

Initiatives taken under Swachh Bharat Abhiyan

Indore



**SWACHH
SURVEKSHAN**
2020



Indore Municipal Corporation



IMC PRESENTATION 2020.mp4

Integrated Solid Waste Management



Challenges in Indore prior to SBM (U)



Lack of public confidence in the Corporation and administration



Lack of sanitation and waste management infrastructure



Community and public toilets not maintained/ unusable



Issues with unions and lack of discipline among municipal staff



Manual attendance system & High absenteeism of staff



Inefficient supervision and monitoring



Scattering of waste nearby container bins & Garbage vulnerable points



Changing the Swachhata Landscape of Indore



Confidence building activities

Two-pronged strategy:
Sanitation & SWM infrastructure; and reaching out to citizens for awareness

Onboarding mayor, president, MLAs and corporators

Setting up infrastructure i.e. D2D comparted vehicles, transfer Stations, MRF center, compost plant etc.

Multiple waste collection system: Silt/ Sweeping waste, horticulture, C&D Collection, BWG, Biomedical, Meat waste

100% segregation through community participation

Special focus on setting up IHHL/CT/PT & Urinal Infrastructure



Intensive IEC activities to create large scale awareness

Bin free city/ towns & elimination of GVP points

Citizen involvement for three bin system (Wet, Dry and Domestic hazardous waste)

Targeted community involvement at various levels i.e., RWAs, Commercial Establishments, Social Organizations, etc.

NGOs mobilized for large scale awareness campaigns on SWM Components

Key Initiatives



Solid Waste Management

- Led by Municipal Commissioner/CMO, Municipal Teams visited field daily at 6-6.30 AM
- Bin Free, Dust free, litter free city/ towns
- Mechanized Road Sweeping
- Training and capacity building of Safaimitra
- Welfare measures for Safaimitra/ Ragpickers
- Active communication with Safaimitra unions
- Active involvement of corporators in D2D collection
- Ensuring Sustainability – “Waste to Wealth” (CNG – Public transport, Royalty – processing)



Sanitation

- Making city & towns Open defecations free
- Morning field visits by all officials/ staffs of municipals corporations and councils
- Construction of CT/PT/ IHHL & standalone Urinal
- Restoration & maintenance of defunct CT/PT
- Faecal Sludge Management



