Future of Smart City

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Abstract

Smart technology is a key enabler in achieving sustainable and liveable cities. Making informed decisions about which technologies best support a city's overall development strategy depends on establishing the right governance and identifying the most suitable technical concepts.The smart cities aim is to promotes cities that provide core infrastructure and give a decent quality of life to its citizens .

Many big cities are implementing a wide array of new technology that promises to make the city smarter. Cities are expected to spend not less than $400 billion on smart urban services by 2020.

To achieve smart cities – using information and communication technology (ICT) - to enhance well-being whilst reducing costs and carbon emissions, city officials need to determine how smart technology can support their overall strategy for improving city life.

Keywords:Technology, Implementation,Smart cities,Challenges

"SMART SOLUTION MAKE OUR CITY SMART "
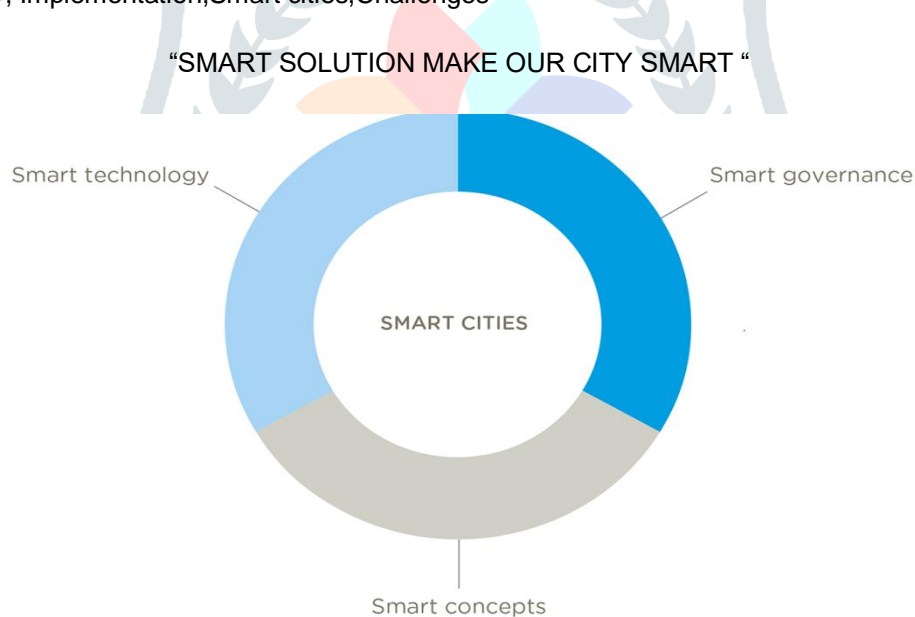
Smart City Challenge

New Delhi is the first Smart City of India.The Ministry of Urban Development (MoUD) program used a competition-based method as a means for selecting cities for funding, based on an area-based development strategy. Cities competed at the state level with other cities within the state. Then the state-level winner competed at the national level Smart City Challenge. Cities obtaining the highest marks in a particular round were chosen to be part of the mission.[New delhi is the 1st smart city in india.

The state governments were asked to nominate potential cities based on state-level competition, with overall cities across India limited to 100. In August 2015 the Development released the list of 98 nominees sent in by state governments. All the participating cities from West Bengal (New Town, Kolkata, Bidhannagar, Durgapur, Haldia) have withdrawn from the Smart Cities Mission. Mumbai and Navi Mumbai from Maharashtra have also been withdrawn from the Smart Cities Mission.

