Project 3 Final Jury Presentation | 26 May 2021

Service design for changing the waste management behavior of the students of IIT Bombay

Guided by

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Project Brief

Designing the services for the students of IIT Bombay to create awareness and nudge them to change their behavior towards sustainable waste management practices by incorporating the principles of behavioral change in Service Design.

Gaps in the current system

- 1. The failure at the systems level interventions
- 2. Lack of interest among the people to practice waste management

Literature Review

- 1. Theory of planned behavior
- 2. Theory of reasoned actions
- 3. Transtheoretical model
- 4. Precaution adoption model
- 5. CraftChange framework

Secondary Research

1. Waste management in South Korea



Secondary Research

- 1. Waste management in South Korea
- 2. The Nudge Unit of the UK

"Nine out of ten people pay their tax on time. You are in the minority that does not pay their tax on time."

"Nine out of ten people in your local area pay their tax on time. You are in the minority..."

"Nine out of ten people with a debt like yours pay their tax on time. You are in the minority..."

"Nine out of ten people with a debt like yours, in your area, pay their tax on time. You are in the minority..."

Secondary Research

- 1. Waste management in South Korea
- 2. The Nudge Unit of the UK
- 3. NSTAR power report







- What is the motivation for students to practice sustainable waste management?
- 2. How are the students maintaining their sustainable behaviors?

- 1. The awareness about the waste management
- 2. Influence of the servicescape, friends and family
- 3. Empathy on the maintenance staff
- 4. Access to sustainable alternatives
- 5. Estimation on the resources required
- 6. Efficient infrastructure and back-end activities
- 7. Other personal benefits

Main sources of the waste generation from students at IIT Bomaby

Place	Mess	Hostel	Departments	Eateries / other shops
Activities	 Cooking Eating Storing vegetable Storing cooked food Stock management 	 Studying Sleeping Cooking Cooking Eating Partying Online shopping Others (bathing, laundry) 	 Teaching Studying Seminars / Conferences Eating Partying Online shopping Administrative activities 	 Cooking Eating Storing vegetable Storing cooked food Stock management
Types of waste generation	 Food waste Cooked Raw 	 Food waste Cooked Raw Packaging Stationary Cloths/footwear E-waste Sanitary waste Daily commodities Other dry waste 	 Food waste Cooked Raw Packaging Stationary E-waste Sanitary waste Other dry waste 	 Food waste Cooked Raw Packaging Other dry waste
Reasons for waste generation	 Substandard taste Wrong estimation Slothful behavior Inefficient storage facilities 	 Lack of awareness on resource management Unsustainable shopping practices Lack of designated bins Lack of awareness on waste disposal/treatment practices Lack of exposure on how to sustainably reuse 	 Lack of awareness on resource management Lack of designated bins Lack of awareness on waste disposal/treatment practices Lack of exposure on how to sustainably reuse 	 Substandard taste Wrong estimation Lack of designated bins Unsustainable packaging Inefficient storage facilities

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Reasons for waste generation	 Substandard taste Wrong estimation Slothful behavior Inefficient storage facilities 	 Lack of awareness on resource management Unsustainable shopping practices Lack of designated bins Lack of awareness on waste disposal/treatment practices Lack of exposure on how to sustainably reuse 	 Lack of awareness on resource management Lack of designated bins Lack of awareness on waste disposal/treatment practices Lack of exposure on how to sustainably reuse 	 Substandard taste Wrong estimation Lack of designated bins Unsustainable packaging Inefficient storage facilities
Existing interventions by the Institute	 Designated bins for food waste A board which display how much food waste is generated in day (<i>Placement matters</i>) 		 Designated bins for e-waste (Placement matters) 	
Existing interventions by student bodies	 Zero waste day - Students have to pay fine when they waste food in the mess 	 Waste collection drives to create awareness about SWM and sustainability 	 Waste collection drives to create awareness about SWM and sustainability 	
0 > ortunities	 Choice architecture : placement of the food waste statistics board Changing the plate design - so that students take less food initially Feedback board in the mess - students take food based on other students feedback Instant feedback on the amount of food wasted digital display Collaboration with NGOs to distribute left overs to needy Raw waste segregation - to feed cows in the campus Segregation of cooked food waste 	 Designated bins for different types of waste (Wet/dry/Re-usable/e- waste) Statistics on waste generation: daily/weekly/monthly in the hostel Collaboration with NGOs to donate unused cloths, footwear and other commodities Compost pit for every hostel - make student contribute and participate - maintaining hostel garder Compi Exit < 85 of 98 > produc 	 Designated bins for different types of waste (Wet/dry/Re-usable/e- waste) Statistics on waste generation: daily/weekly/monthly in the Department Collaboration with startups / student bodies to give away discarded products/materials Competitions b/w departments to produce less waste - Most sustainable department of the year award Measure carbon foot prints or at 	 Designated bins for wet/dry waste Choice architecture : placement of the food waste statistics board Feedback board in the mess - students take food based on other students feedback - could improve their business Collaboration with NGOs to distribute left overs to needy Raw waste segregation - to feed cows in the campus Segregation of cooked food waste to feed dogs in the campus Sustainable packaging