Community Engagement

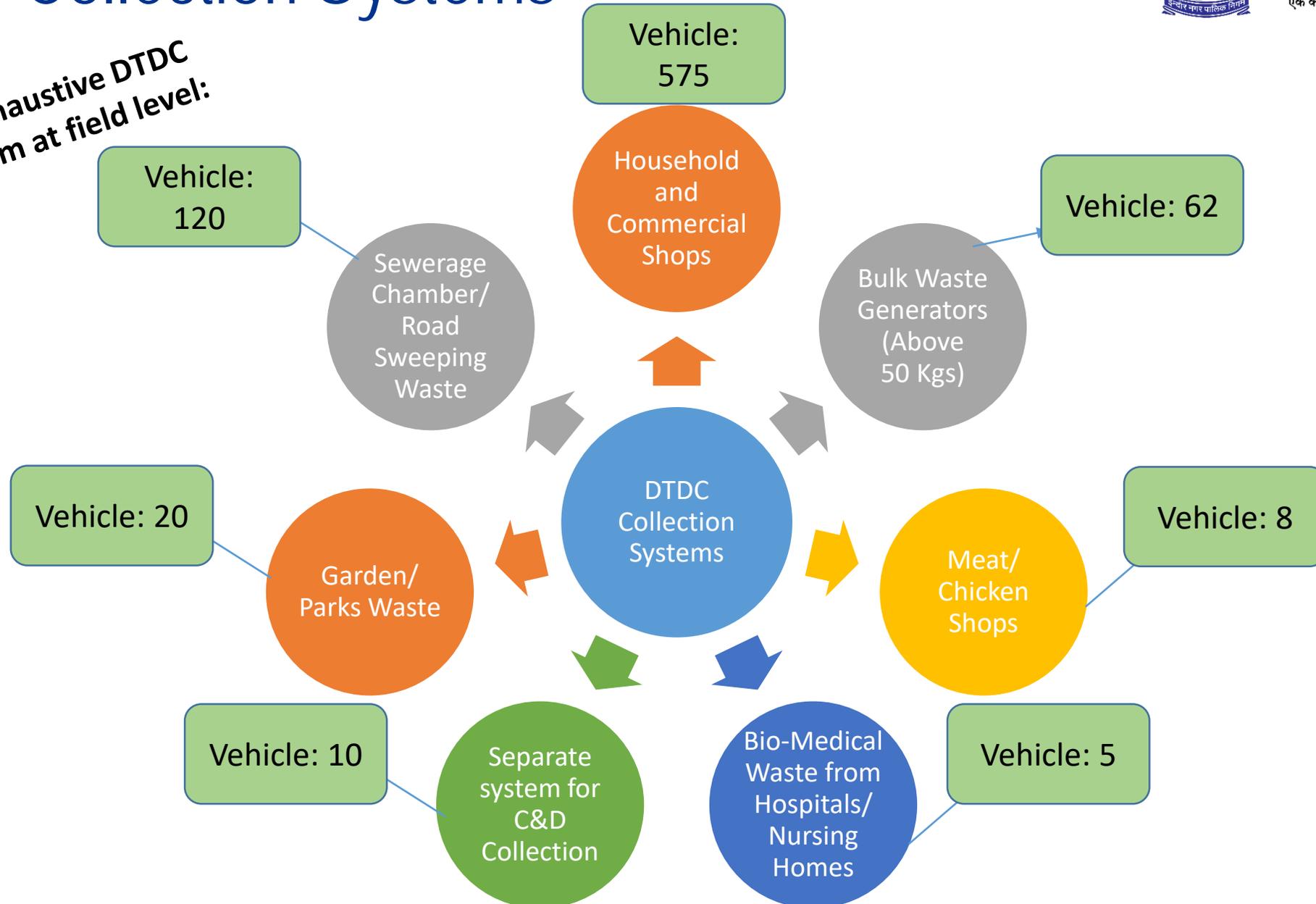
- ‘Dabba’ Gangs & ‘Seeteer’ Gangs (120) of young brigade to prevent open defecation
- CSR initiatives: Established San-mart for citizens to procure bins, bags, and other items related to SWM at subsidized rate
- ‘Indore 311’ Mayor Helpline for citizen grievance redressal & in other associated ULBs Swachhata App & intensive monitoring



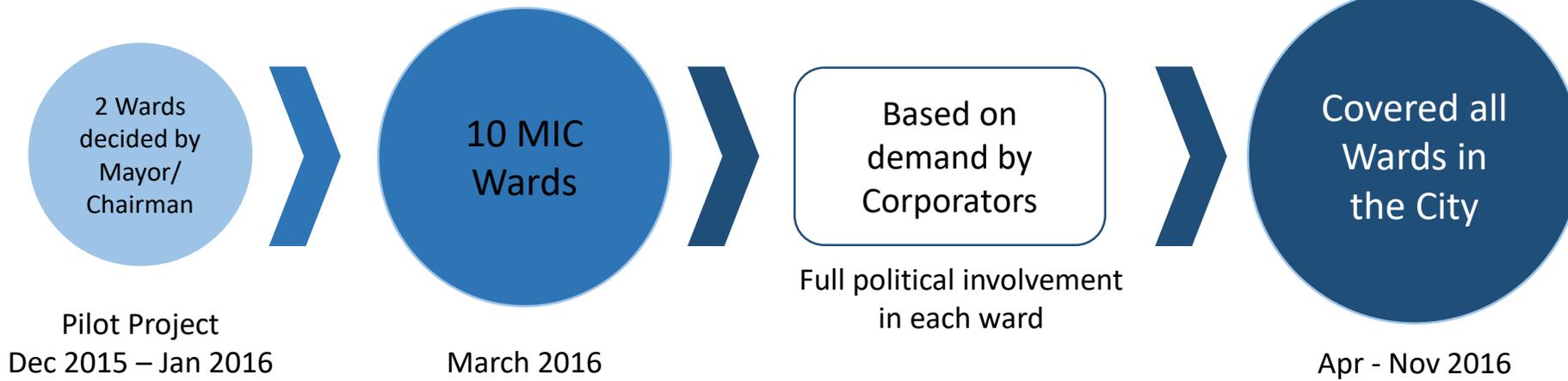
DTDC Collection Systems



Separate and Exhaustive DTDC
Collection System at field level:



