

Concept Note on SMART DISTRICT

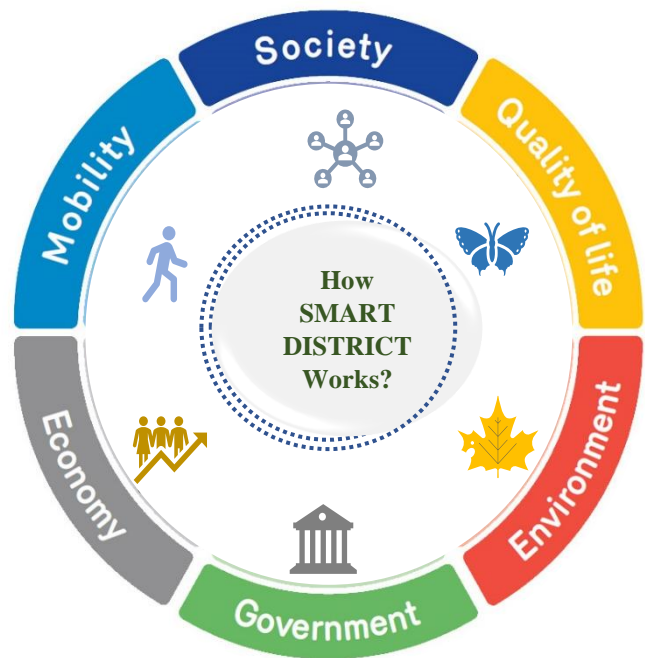
Smart cities allow citizens and local government authorities to work together to launch initiatives and use smart technologies to manage assets and resources in the growing urban environment. 54% of the world's population live in cities and this is expected to rise to 66% by 2050, adding a further 2.5 billion people to the urban population over the next three decades. With this expected population growth there comes a need to manage environmental, social and economic sustainability of resources.

IBM Defines Smart City as:

“One that makes optimal use of all the interconnected information available to better understand & control its operations and optimize use of limited resources.”

Objectives of SMART District:

1. **Efficiency of Services:** to optimize the use of public resources and provide a high level of citizen service.
2. **Mobility:** to make it easy for citizens, workers and visitors to move around in the District, whether by foot, bike, car, public transport etc. (regardless of transportation means).
3. **Economic Growth:** to attract businesses, investors, citizens and visitors.
4. **Sustainability:** to grow & develop the District with strong consideration to environmental impact.
5. **Safety and Security:** to improve public safety & security in every-day life and at special events, as well as being best possibly prepared for emergencies and disasters.
6. **District Reputation:** to constantly improve the District's image & reputation.



Features of SMART DISTRICT:

1. Telecom Network
2. Urban Platform
3. Smart Data
4. Energy Self-sufficiency
5. Smart Education
6. Smart Health
7. Smart Water
8. Smart Mobility
9. Smart Light
10. Renaturation
11. Urban Transformation
12. Smart Furnishing
13. Urban Resilience
14. Smart Citizenship
15. Open Government
16. Smart Waste Management
17. Smart Regulation
18. Smart innovation
19. Infrastructure and Logistics
20. Smart Leisure and Tourism

4 Pillars of Smart District:

1. **Physical Pillar:** Physical Pillars of Smart District consist of Connectivity, Power, Water Supply, Solid Waste Management, Sewerage, Multimodal Transport, Cyber Connection, Housing and Disaster.
2. **Social Pillar:** Social Pillars of Smart District consist of Education, Healthcare, Entertainment, Inclusive Planning and Building Homes.
3. **Institutional Pillar:** Institutional Pillars of Smart District consists of Participatory Decision Making, Enforcement, Security, Taxation, Institutional Finance, Transparency & Accountability, Skill development, Environmental Sustainability, ICT based Service delivery and Citizen Advisory Committee.
4. **Economic Pillar:** Economic Pillars of Smart District consist of GDP Contribution, Job Creation, Livelihood Activities and Market Growth.

Questions for the SMART District:

1. What is your notion about Smart District?
2. Do you aspire to become a citizen of a Smart District?
3. Which features do you deem necessary in a Smart District?
4. What benefits do you expect to get from these features?
5. What infrastructures are required to create these features?
6. What types of definite system/integration do you deem to create desired features?
7. What types of services do you want as a dweller of Smart District?
8. What types of benefits do you deem from desired services?
9. What types /definite infrastructures do you deem to crate these services?
10. What types of definite system/integration do you deem to create desired features?

Participants Districts has to answer on the following table. Through discussion participant District has to identify the focus area for SMART District, the features and services expected therefrom the proposal for solution and required infrastructure. This comprehensive approach jotted down the ideas for SMART District.

