



Empowering Urban Communities to Reduce Waste

The current waste management system in urban India is facing various challenges, from improper segregation to inefficient collection and disposal. This presentation outlines a comprehensive solution to address these issues using a community-driven approach with a data-driven dashboard and a website.

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Challenges of Waste Management in Urban India

Inadequate Segregation

Many urban areas in India struggle with inadequate waste segregation, leading to inefficient recycling and improper disposal.

Overburdened Infrastructure

Waste collection infrastructure is often inadequate, resulting in overflowing bins, illegal dumping, and environmental concerns.

Lack of Awareness

Limited awareness about waste management practices among residents leads to improper disposal habits, contributing to the problem.

Introducing the Data-Driven Waste Tracking Dashboard



Real-Time Tracking

Provides real-time insights into waste generation, segregation, recycling, and composting at the household and community levels.

Personalized Feedback

Generates personalized reports and recommendations to help residents improve their waste management practices and reduce their footprint.

Data-Driven Insights

Provides valuable data to local authorities, enabling them to optimize waste collection routes and improve resource allocation.

Empowering Households to Segregate, Recycle, and Compost



Recycling

Provides guidance on recyclable materials, encourages responsible disposal, and connects users to local recyclers.



Composting

Offers information on composting techniques, promotes composting practices, and encourages the creation of organic fertilizer.



Reducing Waste

Provides tips and strategies for reducing overall waste generation through conscious consumption and lifestyle changes.



Visualizing Individual and Community Impact

50%

Reduction

Illustrates the percentage reduction in waste generation achieved by individual households and communities.

30%

Recycling

Highlights the percentage of recyclable materials collected and processed through the initiative.

20%

Composting

Shows the percentage of organic waste composted, promoting resource recovery and sustainable practices.

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area's operataed participated, vasily compacy averc, composted



58%
Expiration

257%
Population

36%
Participation

27%
Composting

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ALLITRE

Fostering Sustainable Habits through Gamification

1

Badges

Awards badges for achieving milestones and completing challenges, motivating users to engage in sustainable practices.