Opportunities

- distribute left overs to needy 6. Raw waste segregation - to feed
- Raw waste segregation to feed cows in the campus
- Segregation of cooked food waste to feed dogs in the campus
- Competitions btw hostels to produce less waste - Most sustainable hostel of the year award
- 9. Watchfulness while servin food in the mess - might be a psychic cost
 10. Monitoring (Human TP) at food waste disposal - might make the

students guilty for wasting food

- participate maintaining hostel gardens
- Competitions b/w hostels to produce less waste - Most sustainable hostel of the year award
- Show where the waste is going, how the waste is reused/treated
- Wrapper collection at stationary shops and return gifts - exchange

- produce less waste Most sustainable department of the year award
- Measure carbon foot prints or at least waste generation from each department
- Separate wing for sustainability in each department: Comes up with sustainable solutions for several issues at departmental level, encourages students/staff to practice sustainability
- IDC: Designated room to store/dump discarded projects might useful for upcoming batches to reuse/modify or even to inspire
 Physical artifacts matters

- cows in the campus
- Segregation of cooked food waste to feed dogs in the campus
- 7. Sustainable packaging

Other Interventions

- · Digital displays in the campus which shows real-time carbon foot prints or waste generated- day/department/individual..etc
- · Leverage the influence of the teachers/professors
- · Awareness camps on waste treatment practices segregation by maintenance staff, recycling process, etc)
- · Connect with resume points and other benefits academic incentives
- · Hackathons on sustainability and waste management
- · Involve students in several institute level sustainable activities, make them feel accountable empathize
- · Instant rewards system
- · Choice architecture; placement of the designated bin at main hotspots. (Ex: Paper dispenser at department offices)
- · Artifacts or useful products from the discarded waste Could be new exploitative space for artists and industrial designers
- · Providing alternatives by the institute (cycles, green bags, solar powered commuters, etc)
- · Track the waste disposals digitize the waste generation reward the individual who generates less waste
- Color coded biodegradable garbage bags

Project scope

As the ultimate goal is to make IIT Bombay a zero waste campus, this project aims to act as an initial step towards understanding the issue through a broader spectrum and to proclaim various possibilities to design the solutions for a wide range of contexts across the campus.

Final Concepts

- 1. Green Week
- 2. Sustainability Cell
- 3. Green Treasure hunt
- 4. Sustainability @IITBStores
- 5. Source segregation @IITBHostels

Why a broader scope? Why 5 different concepts?



Green Treasure hunt



Green Treasure hunt



Concept I Green Week

Goal: To create awareness about the types of waste, its management and costs involved in handling it.

Target beneficiaries: Students, maintenance staff and other campus residents.

When? Ideally once in a semester. But the program can also be subdivided into smaller events which can be organized throughout the semester.