Scaling up: Door to Door Collection



- Staff/ Vehicle Deployment
- Route Plan Maps
- NGO involvement
- GPS based vehicle monitoring
- Spot fine for violations



Ultra Modern Mechanized Transfer Stations



10
Ultra Modern
Mechanized Transfer
Stations



Scaling up: Segregation at Source



Scaling-up: Segregation at Source



- Strict checking by Driver/Helper/NGO at source stage
- At Transfer Station
- Spot fine for violations



Bin Free City – Key Initiative



Pilot Project
Started in 2
Wards

Dec 2015 –
Jan 2016



Door to Door
Collection of
Waste in 10
Wards

March 2016



Bin Free
Initiative Started
in these 10
wards

April 2016



Door to Door
Collection of
Waste in all
Wards

October 2016



Indore got the
status of Bin
Free City

December 2016



Bin Free City

January 2020



Indore
is
sustaining
Bin-Free
status

Bin Free City Initiative - Transformation



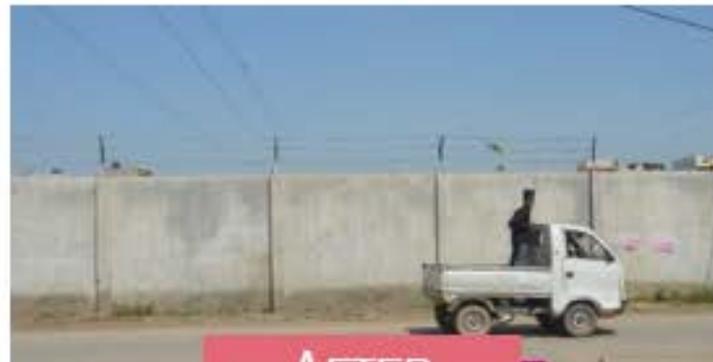
Near Bapat Square,
Indore



Near Swami
Vivekananda School



Near MABFM
Academy



BEFORE

AFTER

PRESENT

Wet Processing

Centralized Processing

Centralized Organic Waste Processing



615 TPD Capacity

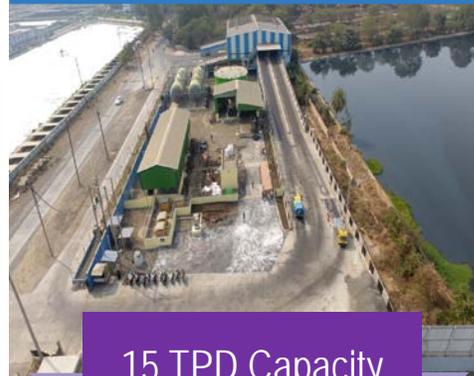
Decentralized Organic Waste Processing

Biomethanation - Choithram Mandi



Onsite Composting
20 TPD Capacity

Biomethanation Plant - Kabitkhedi



15 TPD Capacity

Mobile decentralized composting unit

5 TPD Capacity
Mobile Composter

Onsite Waste Composting (OWC)



RWAs Bulk Garbage generators - Onsite processing

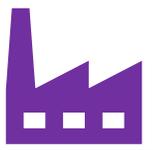
52,000+ households



Practicing home composting since 2019
and help governance for less expenses



Sustainability: Powering clean and green urban transportation



Plant

- Capacity : 15+20= 35 TPD (Two Plant combined)
- Managed by Concessionaire
- Area: 15 TPD-36,000 Sq. Mt. + 7,500 Sq. Mt.



Financials

- Capex Cost: Rs. 9 + 9 =18 Crs.
- **Annual Revenue: Rs. 3.4 Crs.**
- Per Unit cost:
Bio Gas: Rs. 66/Kg



Operations

- Construction timeline:
18 Months



Implemented in District/M. Corp Level



Employment Generation 18-22 Pax.



