PPP FRAMEWORK -
Smart Cities: Ease of Living

At
South Asian Regional Conference on
Urban Infrastructure: New Approaches to Public-Private – Partnership
&
Municipal Finance Innovations

Pravasi Bhartiya Kendra, New Delhi

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NDMC- at a glance

- 42.7 sq km area
- 0.25 million population (2011 census)
- 1.6-2.0 million per day floating population 5850 persons/ sq km density (2011 census)
- 48% green cover
- Cleanest and greenest part of the capital
- The Rating is AA+
Setting Global Benchmark for the Capital City

PHYSICAL INFRASTRUCTURE/RESOURCE CONSERVATION
- STPs
- Parking
- PTUs
- Public Bike Sharing
- Smart Pole
- Smart Power Grid
- Water Managements
- Solid Waste Management

SMART GOVERNANCE
- Digital Governance
- Online Services
- Interactive Smart Panels
- Smart LED Screens

SOCIAL INFRASTRUCTURE
- Smart Classroom
- E Hospital
- Non-Conventional Skills
- Happiness Areas (Fountain)
Projects in PPP MODE

- **Physical Infrastructure**
  - ✓ Mini Sewerage Treatment Plant (STP)
  - ✓ Parking Management System
  - ✓ Smart Toilets – PTUs
  - ✓ Non-Motorised Vehicle (NMV) - Public Bike Sharing
  - ✓ Smart Poles.

- **Digital Governance**
  - ✓ Digital Interactive Smart Panels
  - ✓ LED Screens
Physical Infrastructure
Decentralised STPs

- Bid parameter – water quality and rate
- Rate of treated water made the bidding parameter with 5% increase p.a.
- Revenue Model has 100% guarantee by NDMC to purchase treated water
- Concession Period - 12 yrs.
- NDMC guarantees using minimum 95% of treated water
- Project Running successfully since last 02 yrs.
- Used for Horticulture purposes
- MoU signed with NEERI for 12 Phytorid based STPs
  - One STP installed in Girls’ school at Gole Market of 1 lac liter/day.
Parking Management System

- Smart Parking for 5392 slots for cars & 2237 slots for scooters
  - Sensor based parking to identify occupancy of each parking slots
  - LED Screens to display parking availability
  - Entry & Exit devices for tickets & payments
  - Smart cranes for enforcement
  - Mobile App for parking availability and pre booking
  - Web Portal for parking availability & pre booking
  - Auto Pay stations for payments
  - Handheld devices
  - Cameras for security
  - Command & control Centre for online monitoring
Public Toilet Units

- 109 smart PTUs, equipped with:
  - Bank and water ATM
  - Medical tests facility for 6 non-invasive tests (ECG, Spirometry, Oximetry, Blood pressure, Glucose Test, Body temperature)
  - Snack vending machine
  - Sanitary pads dispensing machine
  - High quality fittings
  - GPS based real time feedback mechanism
  - Backlit totem with watch and temp display
Public Bike Sharing (PBS)

- On PPP mode
- Minimum 500 bikes at 50 stations with
  - Central control centre
  - Interactive panels at stations
  - GPS controlled international standard
Smart Poles

- On PPP mode
- 73 nos in CP and adjacent areas
  - Wi-fi connectivity
  - Environment sensors with display unit
  - CCTV
  - LED street light
- Connectivity to Control Centre at Palika Kendra
- 55 Installed and commissioned
Digital Governance
Interactive Smart Panels

- On PPP mode
- 46” LED outdoor interactive panel for info to citizens, tourists reg various Govt. facilities
- 75” LED outdoor panels for advertisement
  - Free wi-fi
  - Mobile charging points
- 50 nos. in commercial Areas
Smart LED screens in public places

- On PPP mode
- Digital LED Information panels
  - 55” LED screens for providing information to citizens and advertisement to improve the aesthetic and hygiene in CP corridors by covering the corners.
  - Mobile charging points
  - Free wi-fi
  - Information display for 20% of time
- 50 nos installed.
Façade & LED screens in public places

- Giant screens
- 20’x10’large screens (International Quality)
  - Two at CP and one at Khan Market
- Façade Screen
  - At NDMC HQ
  - 1257 sq.mtrs.
  - Visible from 2-3 km distance
Social Infrastructure
Fountains and Lightings