Concept I Green Week

- 1. Waste collection drive
- 2. Waste segregation
- 3. Wet waste treatment
- 4. Dry waste treatment
- 5. Photography, documentary making and Journalism contest

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2			Pre Core				y 2)				
3	Stage	Awareness Campaign	Registration	Waste Warrior safety kit		Introduction session	Session with the maintenance staff (Waste Pickers)	Equipping with safety gear	Waste Collection (2Days)	Deposit the collected waste	
4	Stage Goal	To know about the Green Week	To register for the program	To receive the tool kit which consists of a brochure about Green Week, safety gear like gloves, googles if required, apron		Brief introduction about the vision and mission of the Green Week and how it's contributing to the sustainable practices in the campus	waste - Issues with campus		To collect the waste from different locations across the campus	To deposit the collected waste so shat it could be further segregated	
5	Thoughts	How does this benefit me?	- Will shis benefit me? - Will I get time to participate?	is this safety gear enough?		is attending the program worthy?	How could they even do this? Can I do this? It sounds so difficult	This is not comfortable Will this gear protect me?	So much waste is being generated How could they even do this? Can I do this? It's so difficult and gross Does the vehicle has capacity to carry the waste?	Am I safe and protected? Do we have enough space to deposit the waste?	
6	Feelings		Anticipation, Optimism, doubtful, excited	Enthusiasm, Excited, Optimism, doubtful, curious		Surprised, Optimism	Doubtful, sød, thoughtful, gross	Doubtful, worried, Optimism	Uncomfortable, doubtful, worried	Uncomfortable, doubtful, worried	
	Journey Related Activities		- Registration at the stall - Online registration	Collect the safety kit from the Green week stalls which are across the campus		Attending the introduction session	Attending the session	Wearing the gear	Moving across the campus and collecting the waste	Depositing the waste in the allotted space	
		Posters, brochures, stalls, online campaigns, emails	Helpline to answer queries in the online registration Reliable Online registration platform Registration desks	- Stalls - Volunteers at the stalls - Sponsorship for safety gear		space at different locations across the campus Student volunteers Project/screens	Availability of workers and their timeline/activities/daily goals should considered while making the schedule	Access to the safety gear, sponsorship	A vehicle to travel and carry the waste, List of people and places to collect waste from	A location to store the collected waste Could be away from human settlements to avoid grief	
		Credibility, Social comparison, Normative influence	Trivialization Effect, Recognition effect	Noble edge effect,		Implementation Intention, Partitioning	Identifiable Victim Effect, Implementation Intention,	Noble edge effect,	Goal Gradient Effect, self monitoring, systematic praise, Commitment, Partitioning	Trivialization Effect, Recognition effect, Ostrich effect, Peak end rule,	
		students are active - Highlight the benefits through the digital Notice boards across		the participants to show that the Green Week team cares for their		Explain how the activities are going to benefit and environment and the society Explain the four phases involved Introduce the responsible stakeholders involved at each phase Explain the responsibilities of each participant A schedule of the Whole program	management which could further triggers the participants to		 A schedule of the whole program A checklist for the participants to keep track and progress - could be a mobile app or a sheet of paper If it's an app, it could give rewards/green points for finishing every checkpoint 	 A personalized thanking note for all the participants 	
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s	tage		Awareness Campaign	Registration	Waste Warrior safety kit		Introduction session	Session with the maintenance staff (Waste Pickers)	Equipping with safety gear	Waste Collection (2Days)	Deposit the collected waste	
S	tage Go	al	To know about the Green Week	To register for the program	To receive the tool kit which consists of a brochure about Green Week, safety gear like gloves, googles if required, apron		Brief introduction about the vision and mission of the Green Week and how it's contributing to the sustainable practices in the campus	waste - Issues with campus		To collect the waste from different locations across the campus	To deposit the collected waste so that it could be further segregated	0
T	houghts	5	How does this benefit me?	- Will this benefit me? - Will I get time to participate?	is this safety gear enough?		is attending the program worthy?	How could they even do this? Can I do this? It sounds so difficult	This is not comfortable Will this gear protect me?	So much waste is being generated How could they even do this? Can I do this? It's so difficult and gross Does the vehicle has capacity to carry the waste?	Am I safe and protected? Do we have enough space to deposit the waste?	
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	ourney F			- Registration at the stall - Online registration	lect the safety kit from the een week stalls which are ross the campus		Attending the introduction session	Attending the session	Wearing the gear	Moving across the campus and collecting the waste	Depositing the waste in the allotted space	
	lesource		Posters, brochures, stalls, online campaigns, emails	Helpline to answer queries in the online registration Reliable Online registration platform Registration desks	- Stalls - Volunteers at the stalls - Sponsorship for safety gear		space at different locations across the campus Student volunteers Project/screens	Availability of workers and their timeline/activities/daily goals should considered while making the schedule	Access to the safety gear, sponsorship	A vehicle to travel and carry the wate, List of people and places to collect waste from	A location to store the collected waste Could be away from human settlements to avoid grief	
			Credibility, Social comparison, Normative influence	Trivialization Effect, Recognition	Noble edge effect,		Implementation Intention, Partitioning	Identifiable Victim Effect, Implementation Intention,	Noble edge effect,	Goal Gradient Effect, self monitoring, systematic praise, Commitment, Partitioning	Trivialization Effect, Recognition effect, Ostrich effect, Peak end rule,	