Waste Processed

- Processed waste: 35 TPD
- Recycled: 600 KG/ Day + 800 KG/ Day



Benefits

- Reduce dependence on fossil fuel
- Biogas Generation Reduces Soil and Water Pollution

Generated Bio-CNG Fuels City Buses covering over 3,500 km/day



Recycled Products Bio-CNG



Sustainable Revenue Model – Dry Waste Processing



- ▶ This 350 and 200 TPD plant capacity will help IMC in generate revenue of (1.41+16) 1.57 cr. Every year.
- ▶ On PPP mode the company has invested 30 cr.
- ▶ This plant will be well linked by Collection and Transportation App of IMC to ensure ICT based record keeping.
- ▶ Sorting all type of dry waste such as Paper, plastic, iron, glass, e-waste, polythene, rugs, leather, shoes, pet bottles, rubber etc.,
- ▶ Integration with Recycling Industries, Cement Plant and Road Construction Agencies

Livelihood Opportunities –Ragpickers

- ▶ This plant will help in ensuring maximum recovery, minimum intervention & better health safety environment.
- ▶ 700 Rag pickers and 14 Kabaadis have been provided sustainable livelihood opportunities
- ▶ Experience rag-pickers are trained by NEPRA to help in quality check and segregation
- ▶ These experienced rag-pickers have been *provided* sustainable livelihood as well as enhancing the performance of plant



Sustainability | Moving towards Circular Economy – MRF



Plant

- Capacity – 550 TPD
- Managed by Concessionaire
- Area: 8 Acres



Financials

- Capex Cost: Rs. 25 Crs.
- Annual Revenue: Rs. 1.5 Crs.



Operations

- Construction period: 8 Months
- Annual Opex. 72 Lakh



Waste Processed

- Dry waste Input: 550 TPD
- Processed waste: 440 TPD
- Recycled: 90% plastic & 10% RDF



Benefits

- Help to reduce solid waste
- Ecofriendly Processing



Recycled Product

- Use in road construction
- RDF*



Implemented in District/M. Corp Level



Employment Generation 250 Pax.

*RDF: Refuse Derived Fuel





Construction and Demolition Waste Plant – Process

Collection and Transportation



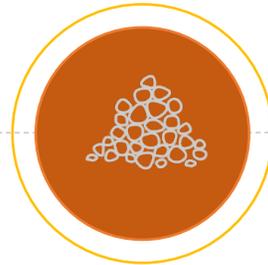
Input in the Feed Hopper



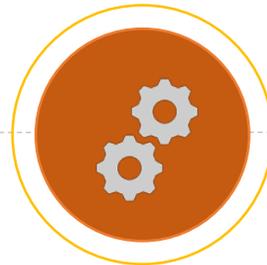
3 Deck Screen Processing Unit



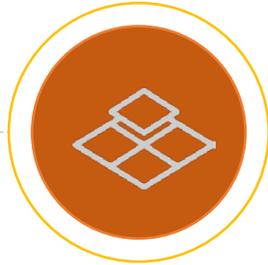
Aggregate of <20mm, >20mm and <10 mm



Paver and Brick molding machine



Pavers and Bricks



Sand Classifier

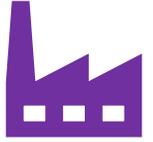


Photographs





Sustainability | Construction and Demolition Waste Plant



Plant

- Capacity – 100 TPD
- Managed by Concessionaire
- Area: 217800 Sq. Ft.



Financials

- Variable Revenue Model
- Capex Cost: Rs. 4 Crore
- **Annual Revenue: Rs. 3.93 Crs.**



Operations

- Construction timeline: 3 Months
- Annual Opex: Rs. 36 Lakhs



Waste Processed

100% Recyclable

- Waste Processed – 60 TPD



Benefits

- Reduction in municipal solid waste
- Positive environmental impact



“Recycling C&D waste would lead to minimal mineral extraction”



Implemented at M. Corp Level



Employment Generation 15 Pax.