2

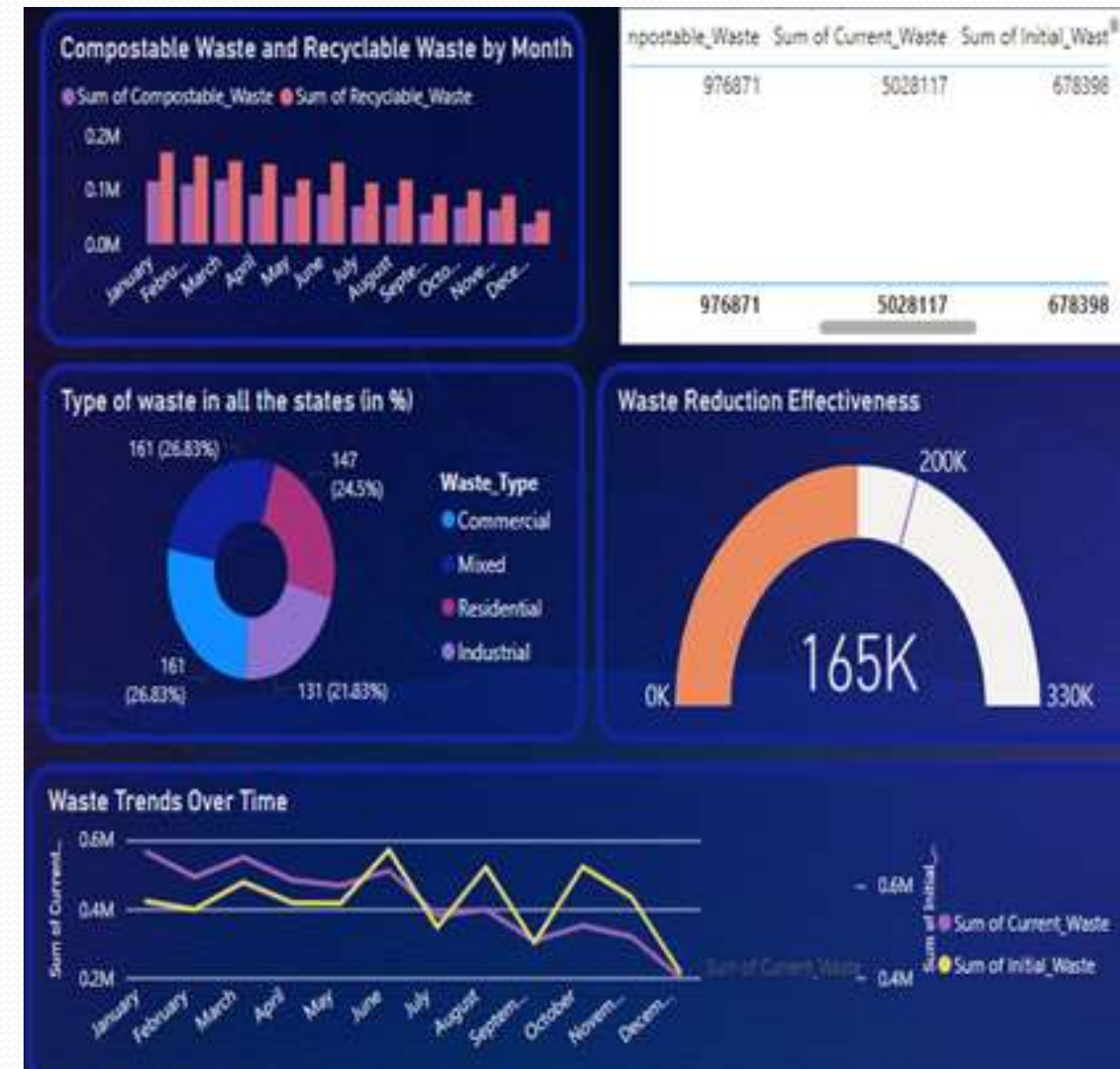
State-wise plots & data visualization

Displays state-wise rankings based on individual and community performance, fostering friendly competition and encouraging participation.

3

Feedback-based results

Offers feedback-based results for consistent effort and achievement, incentivizing sustainable behaviors and rewarding responsible actions.



Integrating with Local Recyclers and Waste Services

1

Mapping

Maps local recyclers and waste collection services, providing convenient access to relevant resources.

