Smart Water for Smart Cities in India

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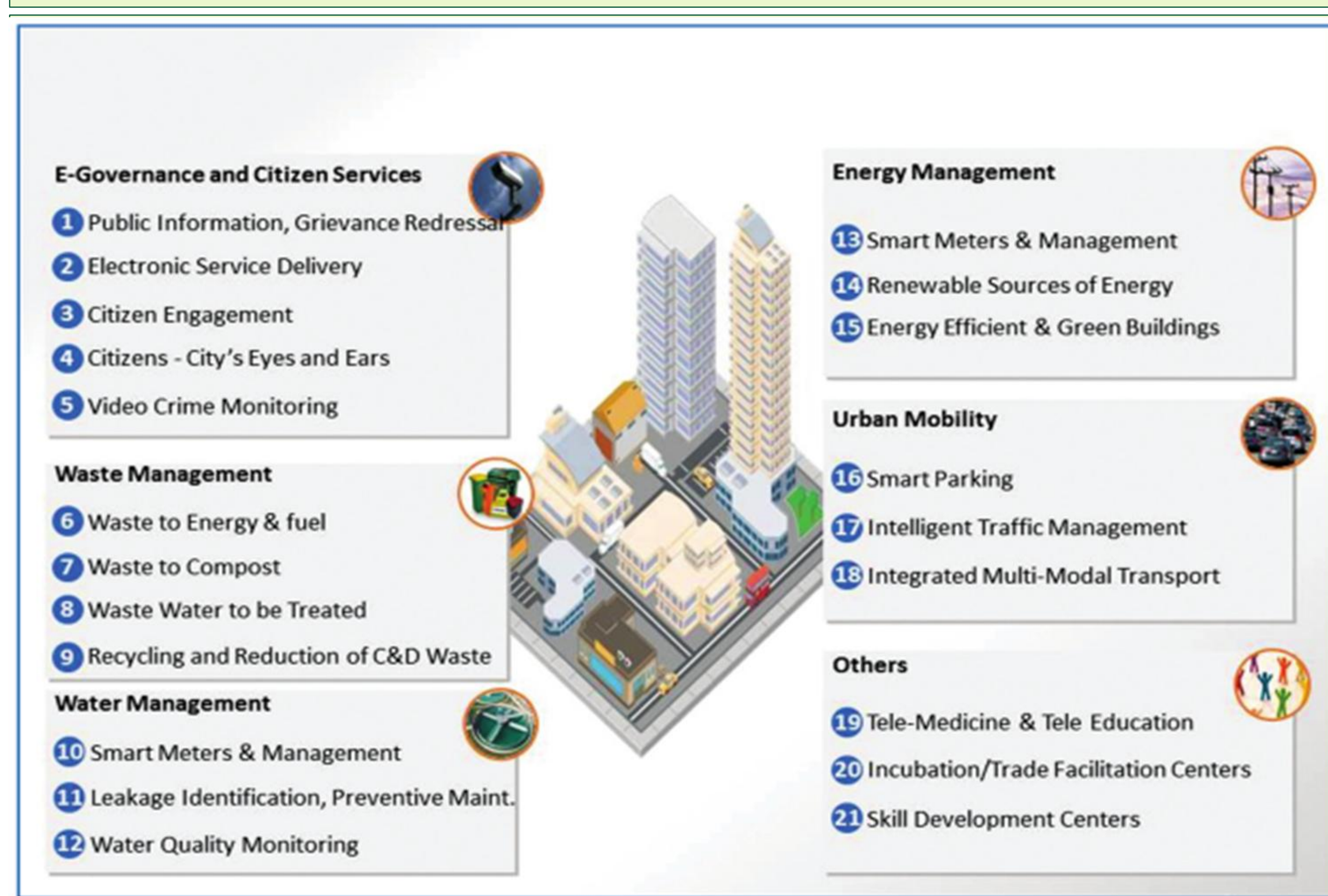*Email: rkl@wapcos.gov.in*

Smart City – A Modern Approach to Sustainable

➤ Smart city is a "booming" international phenomenon. A Smart City is the integration of technology into a strategic approach to sustainability.