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Aim of Smart City:-

- The application of a wide variety of digital and electronic technologies to the city and its communities
- The application of ICT to uplift life and the working environments in the region
- The embedding of such ICT within government systems
- The territorialization of practices that bring the people and ICT together in order to foster innovation and enhance the knowledge that they offer
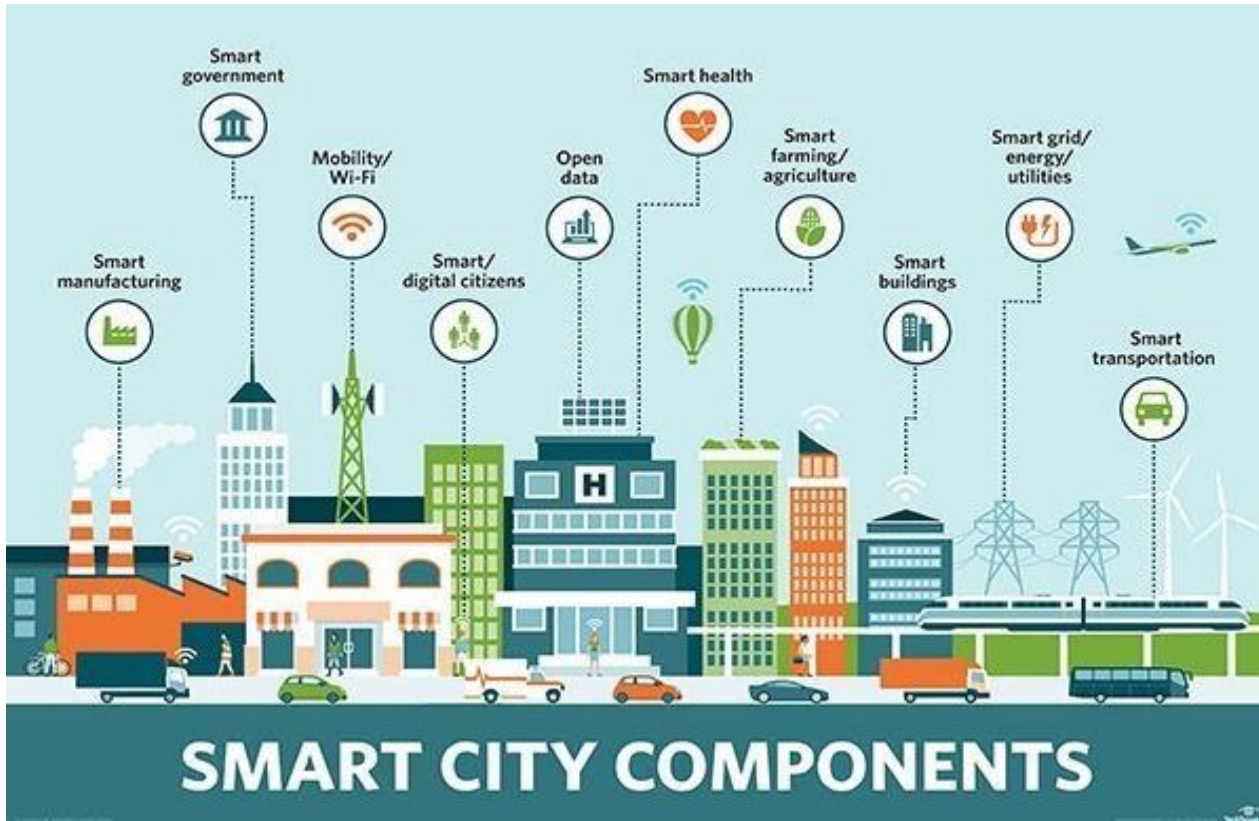
Four Pillars of Smart City

- Institutional
- Physical
- Social
- Economic Infrastructure
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Smart City trends by 2020:-

1.Strong drive processes. As the smart city movement has grown,the vision, technologies and realities on the ground have become lialed and more difficult to deal with . To simplify this, likely See as long drive toward more intuitive processes, including the increased use of machine learning to gather and analyze a community's data. We are already seeing this in the move away from traditional networking to more intuitive, software'defined WAN (SD-WAN), Cisco DNA for cities and intent-based networking.

2. Compatibility on the fly. There will be a growing need for instant interoperability among devices and platforms as the IoT connects more diverse technologies to ever growing network fabrics. I like to think of a smart city's network as a hand-sewn patch quilt with a mix of shapes, sizes, and colors. At first glance, it may look chaotic. But when sewn together, it becomes quite a beautiful thing. The Kinetic for Cities platform is a great start to threading all that disparate technology and data together to create something of greater value.