2

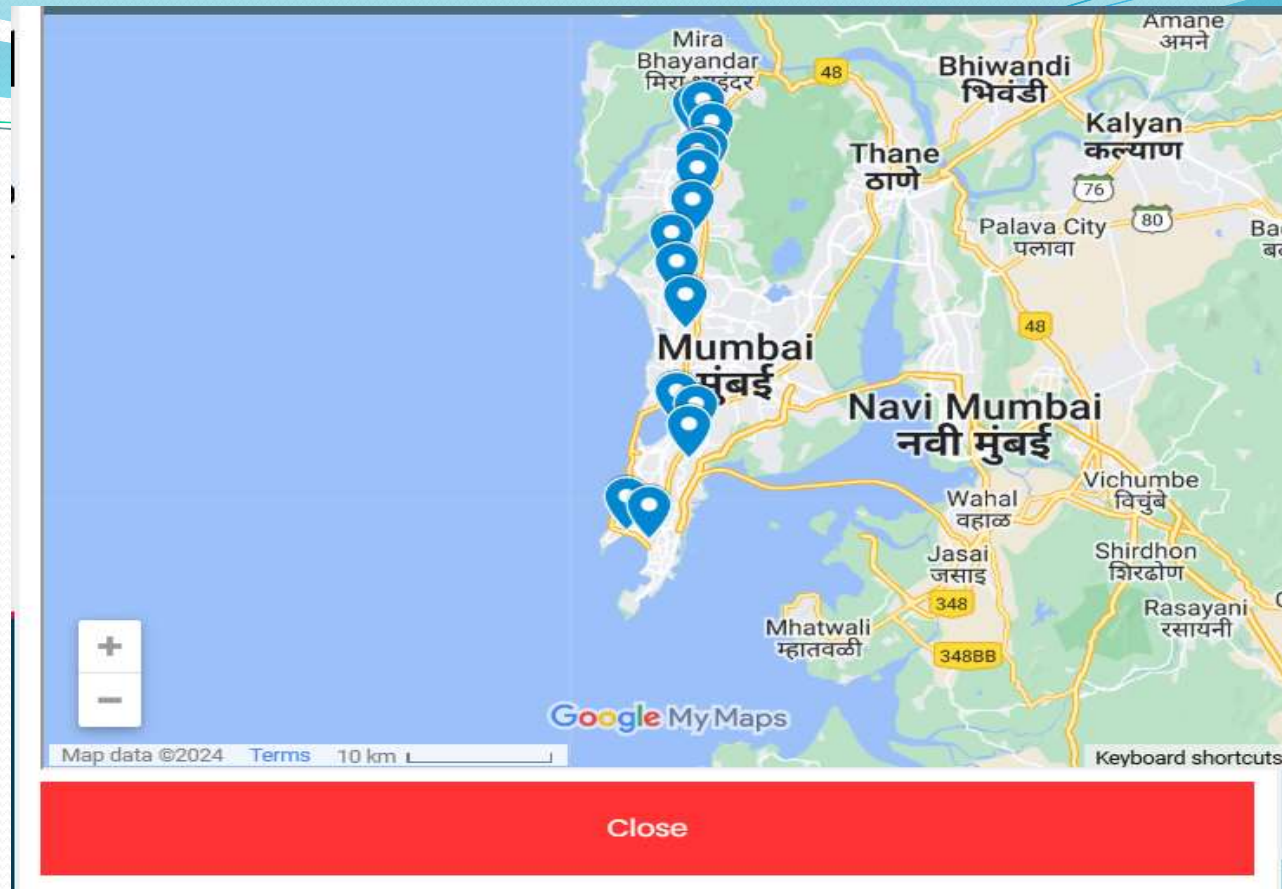
Scheduling

Allows users to schedule pick-ups for recyclable and compostable waste, streamlining the process and promoting responsible disposal.

3

Payment

Facilitates secure payment for waste collection services, offering a convenient and seamless experience.



Scaling the Solution: Expanding to More Communities





Tech Stack: Building a Sustainable Future

The technology stack used in this project includes:

Frontend:Html, css, JavaScript, React, React Native(depending on requirement)

Backend:Firebase/SQL ,PHP/Python depending on need, for database and backend , respectively

DATABASE STORAGE ON phpMyAdmin :

Server: 127.0.0.1 • Database: waste_management • Table: waste_details

Showing rows 0 - 0 (1 total, Query took 0.0002 seconds.)

```
SELECT * FROM `waste_details`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

	id	name	address	waste_type	quantity	date
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	soumil	gukbgie	Plastic	891.00	2024-12-18

Server: 127.0.0.1 • Database: wms • Table: adminlogin

Showing rows 0 - 1 (2 total, Query took 0.0005 seconds.)

```
SELECT * FROM `adminlogin`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

	id	username	password
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	admin	adminfest
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	janak	adminjanak

Check all | With selected | Edit | Copy | Delete | Export

Server: 127.0.0.1 • Database: wms • Table: adminlogin_tbl

Showing rows 0 - 0 (1 total, Query took 0.0004 seconds.)

```
SELECT * FROM `adminlogin_tbl`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

	id	name	email	password	code	status
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	5	janak bista	bistajanak303@gmail.com	\$2y\$10\$AYZ440zhe2NOXsc3dhuOc3XAmrFHyptRCFQiml...	0	verified

Check all | With selected | Edit | Copy | Delete | Export

Server: 127.0.0.1 • Database: wms • Table: contact

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete feature

Showing rows 0 - 3 (4 total, Query took 0.0006 seconds.)

```
SELECT * FROM `contact`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

fname	lname	contactEmail	contactPhone	comment
mark	Zukerberg	janak@gmail.com	1234	Hello wms!
mark	bista	janak@gmail.com	1234	hello
Janak	Bista	janak@gmail.com	8747832827	Hellol
John	Doe	bistajanak303@gmail	9828912874	nice appl

