



# Smart waste management system in metropolitan cities

<div>Scenario</div> <div>Citizens registering to get information about arrival of waste truck. Workers getting information about the status of waste bins in the city</div>	<div></div> <div>Entice</div> <div>How does someone initially become aware of this process?</div>	<div></div> <div>Enter</div> <div>What do people experience as they begin the process?</div>	<div></div> <div>Engage</div> <div>In the core moments in the process, what happens?</div>	<div></div> <div>Exit</div> <div>What do people typically experience as the process finishes?</div>
<div></div> <div>Steps</div> <div>What does the person (or group) typically experience?</div>	<div>City corporation announcement</div> <div>Waste management system arrival in cities</div> <div>Effective workload for waste collectors</div> <div>Announcement from management</div> <div>city corporation announcing about waste disposal</div> <div>citizens get to know about waste management system in their city through news, social medio etc.</div> <div>Working only when needed is effective for the workers</div> <div>Workers are guided , how to use the interface</div>	<div>Citizen registration</div> <div>Workers registration</div> <div>citizens are registered in the UI to get information about waste van arrival</div> <div>Each waste vehicle are registered in the interface</div>	<div>Notification updates for citizens</div> <div>Workers updates</div> <div>citizens get updates about locations of waste van and other updates</div> <div>Workers are updated with notifications about filled dust bins in the streets and its location</div>	<div>Queries &amp; reports</div> <div>Writing reviews</div> <div>Worker experience</div> <div>citizens can report about unfinished works and complains</div> <div>Citizens can writes review about the process or workers, etc.</div> <div>workers get to experience easy and understandable UI for effective work</div>
<div></div> <div>Interactions</div> <div>What interactions do they have at each step along the way?</div> <div><div>■ <b>People:</b> Who do they see or talk to?</div><div>■ <b>Places:</b> Where are they?</div><div>■ <b>Things:</b> What digital touchpoints or physical objects would they use?</div></div>	<div>get updates about arrival of waste van</div> <div>Interaction with worker</div> <div>citizen interacts with waste van</div>	<div>Interface is through a website, android or IOS application software</div> <div>Registrations are done through the software</div>	<div>Users and workers experience a uniform waste cleaning process</div> <div>Each and every bins are cleaned whenever filled on time</div>	<div>A clean environment</div> <div>Clean streets through out the city because of easy disposal process</div> <div>No bin overflow with waste because every filled bins are alerted to the authorized individuals</div>
<div></div> <div>Goals &amp; motivations</div> <div>At each step, what is a person’s primary goal or motivation? (“Help me...” or “Help me avoid...”)</div>	<div>Help me understand how this process works</div> <div>Help me avoid missing the waste collecting van</div>	<div>Great user experience</div> <div>Alerts and notifications on time</div>	<div>Relief after disposing and cleaning bins on time</div>	<div>Clean and waste free streets leading to a clean city</div>
<div></div> <div>Positive moments</div> <div>What steps does a typical person find enjoyable, productive, fun, motivating, delightful, or exciting?</div>	<div>It is helpful to get disposed of waste on time</div>	<div>Satisfied user experience</div> <div>Less workload to workers</div>	<div>Cleaning the street with the User Interface help</div>	<div>Waste free society</div> <div>Clean society</div> <div>Satisfied feeling about protecting the environment</div>
<div></div> <div>Negative moments</div> <div>What steps does a typical person find frustrating, confusing, angering, costly, or time-consuming?</div>	<div>When a user missed the waste collector</div> <div>when a citizen annoys a worker</div>	<div>Missing alerts</div> <div>Problem in software or sensors used in the project</div>	<div>Poor user or worker experience</div> <div>Difficulties in software</div>	<div>Problems in alerts or notifications</div> <div>Wrong data about filled bins</div>
<div></div> <div>Areas of opportunity</div> <div>How might we make each step better? What ideas do we have? What have others suggested?</div>	<div>Building better user interface based on reviews</div> <div>software updates to citizens and users</div>	<div>Providing guidance about the software</div>	<div>Further request from user side can be considered using separate system</div> <div>Workers difficulties can be reduce by providing Better UI software</div>	<div>Cleaning the city via new technology applications</div> <div>Hand free waste cleaning ideas can be promoted</div>