Cities

Customer Journey

Team id:PNT2022TMID07013

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 theexperience is over?

Steps

What does the person (or group) typically experience?

Entice	Enter	Engage	Exit	Extend
Collect garbage	Separate collection and sorting	Extensive uncontrolled dumping	Fully digital and easy infrastructure to access	They feel clean management system
Smart City technology evolved together with the developments in wireless sensor networks (WSN) and the Internet of Things	Metropolitan City citizens People whose house the trashcans.	The citizens can send the message about the smart dumpsters if any damage on the IoT device occured.	Awareness, education, preparedness, and prediction and warning systems can reduce the disruptive impacts of a natural disaster on communities.	Some trash bins are overfilled while others are underfilled by the trash collection time
Separate waste	Expanding the recycling industry	Prevention	Clean city and maintain itself	Clean india system
Smart cities essentially combine the use of ICT to provide services for better living conditions inside cities.	Trashvan Dirvers & Workers The dustbins need to empty after it got filled. The overflowing needs to avoid.	The current process of waste management starts with the waste being created by people in the cities and disposed in trash bins near its creation point.	The user can contact our team if they feel any hardness while using the app.	The waste management services take care of a healthy environment allowing optimization of the utilities and prevent overloading the carrier for waste disposal.
Alert message send to control room	The circular economy based as a resource	Preparation of reuse	Suitable and maintenance easily	
The current state of technology in the field of smart waste management involves the use of sensors that measure the fill level of the trash bin.	Monitoring the dumpsters and send the information about the garbage level to the administrated person to empty the trashcans using arduino device.	The lack of resources and capacities and a low level of knowledge and education emerged in all case studies as major root causes for several drivers of disaster risk.	The device using here is help to update the content regularly and check the truthfulness.	
View details on trashcans	Reliable collection and better landfill sites	Recycling		
The solution presented in this article focuses on the mitigation of these disadvantages by the implementation of RFID based trash identification system and additional weight sensor for improved fill level estimation.	The sensors senses the amount of waste in trashcans and the device sends the notification to the head office, they will come and collect the wastages.	The other is to fear disasters excessively and to be confused.		

Interactions

What interactions do they have ateach step along the way?

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

Entice	Enter	Engage	Exit	Extend
all human produce municipal solid waste	checking the status sensor	website to monitor trash can	internet is to use the webapp	it reduces the fuel cost for travelling
garbage bin overflows monitoring by the ultrasonic sensor	sensing the level of bins	analyze status of dustbin	the device may send wrong information	sensor can be damaged when collecting garbage
urban waste collection is expenditure on government budgets	application to sendof feedback	easily report the current status of garbage	feel easy to monitor the waste	
garbage produce in different area in a city various widely				

Goals & motivations

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

Entice	Enter	Engage	Exit	Extend
clean india	development and improvement of clean technology	the environment to support the economic development and superior quality of life	each type has different types of management	a big part of waste management deals with municipal solid waste
make waste free environment	reduce ,recycle,and to reuse	waste can be liquid or gases	industral,biological waste or organic and biomedical waste	well maintained area
protection of public health	encourage the adoption of sustainable production and conseption patterns	each type has different methods of disposal	its reduce the dangerous effect	
encourage the recycling industries				

Positive moments

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

Entice	Enter	Engage	Exit	Extend
become a smart city	effective way to keep the clean city	quality control improvement and monitoring	reduse harmfull waste water	protect the environment
enhance safety	optimization of resources	exchange of waste	zero waste	increase the fertility of the soil
reduce man power	scarb metal reuse	shipping to the point of use process	reduce the use of packaging material	

Negative moments

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

Entice	Enter	Engage	Exit	Extend
jobless	soil contamination	human damage	loss of habitats	incase of any malfunction
increasing cost of the dustbin	water contamination	harm towards animal and marine life	incase of any short circuit	some cloud warning issue
difficult to maintain the dustbin	air contamination	extreme weather pased by climate change	sensor affect by water	

Areas of opportunity

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

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