➤ The Prime Minister of India has a vision of developing 'one hundred Smart Cities', as satellite towns of larger cities and by modernizing the existing mid-sized cities. The objective is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions.

SMART SOLUTIONS : ILLUSTRATIVE LIST

E-Governance and Citizen Services
1. Public Information, Grievance Redressal
2. Electronic Service Delivery
3. Citizen Engagement
4. Citizens - City's Eyes and Ears
5. Video Crime Monitoring

Waste Management
6. Waste to Energy & fuel
7. Waste to Compost
8. Waste Water to be Treated
9. Recycling and Reduction of C&D Waste

Water Management
10. Smart Meters & Management
11. Leakage Identification, Preventive Maint.
12. Water Quality Monitoring

Energy Management
13. Smart Meters & Management
14. Renewable Sources of Energy
15. Energy Efficient & Green Buildings

Urban Mobility
16. Smart Parking
17. Intelligent Traffic Management
18. Integrated Multi-Modal Transport

Others
19. Tele-Medicine & Tele Education
20. Incubation/Trade Facilitation Centers
21. Skill Development Centers

SMART WATER - For Indian Smart Cities

➤ There are seven components that are required for the Smart city i.e. Smart Energy, Smart mobility, Smart water, Smart Public services, Smart building and homes and Smart Integration. As Smart Cities will be developed in India there would be an urgent need to deliver smart water.

➤ The smart water is proper and efficient management of water for the smart city. Water distribution needs to be optimized, operationalized and reduced energy costs.

➤ The innovative approach to address the issues of smart cities in India is the development and implementation of smart grid systems for water distribution and its treatment & disposal.