3. Involving citizen engagement. There's a definable and growing undercurrent in U.S. communities toward more citizen control in decision making. Apps will evolve to help fill this need as private and public entities partner for better outcomes. Artificial intelligence and machine learning will be a key part of this, as will smart infrastructure to drive real-time collaboration tools.

4. Decentralizing control. Smart city leaders will seek to decentralize data centers, technologies, and decision making for a more human-centric approach to serving citizens. Technologies like the Edge & Fog Processing Module will drive this shift to faster and more accurate response while helping improve recovery efforts (especially after natural/manmade disasters). By pushing decision making closer to where the action is, needs can be extremely fine-tuned, helping to preserve and enhance the unique social and cultural characteristics of communities, even down to the neighborhood level.

5. Transparency by Government. Smart communities will continue to make great strides in transparency as mobile apps, now the norm, evolve to improve real-time collaboration on an individual level. By using real-time video and data sharing tools like Cisco Webex and Cisco Jabber, government can invite citizens to be a more integral part of the process; to attend meetings virtually to increase transparency and allow government staff in the field to interact live with colleagues anywhere, anytime when citizen needs arise. Plus, smart city apps will evolve that will merge a multitude of processes, making citizen inquiries much simpler. Together, these advances can help increase collaboration and trust between government and the citizens they serve.

6. Much focus on revenue generation. Being a smart city will also mean an opportunity for smarter stewardship of financial resources—and revenue opportunities—in 2019. This could pave the way for greater openness by government to partner with local businesses, retailers, mobile businesses, and entertainment/tourism to spur economic growth and revenue. This will include merging public spaces and private spaces (and the technology platforms they use) to create activity zones both physical and virtual. Read more about developing public spaces for the better in this report: Digital Cities: Value at Stake.

7. Use of low-cost IoT tech to enhance public safety. As community-wide WiFi and IoT technologies become commonplace and affordable, we'll see the widespread deployment of low-cost fabrics (like community-wide networks of sensors and cameras) to improve safety and response times. New Orleans is already doing so.

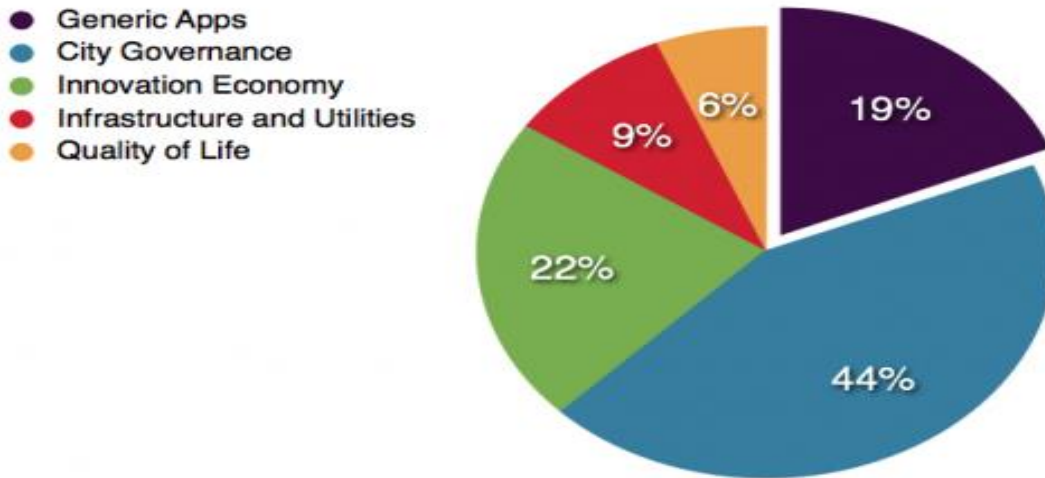**Better decisions and deliver a better quality of life**

 "Smartness" is not just about installing digital interfaces in traditional infrastructure or streamlining city operations. It is also about using technology and data purposefully to make better decisions and deliver a better quality of life.