0	Blueprints - Treasure Hunt CJM Green Week Blueprints - Green Week			Send a safety kit / good lies to te participants to show that the reen Week team cares for their articipants		Explain how the activities are going to benefit and environment and the society Explain the four phases involved - Introduce the responsible stakeholders involved at each phase - Explain the responsibilities of each participant A schedule of the Whole program	- Let the maintenance staff / volunteers share their own experiences about the waste management which could further triggers the participants to		 A schedule of the whole program A checklist for the participants to ikep track and progress - could be a mobile app or a sheet of paper If it's an app, it could give rewards/green points for finishing every checkpoint 	- A personalized thanking note for all the participants		
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		Connecting with the Green Week student coordinators	- Registration at the stall - Online registration	Collect the safety kit from the Green week stalls which are across the campus		Attending the introduction session	Attending the session	Wearing the gear	Moving across the campus and collecting the waste	Depositing the waste in the allotted space				
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		students are active - Highlight the benefits through the digital Notice boards across		 Send a safety kit / good lies to the participants to show that the Green Week team cares for their 		Explain how the activities are going to benefit and environment and the society Explain the four phases involved Introduce the responsible stakeholders involved at each phase Explain the responsibilities of each participant A schedule of the Whole program	- Let the maintenance staff / volunteers share their own experiences about the waste management which could further triggers the participants to		A schedule of the whole program A checklist for the participants to keep track and progress - could be a mobile app or a sheet of paper If it's an app, it could give rewards/green points for finishing every checkpoint	for all the participants				
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2		Waste Segregation Drive (Day	(3)		A sheet was	Food Waste Tre	atment (Day 4)				Dry Waste Treatmen
1	Stage	Equipping with safety gear	Waste Segregation		Session with the maintenance staff	Equipping with safety gear	Bio gas plant visit	Composting/gardening		Session with the NGO volunteers	Equipping with safety §
4	Stage Goal	To Wear the essential safety gear for the particular task (Collection, segregation, etc)	To segregate the collected waste		To create awareness about backend activities at the biogas plant - How much food is being wasted - How much resources are being consumed - What does the workers go through - measures they take while segregating the waste - Issues with unsegregated waste	To Wear the essential safety gear for the particular task (Collection, segregation, etc)	To process the food waste at biogas plant	Composting the organic waste and gardening		To create awareness about backend activities - What does the volunteers go through - measures they take while processing the dry waste - Importance of the segregated waste	To Wear the essential saf for the particular task (Cc segregation, etc)
5	Thoughts	This is not comfortable Will this gear protect me?	Haw could they even do this? Can I do this? It's so difficult and gross So much plastic waste is being generated		How could they even do this? Cen I do this? It sounds so difficult	This is not comfortable Will this gear protect me?	So much food is being wasted Good that the it is being utilized But at the cost of extra efforts and resources	Glad the waste being utilized I don't want to work in this soil		How could they even do this? Can I do this? It sounds so difficult	This is not comfortable Will this gear protect me
6	Feelings	Daubtful, warried, Optimism	Uncomfortable, thoughtful, gross, sad, helpless, hopeful		Doubtful, sad, thoughtful, gross	Doubtful, worried, Optimism	Uncomfortable, choughtful, gross, sad, excited, hopeful	Uncomfortable, grateful		Doubtful, sad, thoughtful, gross	Doubtful, worried, Optim
7	Journey Related Activities	Wearing the gear	Segregating the waste		Attending the session	Wearing the gear	Processing the food waste at Biogas plant	Composting and gardening		Attending the session	Wearing the gear
•	Resources and Enablers	Access to the safety gear, sponsorship	Guidance from the volunteers and workers on how to segregate, identify different types of waste		Availability of workers and their timeline/activities/daily goals should considered while making the schedule	Access to the safety gear, sponsorship	Guidance from the volunteers and workers on how to operate the bio gas plant	Garden, Compost pits		Availability of the NGO volunteers and their timeline/activities/daily goals should considered while making the schedule	Access to the safety gear, sponsorship
*	Potential Behavioral Change Principles	Noble edge effect,	Goal Gradient Effect, self monitoring, systematic praise, Commitment, Partitioning		Identifiable Victim Effect	Noble edge effect,	Goal Gradient Effect, self monitoring, systematic praise, Commitment, Partitioning	Goal Gradient Effect, self monitoring, systematic praise, Commitment, Partitioning		Identifiable Victim Effect	Noble edge effect,
10	Potential Service Design Interventions		 A schedule of the whole program A checklist for the participants to keep track and progress - could be a mobile app or a sheet of paper If it's an app, it could give rewards/green points for finishing every checkpoint 		- Let the maintenance staff / volunteers share their own experiences about the waste management which could further triggers the participants to empathize		 A checklist for the participants to keep track and progress - could be a mobile app or a sheet of paper If it's an app, it could give 	 A schedule of the whole program A checklist for the participants to keep track and progress - could be a mobile app or a sheet of paper If it's an app, it could give rewards/green points for finishing every checkpoint 		- Let the maintenance staff / volunteers share their own experiences about the waste management which could further triggers the participants to empathize	
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Awareness Campaign	Registration	Waste Warrior safety kit	Introduction session	Session with the maintenance staff (Waste Pickers)	Equipping with safety gear	Waste Collection (2Days)	Deposit the collected waste
To know about the Green Week	To register for the program	To receive the tool kit which consists of a brochure about Green Week, safety gear like gloves, googles if required, apron	how it's contributing to the	waste - Issues with campus			To deposit the collected waste so that it could be further segregated