Template for SMART DISTRICT DESIGN

SI	Focus Area	Expected Features	Expected Service	Expected Benefits	Required Infrastructure	Proposed Solution	Remarks

Proposed Solutions could be termed as: Bottom-Up Approach

SI	Focus Area	Expected Features	Expected Service	Expected Benefits	Required Infrastructure	Proposed Solution
1.	Pillar- Physical Housing	Masterplan based housing to protect agri-land across areas	Area blueprint to segregate cultivable and other activity-based areas	Protection & Preservation of agricultural land	(LGI) & centralized monitoring system	Area based digital mapping to segregate cultivable land and other activity-based areas
2.	Connectivity-G-pon based ward level connectivity	Network expansion towards ward level	High speed data transmission	More connected village eco-system	G-pon & fiber layout	Ward based service provider and required connectivity
3.	Power-Sustainable and renewable energy	More sustainability and creating greener eco-system	Bio Gas production, solar energy production and contribution to the national grid & organic fertilizer production	Creating mesh solar eco-system, less dependency on imported LPG gas	Solar system & Bio gas production	Area based centralized bio gas and solar energy production and supply the access amount to the national grid
4.	Disaster Management	Disaster Response office in the ward level	Any kind of disaster response	Alignment with the govt & non govt body to serve the citizen in need	Proper training and ward-based support center connected with the central system, warning generation via connected platform	Disaster response eco-system connected via SMS & IVR
5.	Ward Dash board	Power, Data, light & other amenities should be connected to monitor	Instant citizen service	TCV reduction	Connected dashboard with every service provider	Connected Dash board with every service component to check the health status
6.	Institute: UDC expansion	Ward based UDC expansion and service expansion	All sort of UDC service expanded to ward level	TCV reduction	Ward based center	One stop ward based citizen services

7.	Skill development	Free-lance-based training like computer graphics and related IT based language	Local BPO creation to support the local free lancers	More dollar earners and contribution to the GDP	Training expansion towards ward level	NISE connected training eco-system
8.	Agri business hub creation	Connected e-commerce	Ward based product depository	Fair pricing to the last mile producers	E-comm support and transportation facilities	E-commerce platform, physical hub, Transportation support
9.	Finance	Entrepreneur listing and loan support services	Finance to grow	More business growth	Financing module for wards incorporating all the available financing parties	Ward based web platform with loan exposure calculation
10.	Social: Inclusive Planning	Model village with a planning like govt budget planning for a year	Co-ordinated development approach	E-governance establishment	Local govt framework intervention	Local dashboard
11.	Education	Re-use of school and other institutions	Training and tuition activities supported by the technology	Efficiency and contributory society	e-education supported technology	Connected technology-based infrastructure to provide best alternative education
12.	Entertainment	Content creation, educational training, playground and other activities	More value to the society	Healthy society	Proper resource creation and allocation	
13.	Health	E-health for the marginal community	Accurate health services	TCV reduction and ensuring proper health services	Data base creation, ward-based health worker connected with national e-health platform	

14.	Economic: GDP contribution	Creating more alternative income generation from the ward level	Area wise formal and non-formal profession-based training and job placement	More contribution to the local economy and nation	Expansion of govt and non-govt training initiatives	Incorporation of NISE platform as per the ward level
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Proposed Solutions could be termed as: Top-Down Approach

SL	Focus Area	Expected Features	Expected Service	Expected Benefits	Required Infrastructure	Proposed Solution
1.	Smart Residence	Smart Office Smart Home Water Quality Monitoring Water Distribution Control District Lighting Renewable Energy	Work from anywhere. Home Management	Time cost Power Savings & Security	IoT Devices	Virtual office setup. Smart Home Application Smart Sensors
2.	Transportation	Smart Parking System Traffic plan (odd/ even) District/ Public Bus / Water vehicle/ Train Goods Train	Easy parking access Concise vehicle movement Frequent access to the public vehicle Smooth transportation for food / products items	Energy and time saving Easy traffic Easy transportation Well maintained food /products supply chain	IoT Devices Data Analytics AI Robotics	App based Traffic control Increase modern vehicles Dedicated management applications (Cold Storage, Product Supply Chain Management, Food processing unit)
3.	Waste Management	Incineration of medical Waste Waste Recycling	Prompt incineration of medical waste Reuse, Zero use of plastic Use of natural fiber for packaging	Clean and Safe environment	IoT Sensors Robotics	Recycling system
4.	Population Management	Decentralization Citizen Central Database	Frequent Citizen services	Easy access to services	Database Data Analytics	Synchronization of all national database &

		Social Safety-Net Program Employment Creation Program Multipurpose Card			Embedded System	monitoring system
5.	Environment	Air Quality Monitoring Carbon Reduction	Less pollution	Healthy & Quality life	Smart Sensors IOT	Eco friendly products and embedded system

Findings could be in the following forms:

1. Smart Residence will be new demand for coming days.
2. Smart Transportation will be considered as inevitable rights for the citizens of future.
3. Smart Waste Management
4. Population Management
5. Smart Environment Management
6. Smart Health Management
7. To build Smart District we have to use information and communication technology (ICT) to improve operational efficiency, share information with the public and provide a better quality of government service and citizen welfare.

Conclusion:

Creating smart connected systems for our urban areas provides a great many benefits for citizens around the world, not only to improve quality of life, but also to ensure sustainability and the best possible use of resources.