Ranchi Smart City Proposal

SCP overview and Next Steps
SCP Overview

► City Overview – SWOT
► City Vision & Goals
► Overview of citizen engagement process
► Area Based Development proposal
► Pan city proposal
► Next steps
## City SWOT

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Research and knowledge based city character – Presence of nearly 15 R&amp;D Centres / PSUs, 21 MSEs</td>
<td>✓ Inadequate higher / technical education facilities</td>
</tr>
<tr>
<td>✓ Availability of quality sports infrastructure – 17 Stadiums, Sports university</td>
<td>✓ Poor urban planning, road infrastructure, public transport system</td>
</tr>
<tr>
<td>✓ Availability of prominent schools/ pre-college facilities</td>
<td>✓ Lack of specialised medical facilities</td>
</tr>
<tr>
<td>✓ Presence of abundant natural spots</td>
<td>✓ Low disaster management preparedness</td>
</tr>
<tr>
<td>✓ Variety of flora, fauna, variety of horticulture and floriculture</td>
<td>✓ Poor road and rail connectivity</td>
</tr>
<tr>
<td>✓ Absence of sewerage system</td>
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</tr>
</tbody>
</table>

### Opportunity

Opportunity to develop:

- ✓ Knowledge hub/ Higher education facilities / Education hub
- ✓ Eco-tourism centre
- ✓ Sports hub
- ✓ Mineral related business hub
- ✓ Tribal tourism development culture centre / Herbal medicine hub
- ✓ Food processing hub

### Threat

- ✓ Naxalism
- ✓ Erratic monsoon
- ✓ Depleting green cover / indigenous plantation
- ✓ Depleting water table
- ✓ Thundering / lightning fatalities
- ✓ Ranchi has high migration rate
**Key takeaways from city SWOT**

► Historically Ranchi is home to Government Organizations, PSUs and R&D centres that drives city's economy. These organizations depend on other cities to meet their manpower requirement.

► Contrarily, Ranchi despite being rich in human capital, grapple with a scenario to retain its people in the city, as young population often move out from the city to pursue higher technical education.

► Through knowledge focussed Area based development, Ranchi intends to bridge the missing link between the young population migrating from the city and rich human capital requirement of economic drivers of the city.
City Vision and Goals

“Ranchi to be a hub for education – for both Formal and Non-formal sector, by reinforcing its good educational institutes in preparation for welcoming knowledge based industries.”

Goal 1: To become knowledge hub/city for the State of Jharkhand and other North-Eastern States of the country in 5-10 years

► Enhanced visibility:
  ► Attraction of the best think tanks to the knowledge city
  ► Brand image as the education and research capital will be enhanced

► Development of human capital
  ► Students and researchers get better platform to hone their skills
  ► Development of intellectual property

► Augmentation of social infrastructure

Goal 2: Reduce travel time and incidents of traffic violations

► Use of IT as a tool to make Ranchi a safe city for pedestrians and commuters

Goal 3: Ranchi to be one of the cleanest and greenest city

► Prompt and time bound collection and transportation of waste and its disposal
Overview of citizen engagement process

**Modes of Citizen Engagement**

- **Talk Shows**
  - ~30
- **Structured questionnaire**
  - >80,000
- **Print Media**
  - Multiple articles
- **Radio Jingles**
  - 4 jingles 5 times for 7 days
- **Social Media**
  - MyGov Portal
  - Essay Competition
    - 2420 online/offline entries
  - Smart Rath
    - 5 Raths covered 55 wards in 10 days
- **Email ID**
  - smartranchi@ranchimunicipal.com
- **Nukkad Natak**
  - 110 locations
- **Ward level polling**
  - 55,000
- **Pamphlets**
  - >1.5lakh distributed

**Extent of Citizen Engagement**

- **Schools**
- **Colleges**
- **Common citizens**
- **NGOs**
- **Association**
  - Architects / Builders / Traders / Bars
- **PSUs**

**Polling results - Area Based Development**

<table>
<thead>
<tr>
<th>Area</th>
<th>MyGov polling results</th>
<th>Talk show polling results</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEC Greenfield</td>
<td>Morabadi - Retrofitting, 55%</td>
<td>HEC - Retrofitting, 63%</td>
</tr>
<tr>
<td>Baraiatu - Retrofitting, 14%</td>
<td></td>
<td>Harmu - Retrofitting, 14%</td>
</tr>
<tr>
<td>Bariatu - Retrofitting, 7%</td>
<td></td>
<td>Morabadi - Retrofitting, 7%</td>
</tr>
</tbody>
</table>

**Polling results - Pan city proposal**

- **MyGov polling results**
  - Sewerage & Drainage, 15%
  - Water Supply, 11%
  - Parking, 16%
  - Transpor, 31%
  - SWM, 27%
- **Talk show polling results**
  - Pedestrian Zone, 10%
  - Integrated Solid Waste mgmt., 12%
  - Water Mgmt. System, 8%
  - Intelligent Public Transport System, 12%
  - Intelligent Traffic Mgmt. System, 17%
  - Smart parking, 6%
Area Based Proposal