Recycled Products
1. Paver Blocks
2. Bricks



Sustainability – 3R (Reduce-Reuse-Recycle)



Disposal Free Markets



Secretary MoHUA visit



3R Pledge by Citizens



'Ashara Mubaraka'



Jatra (Marathi Festival)



Cricket Match:3R Protocol



Initiatives

- 8th UN Regional 3R Forum in Asia and Pacific REGION -held at Indore April 2018.
- Indore 3R declaration for clean land, clean water & clean air.
- Zero waste events (Ashara Mubaraka & IPL)
- Reduction of Waste Generation at source by Decentralized Composting & behavioral change
- Promoting Reuse & Recycling of waste
- 22 Zero Waste Campus/ colonies

Impact

- 5 Zero waste wards initiative out of 150 wards have been selected
- More than 0.52 lakhs of citizens doing home composting
- Reduction in transportation cost per matric tons
- Reduction in use of single use plastic
- Initiative of 3R already has been taken to reduce the waste:- *Bartan Bank, Food Bank, Artefacts made out of Waste, Neki Ki Dewar, Leftover food to needy people*



Bio-Remediation



PHASE I:
GREEN BELT
DEVELOPED ON BIO-
REMEDiated LAND
[50,000 MT]



PHASE II:
GREEN BELT
DEVELOPED ON BIO-
REMEDiated LAND
[1,00,000 MT]



Bio-Remediation - Transformational Change



BEFORE



BEFORE



PRESENT

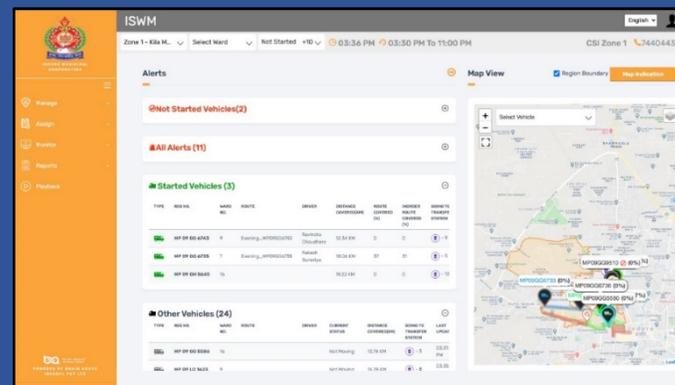


- ▶ 100 % legacy waste remediated
- ▶ 100 acres land worth Rs. 300 cr. Reclaimed
- ▶ Proposed Plan to develop Golf Course/ City Forest

Bio-Remediation - Transformational Change



Digital innovations for citizen engagement



SWACHHATA APP:

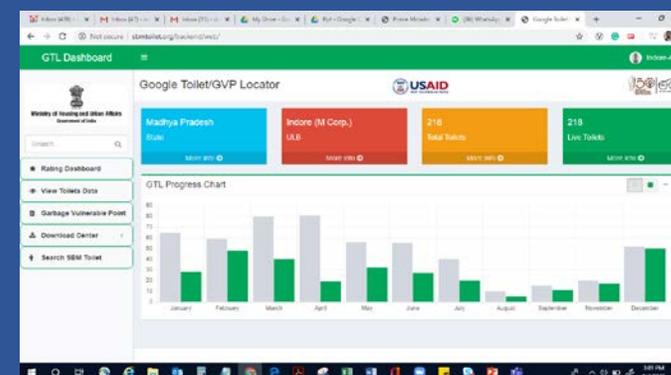
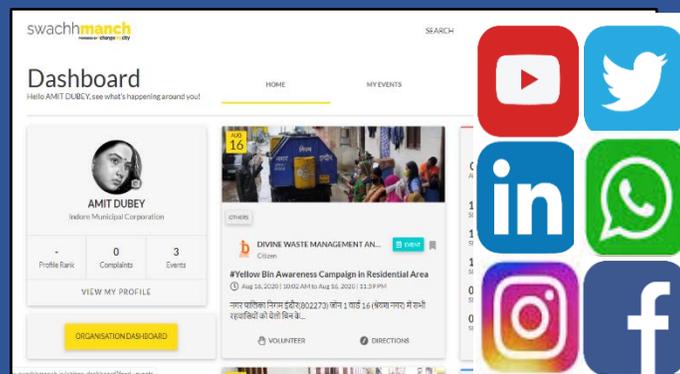
98.5% complaints resolution within SLA

INTEGRATED SWM: Vehicle tracking, talk button with driver, 100% weighing at transfer stations and disposal site

SEGREGATION MONITORING APP: Startup initiative for monitoring Segregation

CITIZEN PARTICIPATION:

Bhopu Mohalla App, Indore Talk, Indore Wale, Indore HD, Indore Meri Jaan, FM channels



GOOGLE TOILET LOCATOR:

326+ toilets mapped across the district and used actively by citizens

Swachhata – Jan Andolan



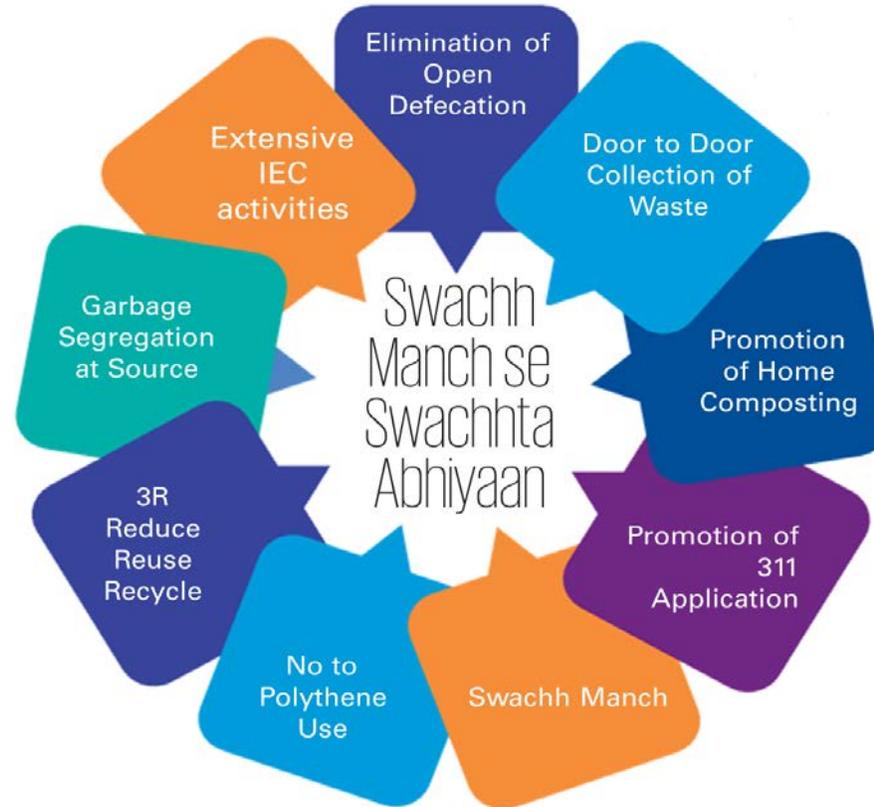
Awareness on Swachhta among Youngsters



Awareness on Swachhta among Citizens



Awareness on Swachhta among Citizens



Awareness on Home Composting



Awareness on Indore Swachhta Abhiyan

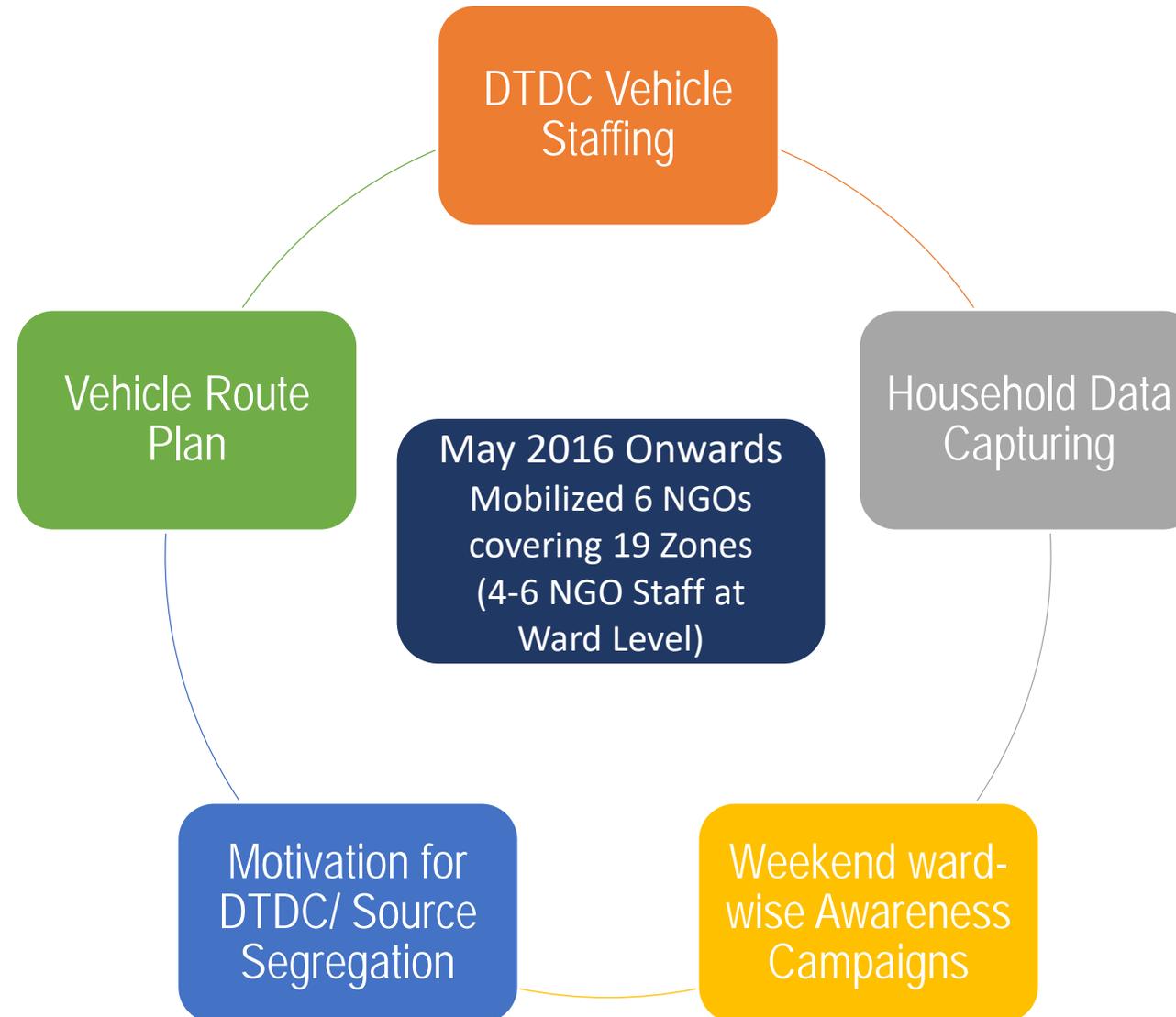


Awareness on 311 App

Role of NGOs in setting up SWM Processes



NGOs have played a key role in setting up SWM and creating Large Scale Awareness



Result and Impact



ODF & Water Sustainability

- Sustainable ODF City since 2015 and 1st ODF++ City in India
- 100% Fecal Sludge treated at STP
- Action Plan for reuse of treated waste water is formalized.
- 100% IHHL constructed as per requirement
- Self sustainable CT/PT to cater to the population of Indore

SWM

- State-of Art Infrastructure encompassing the entire waste value chain from collection to scientific disposal of waste
- Dumpsite remediated and 100 Acre land reclaimed
- Efficient C&D Waste Plan
- Sustainable Revenue Model established of Dry Waste Processing
- 3R (Reduce-Reuse-Recycle) principal implementation with citizens

IEC

- 100% DTDC and 100% Source segregation achieved at all wards
- 100% processing of Dry and Wet Waste achieved and the city is in process of achieving 'Zero Landfill Model'
- Across all parameters, IEC activities now focus on sustenance of the systems and processes in place

Way Forward (Waste Projects 2020)



100 TPD Sludge Hygiene-nation Project in Collaboration with BARC

500 TPD Bio-Methanation Plant

10 TPD x 4 Dry waste processing plants with Material recovery facility

05 Zero Waste Wards

399 Urinal upgradation

500 TPD NTPC Dry Reject to Bio Char/ Coal





Swachh Survekshan Award 2017

Swachh Survekshan Award 2018

Swachh Survekshan Award 2019

Swachh Survekshan Award 2020



**इंदौर लगाएगा
स्वच्छता का पंच**

**इन्दौर
रहेगा नं.1**

नगर पालिक निगम, इंदौर

Thank You