Quality of life has many dimensions, from the air residents breathe to how safe they feel walking the streets. The latest report from the McKinsey Global Institute (MGI), Smart cities: Digital solutions for a more livable future (PDF–6MB), analyzes how dozens of digital applications address these kinds of practical and very human concerns. It finds that cities can use smart technologies to improve some key quality-of-life indicators by 10 to 30 percent—numbers that translate into lives saved, fewer crime incidents, shorter commutes, a reduced health burden, and carbon emissions averted.

Technology

Technology termed only to make our work easier.It not only helps to develop ourself but also get to know what is happening all around world.

- ✓ Energy
- ✓ Transportation
- ✓ Data
- ✓ Infrastructure
- ✓ Mobility
- ✓ IoT devices

Legend:
- Generic Apps
- City Governance
- Innovation Economy
- Infrastructure and Utilities
- Quality of Life

Pie chart: Generic Apps 19%, City Governance 44%, Innovation Economy 22%, Infrastructure and Utilities 9%, Quality of Life 6%

In short a smart city is

➢ More effective, data-driven decision-making
➢ Enhanced citizen and government engagement
➢ Safer communities
➢ Reduced environmental footprint
➢ Improved transportation
➢ Increased digital equity
➢ New economic development opportunities
➢ Efficient public utilities
➢ Improved infrastructure
➢ Increased workforce engagement

Smart City Features

Some typical features of comprehensive development in Smart Cities are described below.

❖ Promoting mixed land use in area based developments–planning for 'unplanned areas' containing a range of compatible activities and land uses close to one another in order to make land use more efficient. The States will enable some flexibility in land use and building bye-laws to adapt to change;
❖ Housing and inclusiveness - expand housing opportunities for all;
❖ Creating walkable localities –reduce congestion, air pollution and resource depletion, boost local economy, promote interactions and ensure security. The road network is created or refurbished not only for vehicles and public transport, but also for pedestrians and cyclists, and necessary administrative services are offered within walking or cycling distance;
❖ Preserving and developing open spaces - parks, playgrounds, and recreational spaces in order to enhance the quality of life of citizens, reduce the urban heat effects in Areas and generally promote eco-balance;
❖ Promoting a variety of transport options - Transit Oriented Development (TOD), public transport and last mile para-transport connectivity;
❖ Making governance citizen-friendly and cost effective - increasingly rely on online services to bring about accountability and transparency, especially using mobiles to reduce cost of services and providing services without having to go to municipal offices. Forming e-groups to listen to people and obtain feedback and use online monitoring of programs and activities with the aid of cyber tour of worksites;
❖ Giving an identity to the city - based on its main economic activity, such as local cuisine, health, education, arts and craft, culture, sports goods, furniture, hosiery, textile, dairy, etc;
❖ Applying Smart Solutions to infrastructure and services in area-based development in order to make them better. For example, making Areas less vulnerable to disasters, using fewer resources, and providing cheaper services.

India is increasingly taking up the use technology in a much larger way. We are now living in a generation where we have moved from wired world to wireless. While planning for a smart city technology plays the most crucial part. This is where the first distinguishing factor from any other city comes in. Not every Indian city is technologically advanced. The government on its part is taking every necessary step to push huge investments in technology so that resources can be utilised at its best. All the listed smart cities are already inhabited and no new city is being created. The use of technological advancement will be the first step in making them unique from the rest. The technological elements of a smart city

programme are – the GPS technology, telematics, a smartphone dispersion and high-speed bandwidth. All these technologies will connect the residents, government and businesses.

Conclusion

Smart cities means development of city.It make development in each and every sector which make our city "SMART". It provides more facilities to the public. smart cities also make challenges with developed countries.Smart cities are currently perceived as key to achieving sustainable urban development goals. Namely, reducing resource consumption, reusing resources, and recycling waste- all with the assistance of technology are promised to improve the residents' quality of life. However, it is important to understand which population the smart city is targeting.. Along with obtaining smart technologies, and providing smart health and smart education, a smart city must also have smart social sustainability which accounts for fair accessibility of public services, employment and social interactions.Smart cities means development of city it make development in each and every sector which makes our city"smart". It provides more facilities to the public. Smart cities also make challenges with developed countries.

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