Server: 127.0.0.1 • Database: wms • Table: galapagos

	id	name	mobile	email	wastetype	location	locationdescription	file	date	status
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	110	janak bista	9848720051	janak.bista@sagarmatha.edu.np	Household	Bitpur	near durbar square	kalankwaste.jpg	Saturday 24th July 2021	Completed
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	117	janak bista	9848726651	bistajanak303@gmail.com	mixed	Bitpur	sakikisa	benjamin.PNG	5:17pm, Thursday 26th August 2021	Pending
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	118	Soumil Bha	9405727673	wms26.v@gmail.com	organic,mixed	Bitpur	MUMBAI	Screenshot 2024-12-12 140001.png	4:27pm, Thursday 12th December 2024	Pending
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	119	Soumil Bha	9405727673	souco23@gmail.com	inorganic,mixed	Bitpur	none	Screenshot 2024-12-12 124311.png	4:31pm, Thursday 12th December 2024	Pending
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	120	Soumil Bha	9405727673	souco23@gmail.com	inorganic,mixed	Bitpur	none	Screenshot 2024-12-12 124311.png	4:32pm, Thursday 12th December 2024	Pending

Server: 127.0.0.1 • Database: wms • Table: waste_pickup_requests

Showing rows 0 - 3 (4 total, Query took 0.0005 seconds.)

```
SELECT * FROM `waste_pickup_requests`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

	id	name	email	phone	pickup_date	pickup_time	address	specific_details	waste_type	waste_quantity
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1				0000-00-00	00:00:00			plastic	
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2				0000-00-00	00:00:00			plastic	
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3				0000-00-00	00:00:00			plastic	
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4				0000-00-00	00:00:00			paper	

Check all | With selected | Edit | Copy | Delete | Export

Server: 127.0.0.1 » Database: wms » Table: usertable

BrowseStructureSQLSearchInsertExportImportPrivilegesOperationsTrackingTriggers

✓ Showing rows 0 - 7 (8 total, Query took 0.0003 seconds.)

SELECT * FROM `usertable`

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

				id	name	email	password	code	status
<input type="checkbox"/>	Edit	Copy	Delete	17	janak bist	bistajanak303@gmail.com	\$2y\$10\$V/MVcUMG.lrwL0owFuzgDO1cY/laDV2SI5uawn740lg...	0	verified
<input type="checkbox"/>	Edit	Copy	Delete	27	Image	imagekunwar@gmail.com	\$2y\$10\$Z2/FobzUkJyHW9625ISW1.odNvd5sRykoSDGWSxJ7bP...	0	verified
<input type="checkbox"/>	Edit	Copy	Delete	28	janak bist	janak.bista@sagarmatha.edu.np	\$2y\$10\$PG0ub9mnlJKwP3NTa2E4suoXfzl6rfz/vdPkuA1jgfr...	0	verified
<input type="checkbox"/>	Edit	Copy	Delete	32	Rohit P	r.prajapati@gmail.com	\$2y\$10\$RYw2JkEt66qXeodDe9ZNWuL5piRa3EtFTXdHsCQAEt...	146219	notverified
<input type="checkbox"/>	Edit	Copy	Delete	33	Soum	moumil69@gmail.com	\$2y\$10\$knFkYW2et7S/NGO8xA5EfeG4yTXsw9bA/ahBKbXrq2Q...	135932	notverified
<input type="checkbox"/>	Edit	Copy	Delete	34	Soumil M	msoumil69@gmail.com	\$2y\$10\$zHunfQrBtlLxjKK294SNCOVjdspsvcmkjG91fJC3hrs7...	0	verified
<input type="checkbox"/>	Edit	Copy	Delete	35	nimish v	nimish26.v@gmail.com	\$2y\$10\$bCdYJ2XQjLq2wvOgXgZ.Yeo0Q.Hu2l/P3yZXCsmhN2j...	0	verified
<input type="checkbox"/>	Edit	Copy	Delete	36	Soumil Bhai	souco23@gmail.com	\$2y\$10\$X5gTWMP3qngPSphMSzL.SuLNsJk6vGPAe6gai4WD7IH...	0	verified

References :

1. <https://github.com/vivekshotti/REDIVIVUS-WasteManagementSite>
2. <https://github.com/Harsh9524/AquaTrash>
3. <https://github.com/ShivaBhattacharjee/WasteEasy>
4. <https://github.com/BogdanMFometescu/WasteManagement>
5. <https://github.com/adithyaanilkumar/ZeW-IT>
6. https://github.com/Lakhankumawat/sort_it
7. <https://github.com/imlakshayo8/waste-management-system>