Smart Water Technologies : Opportunities
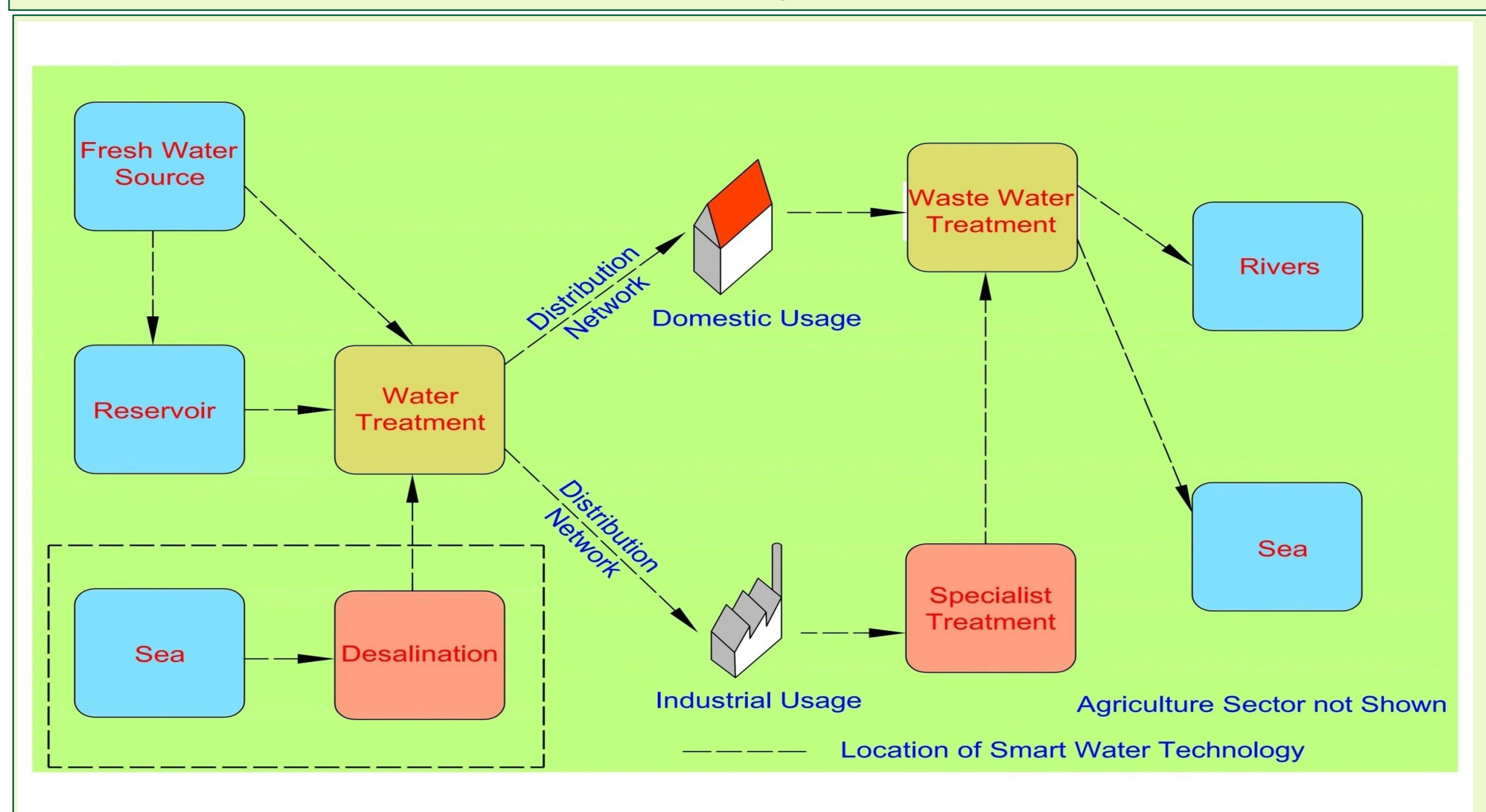
➤ Management of Smart water seeks to alleviate challenges in the water sector by adopting a sustainable approach to water management and consumption through the use of ICTs.

➤ The smart water system would direct an innovative technology suite, including smart water meters, sensors, advanced modeling, water mapping and other technologies, that would work together to create a data-driven system for the intelligent management of water resources.

CHALLENGES AND OPPORTUNITIES

➤ There are many challenges ahead in managing smart water technologies in India. Since smart water is a new concept in India, the standardization and development of best practices in this area is naïve. There is absence of stringent policies and regulations.

➤ Initially, smart cities required huge investment in management and implementation of smart water technologies.

➤ At international level, more emphasis has been placed on the development of smart cities but not on how ICTs can act as an enabler of management of Smart Water Technologies on a larger scale.

➤ The Smart Water has a wide application and a clear set of benefits, which, in general, increases water use efficiency and therefore decreases consumption.

➤ The Real-time monitoring Technologies such as smart metering, SCADA, GIS, telecommunication sensors and decision support systems allow for the provision of real-time reliable data.

➤ The smart water technologies helps in reduction in water consumption and reduction in operational costs. Integration of smart water management technologies would promote sustainable smart cites. The smart water technologies maintains ecological and environmental resources for future generations.

THE PATH FORWARD

➤ Smart Water Technologies are the viable option for sustainable Indian smart cities in the face of water scarcity, climate change as well the other constraints endured in the water sector. The advantages which can be gained by ICT incorporation in water management could possibly see the attainment of the sustainable smart city in water and sanitation sector, if properly implemented.

➤ Discourse must be bridged to ensure that information from utilities, municipalities, regulators, investors industries, technology providers and academia can be properly harnessed.

➤ Smart Regulations will lead the way. Development of standards, policies and ICT governance is imperative to ensure that there is integrity in the process as we try to manage our smart cities in the 21st century.

Path Forward: Smart Regulations