	- Will this benefit me? - Will I get time to participate?	is this safety gear enough?	is attending the program worthy?	How could they even do this? Can I do this? It sounds so difficult	This is not comfortable Will this gear protect me?	So much waste is being generated How could they even do this? Can I do this? It's so difficult and gross Does the vehicle has capacity to carry the waste?	Am I safe and protected? Do we have enough space to deposit the waste?
	Anticipation, Optimism, doubtful, excited	Enthusiasm, Excited, Optimism, doubtful, curious	Surprised, Optimism	Doubtful, sad, thoughtful, gross	Doubtful, worried, Optimism	Uncomfortable, doubtful, worried	Uncomfortable, doubtful, worrie
	- Registration at the stall - Online registration	Collect the safety kit from the Green week stalls which are across the campus	Attending the introduction session	Attending the session	Wearing the gear	Moving across the campus and collecting the waste	Depositing the waste in the allotted space
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- Leverage the influence of the popular student bodies / faculty and their credibility - Publicity / campaigns on instagram/fb/linkedin where students are active - Highlight the benefits through the digital Notice boards across	 Provide Goodies to the participants to keep them motivated and excited about the event Interaction guidelines for the 	- Send a safety kit / good lies to the participants to show that the Green Week team cares for their	Explain how the activities are going to benefit and environment and the society Explain the four phases involved Introduce the responsible stakeholders involved at each phase Explain the responsibilities of each participant	- Let the maintenance staff / volunteers share their own experiences about the waste management which could further triggers the participants to		 A schedule of the whole program A checklist for the participants to keep track and progress - could be a mobile app or a sheet of paper 	- A personalized thanking note for all the participants
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Is this safety gear enough? iow does this benefit me? • Will i get time to participate? Is this safety gear enough? intcipation, Optimism, curious, xoted Anticipation, Optimism, doubtful, excited Enthusiasm, Excited, Optimism, doubtful, curious ionnecting with the Green Week • Registration at the stall Collect the safety kit from the Green week stalls which are across the campus is the online registration • Helpline to answer queries in the online registration • Seals issters, brochures, stalls, online ampaigns, emails • Trivialization Effect, Recognition • Seals issemative influence • Provide Goodles to the participants to keep them motivated and excited about the event • Send a safety kit / good lies to the participants to keep them motivated and excited about the event	o know about the Green Week To register for the program To receive the tool kit which consists of a brochure about the vision and mission of the Green Week and the green Week affer gear like gloves, googles if required, apron Binef introduction about the vision and mission of the Green Week affer gear like gloves, googles if required, apron low does this benefit me? • Will this benefit me? Is this safety gear enough? Is attending the program worthy? noticipation, Optimism, curioux, xoited • Anticipation, Optimism, doubtful, excited Enclusion, Excited, Optimism, doubtful, curious Surprised, Optimism onnecting with the Green Week • Registration at the stall • Collect the safety kit from the Green Week and introduction session • Surprised, Optimism onnecting with the Green Week • Registration at the stall • Collect the safety kit from the Green Week send colline registration • Sails • Sails other coordinators • Helpline to answer queries in the online registration • Sails • Sails • Sails other colline registration • Sails • Sails • Sails • Sails volunteers • Provide Goodes to the participants to keet gear • Sails • Sails volunteers • Provide Goodes to the participants to keet premonship for safety gear • Explain how the activ	o know about the Green Week To register for the program To receive the tool kit which consists of a brochware about for service about for service about the vision of the Green Week in the collecting the green Week states gatering and massion of the Green Week in the collecting the green Week states gatering and the green Week states while collecting the green Week in the computer interview about the vision of the Green Week in the computer is the state of the green Week in the computer is the state of the green Week in the computer is the state of the green Week in the computer is the state of the green Week in the computer is the state of the green Week in the computer is the state of the green Week in the state of the green Week is benefit me? Will be benefit me? Is this safety gate if required, apron I dow does this benefit me? Will be benefit me? Is this safety gate if required, apron Is a steering the program worthy? Is a steering the program worthy? How could they even do this? Can I do this? I dow does this benefit me? Will be state in the state of the sta	o inow about the Green Week To register for the program To receive the tool kit which consists of a brochure about Green Week, safety gear like consists of a brochure about Green Week, safety gear like construction about the compute go through - measures they sake which collecting the brock go through - measures they sake which collecting the program worthy? To register for the program To Wear the essential tafety gear for the program tow does this benefit me? - Will this benefit me? - Will this benefit me? is this safety gear enough? Is attending the program worthy? - No is not comfortable will this gear protect me? ow does this benefit me? - Will this benefit me? - Will this safety gear enough? Is attending the program worthy? Is attending the program worthy? This is not comfortable will this gear protect me? our does this benefit me? - Will get time to participate? Is this safety gear enough? Is attending the program worthy? Doubtful, sad, thoughtful, gross Doubtful, worried, Optimism onnecting with the Green Week is a confidence - Registration at the stall Collect the safety kit from the Green Week is a confidence Attending the introduction section Attending the section Atten	o b now about the Green Week To register for the program <