Strength
1. Proximity to Hatia Railway station and Birsa Munda International Airport
2. Availability of natural corridors within site boundary
3. Good connectivity with 2 highways at the site peripheral.
4. Surrounded by a mixture of residential, IT industries and government offices
5. Availability of land for development

Weakness
1. Land parcels being cut by the railway lines limits land integration
2. Lack of road infrastructure to serve the site
3. Proximity to industries

Legend
- Residential
- Industrial & Manufacturing
- IT Park
- Service & Light Industry
- Heavy Industry
- Public & Semi-Public
- Government
- Transportation
- Transportation facilities
- Site
1. Concept idea is to have a knowledge hub at the center of our development.
2. Bringing in a “Nature Walk concept” where the “Knowledge Vale” is a linear landscaped ecological belt connecting various parts of the site.
3. All public spaces & nodes are planned along this Vale.
4. The green belt at the edge of the Knowledge Hub forms a buffer between the Public-Semi-public engaging sector.
5. The residential Zones further envelops this Central Hub from the other sides along with necessary supporting commercial & social infrastructure.
6. Core idea is to create a lively walking environment for the users so that their pedestrian from one point of the site to other is smooth.
Area based Proposal
Smart Components

Knowledge Hub
Core function of the development consisting of skill development centre, training institutes, workshops, R&D wings along with open public spaces.

Education, Research wings & Training institutes
- Smart classrooms & workshops
- Digital public library
- 100% network coverage in campus
- Interactive common rooms

Common Service Tunnel for all Utilities
Supply & Distribution
Services accommodated:
1. Power lines & Network cables
2. Water supply, sanitation, waste, waste disposal

Smart Traffic Management
Integrated Traffic Control
- Centralised traffic monitoring
- Maintenance of equipment & back-end systems
- Intelligent parking systems

Public Commute service
- Integrated multi-modal public transport

Integrated Logistics
- Bicycle sharing, RFID tagging

Decision support
- Improved problem solving & decision making
- Smart IPT stands & App

IT Connectivity
- Underground fibre optic cabling for internet and telecommunication.
- LAN connectivity capabilities to all buildings.
- Wifi hotspots at all important public nodes, buildings.

Safety & Security
- Pan development Video Monitoring.
- Helpline & SOS numbers.
- Crime alert Apps.

Sustainable Waste & Water management

Smart Building
Water Harvesting
Orientation Optimization
Renewable Energy
- High Efficient ACMV
- Photo & Motion Sensor
- Regenerative Lift

Water Supply

Water Quality Sensor
- Water Pressure Optimizer
- Real-time hydraulic modelling
- Water SCADA
- Outage Mgmt
- Mapping & Modelling of distribution assets
- Smart Meter

Distribution Network

Waste management is introduced to separate waste streams in Hostels, Hotels and food court kitchen.

1. Biogas produced is connected to the current gas inlet-pipe
2. Waste management is introduced to separate waste streams in Hostels, Hotels and food court kitchen
3. Absorption Chiller Plant
Components:

- Traffic control and management center
- Disaster recovery center
- Incident detection system
- Adaptive signal control of at-grade intersections
- CCTV-camera system
- Traffic information system with variable message signs
- Speed and red light violation cameras
Pan City proposal
Solid Waste Management

Smart Solid Waste Management –ICT Tools (in the already existing SWM System)

1. All vehicles (e-Rickshaw) to be GPS tracked
2. RFID to be provided in all vehicles
3. IVRS based complaint tracking photo tagging option
4. Vehicle management system (O&M system)
5. Digital weigh bridge
6. Biometric (thumb impression and face recognition) attendance system
7. Control and Command Centre

Pneumatic waste collection system plan

- Waste management & recycling plant
- Common service tunnel for pneumatic pipes
- Waste collection point
Next steps based on MoUD Comments

City Level criteria

► Showcase initiatives taken in the city (ongoing and proposed projects) to improve basic services in the city to address the issues related to basic services, public transport etc

► Elaborate the existing ecosystem existing in the system that supports proposed knowledge hub

► Provide qualitative and quantitative outcomes for the proposed goals and strategies to achieve the vision

► Highlight ongoing and upcoming projects proposed in the city to increase the employment opportunities in the city

► Increase citizen outreach through online platforms such as MyGov platform, Facebook
Next steps based on MoUD Comments
Area Based Development

► Showcase Proposed Site’s connectivity with the city – Existing and proposed

► Site’s linkage with other economic, institutional and commercial centres of the city

► Elaborate economic and social benefits of the proposed development – Knowledge hub

► Existing education infrastructure – premier institutes, catchment regions for students etc needs to be elaborated

► Provide list of premier institutes – national and international; targeted for the knowledge hub/city
Next steps based on MoUD Comments
Pan City Proposal

► Details of the Non-IT initiatives taken in the city to improve the mobility should be further detailed, to establish the ‘inclusivity’ of the proposed solutions

► Initiatives taken to inform and encourage people to adopt the proposed solution should be elaborated
Thank You!

Please share your opinion on:
www.mygov.in
Email -smartranchi@ranchimunicipal.com