- 11 Murty fountain and lighting
- 8 nos. innovative dynamic RGB flood lights with 60 million
Water ATM

- To provide pure water at affordable and reasonable price
  - Phase I- 17 ATMs installed
  - Phase II- 20 ATMs installed
  - Phase III- 40 ATMs on PPP mode
Integrated MSW management

Houses
Market
Offices
Institutions
Roadsides
Garden

School Storage (doors)

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Transferring Garbage directly into Mechanical Compactor

Mechanical Compactors

Waste to Energy / Compost Plant at Okhla
Bio-Methanation Plant

- 0.5 TPD Bio-Methanation plant is installed at Laxmibaai Nagar.
- The gas generated is used at NDMC’s women’s hostel.
Reverse Vending Machine

- 11 RVM setup to bring behavioral change.

- Citizen deposits plastic bottles/Cans, get remuneration in form of Coupon/Cash through Paytm.
Organic waste converter

- NDMC is installing Organic Waste Converter in partnership with Art of Living Trust.
- These shall facilitate in making NDMC colonies Zero waste as all the wet waste shall be utilised in the colony.
Smart Healthcare

- E-hospital introduced in NDMC hospital, polyclinics and dispensaries
  - Aadhar based registration
  - Online medicine availability
  - Self registering counter
  - OPD, IPD, Pharmacy module etc. implemented
- Jan Aushadhi Centre opened at sub-way near RML Hospital
- Introduced Annual health checkup for students / safai sevaks
- CT & MRI being commissioned at Charak hospital on PPP
Happiness Areas

- Charkha Museum
  - Over Palika Parking at CP
  - Containing huge Stainless Steel Charkha
  - Museum containing the history of Charkha and its roll in Independence movement
  - Charkha as old as 100 years are displayed in the museum
- Palika Park developed adjacent to museum
- Cultural programme being organised and becoming a happening place
Happiness areas....
Happiness areas….

- Open Gyms
  - 93 nos of open gyms have been erected at various public places, particularly in
    - Garden &
    - Society parks
  - Very high quality equipment
  - Immensely popular amongst citizens and people are using extensively
  - Gyms at Lodi Garden and Children’s Park for physically challenged
Skill Development

- Pradhan Mantri Kaushal Vikash Kendra at Mandir Marg in collaboration with Pvt. Sectors
- Health and Solar related 9 courses are offered
  - General Duty Assistant Course, duration 460 hrs.
  - Home Health Aid Course, duration 400 hrs.
  - Vision Technician Course, duration 465 hrs.
  - Emergency Medical Technician Course, duration 400 hrs.
  - Diabetic Educator Course, duration 400 hrs.
  - Pharmacy Assistant Course, duration 465 hrs.
  - Dental Assistant Course duration 700 hrs.
  - Solar PV Installer Electrical Course, duration 240 hrs.
Skill Development Centre of Excellence in Community Hygiene under way

- To be developed at Tughlaq Crescent
- Infrastructure has been developed
- Act as Knowledge center with multi-pronged scope of work in community hygiene
- The center would work for
  - A) Technology solutions and innovations
  - B) Training and institutional strengthening
  - C) Behavior and social norms
  - D) Facilitate focused research and innovation on sanitation (Including technology) and waste management
Unified CCC

- Bid received, scrutinized and to be submitted to Council
- Integrating following services:
  - Smart LED Street Lights
  - Sensor Based Smart Parking
  - 24x7 Water Grid Mgmt.
  - Electricity Grid Mgmt.
  - Property Tax (GIS)
  - Smart Classrooms
  - CCTV
  - App NDMC311
  - Building Plans Approval
  - Accounts Module (e-fin module)
  - e-Hospital
  - GPS tracking of vehicles
  - e-office (including e-dak)
  - Public Wi-Fi
  - Estate License Fee module
  - Citizen Interactive Kiosks for Urban Service Delivery
  - Environmental Monitoring
  - Smart Waste Management
  - Billing of Electricity & Water
  - Event Management
  - Birth & Death Module
  - Health License
  - Central Workshop Management
  - HRMS including pay roll and pension, Biometric Attendance
  - Sewerage Treatment Plant
  - Public Bike Sharing
  - Asset Management
Citizen engagement

Through Social Media

Through Digital Feedback

- Face to face interface with RWAs
- Involving students as ambassadors