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1	ENCOUNTER		Blueprint o	Pre-event				Blue
2	STEP	Awareness campaign - Stalls	Awareness campaign - Social media	Registration process	Receives Waste Warrior safety kit		Introduction session	Session with the maintenance staff (Waste Pickers)
3	STEP GOAL		To know about the importance of Oreen Week and benefits of taking part in it	To finish the registration process	To receive the safety kit (gloves, mask, event schedule and other details) after registration process		Brief introduction about the vision and mission of the Green Week and how it's contributing to the sustainable practices in the compus	To create awareness about backend activities
	USER ACTION	Approaching the volunteers at stalls	Accessing the content on social media	Gives required data for the registration process - inputs the data in the form (online) - Gives the details to the volunteer (offline)	To receive and understand the use of the kit		Attending and listening	Attending and listening
	TOUCH POINT ACTION	Explains about the importance of Green	Mails / social media posts which explains about the importance of Oreen Week and benefits of taking part in it	Confirms the registration	- explains the importance of the kit and how it can be useful during the event		Presenting the information about the green week	Presenting the information about the backend activities: - What the workers go through while collecting the waste - measures they take while collecting the waste - Issues with compus residents from the perspective
•		Training the volunteers to handle the situation	Active social media accounts	Data gets uploaded into the server and registers as a new entry	Keeping the kits ready		Making an attractive and engaging presentation	Training the maintenance staff to talk an present effectively
	SUPPORT ACTIVITIES AND PROCESSES		A team to create attractive digital content		 Availability of kits/ resources management Procuring enough capital to buy the safety kits 		Getting a place to give the presentation depending on the size of participants (Auditorium)	Availability of workers
12	TOUCH POINT	Composite touch point - Volunteer - Brochures - Posters	Social media	Composite touch point - Volunteer - Web portal	Volunteer		Organizers - Team Zero Waste, Sustainability Cell	Composite touch point - Organizers - Team Zero Waste, Sustainability Cell - Maintenance staff
13		 a) Unable to reach out the whole target population in the campus b) Volunteer's lack of knowledge about the context c) Permission for setting up the stalls across the campus d) Sponsorship for publicity 	Unengaging posts	out of date database - as registrations are happening both online and offline			Students losing the interest - lengthy, one sided, engaging presentations	a) Unavailability of the maintenance sta b) Bad presentation skills of the maintenance staff
	+ Blueprints -	Treasure Hunt × CJM Gre	en Week - Blueprints - G	Green Week - Blueprints	- Resource management @ID	CStudios	BI ()	Count: #

Major Encounters during the Green Week

Figure 33: Awareness Campaigns



These campaigns happen a week or a two prior to the actual event.

Goal: To create exposure and awareness about the Green Week and benefits of participating in it.

Enablers: Stalls across the campus, Social media publicity (Instagram, fb, WhatsApp), Posters and Brochures.

Potential Failures: Could attract only the people who are interested in environment and sustainability

Recovery: There could be other competitions like photography, documentary making, journalism contests on the Green Week to pull in other groups of the population as well. The outcome could be used on social media to multiply the impact.

Service Design for changing the waste management behavior of the students of IIT Bombay

Figure 34: Waste warriors safety kit



Registered students receive the safety kit which includes gloves, mask, the schedule for the Green Week and some goodies.

Goal: To show how the service provider cares for the students and also to motivate them to take part in the event.

Enablers: sponsorship and logistics

Potential Failures: Safety kit is a touchpoint to motivate students to participate in the event but they might not come and participate even after receiving the safety kit.

Recovery: There could be frequent updates on social media, whatsapp groups about the event like team formations, sharing tips, countdown, establishing the goals, etc.

Service Design for changing the waste management behavior of the students of IIT Bombay

Figure 35: Introductory Sessions



Everyday throughout the week starts with the introductory sessions by volunteers and the maintenance staff.

Goal: To create exposure and awareness about the backend activities which further evokes deeper emotions and empathise the maintenance staff.

Enablers: Student volunteers, maintenance staff

Potential Failures: Maintenance staff or workers might not be able to communicate well. The event might affect the workers daily schedules

Recovery: There could be training sessions for the workers and the maintenance staff to communicate and present well. The event should be planned and scheduled in accordance with the availability of workers and the maintenance staff

Figure 36: Waste collection drive



Goal: To create exposure and awareness about the amount of waste which is being generated across the campus from different sources.

Enablers: Prior notice to the residents to discard the unwanted goods separately along with the daily solid waste generation. Transportation facility across the campus.

Potential Failures: Participants might have stigma handling the waste. Might lose interest in the middle of the event.

Recovery: Creating awareness about how they handle the waste and it's impotence by exposing the backend activities through the workers along with providing the safety gear could reduce the stigma. Tracking individuals' contribution, giving targets/goals and giving rewards/incentives could keep the participants engaged throughout the event.

Service Design for changing the waste management behavior of the students of IIT Bombay

Figure 37: Waste Segregation



Goal: To create exposure and awareness about the types of wastes which are being generated in the campus and difficulties in segregating the mixed waste.

Enablers: Segregated bins and safety gear

Potential Failures: Participants might have stigma handling the waste. Might lose interest in the middle of the event.

Recovery: Creating awareness about how they segregate the waste and it's impotence by exposing the backend activities through the workers along with providing the safety gear could reduce the stigma. Tracking individuals' contribution, giving targets/goals and giving rewards/incentives could keep the participants engaged throughout the event.

Figure 38: Wet waste treatment



There could be many activities involved in the wet waste treatment like biogas production which involves handling the biogas plant and compositing.

Service Design for changing the waste management behavior of the students of IIT Bombay

Goal: To create exposure on how much food waste is being generated from different sources and resources / efforts involved in treating the wet waste.

Enablers: Access to the bio gas plant and compost pits.

Potential Failures: Participants might have stigma handling the waste. Might lose interest in the middle of the event.

Recovery: Creating awareness about why it is important to treat wet waste by exposing the backend activities through the workers along with providing the safety gear could reduce the stigma. Tracking individuals' contribution, giving targets/goals and giving rewards/ incentives could keep the participants engaged throughout the event.
Service Design for changing the waste management behavior of the students of IIT Bombay

Figure 39: Dry waste treatment



[Upcycling]





[Recycling]



Image credits: Plastics make it possible

There could be many activities involved in the dry waste treatment like recycling and upcycling.

Goal: To create exposure on how much dry waste is being generated from different sources and resources / efforts involved in treating the dry waste.

Enablers: Access to dry waste recycling and upcycling plants.

Potential Failures: Participants might have stigma handling the waste. Might lose interest in the middle of the event.

Recovery: Creating awareness about why it is important to treat dry waste by exposing the backend activities through the workers along with providing the safety gear could reduce the stigma. Tracking individuals' contribution, giving targets/goals and giving rewards/ incentives could keep the participants engaged throughout the event.

Akhil Guthula | 196330008 | Project 3

Post event activities





The outcome from the other parallel events like photography, documentary and journalism contests could be leveraged to keep the participants engaged after the completion of the events. As we are leveraging social media, the reach could be maximized and has potential to influence a much greater population.

Figure 94 (*left*): A screenshot (prototype) of a facebook post from the Team Zero Waste declaring the results of the photography contest. Such posts could have more reach and impact than a usual post because a lot of people share and comment on such posts. Similarly, even the best documentaries could also be shared across social media.

Figure 95 (right): A magazine cover (prototype) published by Insights IIT Bombay on several Green initiatives in the campus. As the insights is one of the popular publishers in the institute they could be leveraged to highlight the initiatives and create awareness among the campus residents.

Analysis on the Green Week

Influence of the Green Week on the Participant behavior



The different programs within the Green Week have different values and significance. For example, Waste collection drives create awareness about how much and what type of waste is being generated across the campus from different sources. The waste segregation drive focuses more on creating awareness about the segregation of waste at source which also sensitizes the participants about how this segregation affects the further waste treatment activities. Similarly, food waste treatment at the Bio gas plant sensitizes the participants about the amount of food which is being wasted and resources required to process it. Students who have participated in the program for a couple of times could have enough experience to advocate from the next event.

Benefits

Knowledge benefits: Awareness on solid waste management through the interactive sessions as well as activities which expose the backend practices in waste management

Social benefits: Get to meet and network with like minded students and other campus residents

Emotional benefits: A get away from daily routines

Costs

Time costs: Students might not be interest to participate because of tightly packed academics

Energy costs: Segregation and waste treatment practices involves extra manual efforts

Psychic costs: Few people might be having issues with hygiene and cleanliness, such people might not be comfortable taking part in such events

- 1. Green Week
- 2. Treasure hunt

To expose the freshers to the campus ecosystem and biodiversity

- 1. Green Week
- 2. Treasure hunt
- 3. Sustainability cell

A systems level intervention to monitor and guide the sustainability aspect of the practices

- 1. Green Week
- 2. Treasure hunt
- 3. Sustainability cell
- 4. Sustainability at IITB stores

To promote the sustainable products and waste management at the stores

- 1. Green Week
- 2. Treasure hunt
- 3. Sustainability cell
- 4. Sustainability at IITB stores
- 5. Waste segregation at IITB hostels

To nudge the students to segregate the waste before disposing it

Personas

Personas

1. Raj

Aware and interested

2. John

Aware but not interested

3. Eva

Completely unaware











Scenario at Orientation day



Scenario at the Green Week



Multiple sources for students to know about the Green Week



Scenario at IDC - Interventions by the Sustainability Cell of IDC



Scenario at the IITB stores - promoting sustainability





What fithe installation doesn't work

Evaluation

1. Waste segregation at hostels



Evaluation

1. Waste segregation at hostels



Evaluation

1. Waste segregation at hostels

2. Remaining concepts - expert feedback

Thank you