

SMART CITY





SMART CITY, MAIN FIELDS

- Energy Solutions
- Transportation
- Buildings & Infrastructure
- Advanced/Wireless Networks
- Sensor Networks
- ICT Networks
- Cyber Security
- Gov/Civic Services
- Healthcare Services
- Resource/Commerce
- Emergency Services
- Islands/Isolated Communities
- Water/Waste Management
- Weather Solutions
- Data Analytics/Tools



SMART CITY, BACKGROUND

- An increasing number of the world's citizens are moving to cities
- Currently, 33 cities worldwide will have a population of greater than 10 million people
- Cities consume 2/3 of the world's energy and a majority of other resources
- Increased demand on other city resources – including the reliability of energy and power, quality of the air, and the flow of traffic – will impact the quality of living
- Cities are looking at ways to become “smarter” and more flexible in responding to citizens' needs.
- Smart Cities' technology enables the cutting-edge intelligence and flexibility necessary to help cities use resources more efficiently
- Cities will invest approximately \$41 trillion over the next 20 years to upgrade their infrastructure to benefit from IoT based Smart Cities



SMART CITY BENEFITS

- Green Vision, increasing efficiency and eco-friendliness
- Drive economic growth
- Create new jobs
- Enhancing the quality of life for the citizens.
- Improvements in air quality, noise, transportation efficiency, environmental sustainability, health, and energy efficiency.
- Safety and Security



SMART ENERGY

- With Smart Energy, solutions are enabled to increase efficiency
- Data regarding usage is collected and analyzed
- Smart grids are part of the development of a smart cities
- Smart streetlights are an easy entry point for many cities
- Smart meters at homes
- Buildings monitor their energy usage actively and report this data to utilities.
- Home solar power systems
- A centralized system which leads to lower pollution, better efficiency, sustainable environment



SMART TRANSPORTATION

- Supporting multi-modal transportation, smart traffic lights and smart parking.
- By making parking smarter, people spend less time looking for parking spots and circling city blocks
- Smart traffic lights have cameras that monitor traffic flow so that it's reflected in the traffic signals
- Using sensors to collect data about the movement of people, all forms of vehicles and bikes
- Greatly reduce vehicle traffic and allow people and goods to be moved easily through various means
- Intelligent traffic systems would reduce pollution as well as time stuck in traffic, resulting in a healthier population



SMART DATA

- The massive amounts of data collected by a smart city must be analyzed quickly and correctly in order to make it useful
- Open data portals are an option to publish city data online, so that anyone can access it and use predictive analytics to assess future patterns.
- Moving from analyzing data that exists within city hall, to generating new data from sensors that are deployed all across cities for use by multiple departments and people for multiple uses
- The data collected gives valuable insights and information about how citizens interact with cities
- Predictive analytics helps cities filter and translate data into relevant and actionable information that makes city life better, easier, and more productive
- We train local teams and give them the tools to better gather and analyze data and take action



SMART INFRASTRUCTURE

- City's ability to analyze large amounts of data will allow for pro-active maintenance and better planning for future demand.
- Having a smart infrastructure means that a city can move forward with other technologies and use the data collected to make meaningful changes in future city plans.



SMART IOT DEVICES

- IoT devices will allow all the data to be easily collected to one integrated platform
- In a smart city, information will increasingly be obtained directly from purposefully deployed sensors or indirectly from sensors deployed for another purpose but which gather and share useful information
- Information is freely exchanged
- As cities move increase devices transmitting, usable and potentially unusable information, bandwidth efficiency and capacity need to adapt
- Each of these technologies work together to make a smart city even smarter. As the world's population grows, and more people move into urban areas, the need for smarter cities will increase to make the best use of available resources.



SAFE CITY

- In recent years, rise in terror activity, crime, fraud, street violence, and large scale disasters have become a growing threat to public safety in many countries around the world.
- The Safe City solution is aimed at addressing the following major needs:
 - Supervision and surveillance of illegal activities and selected sites.
 - Border Control
 - Deterrence of terror and criminal activities.
 - Establishing a visual database for future analysis and correlation.
 - Investigation of recorded events.
- The Safe City system comprises five major components:
 - Endpoint sensors (for example, cameras and LPR systems).
 - Capturing, streaming, and recording devices.
 - Event generating analytic software.
 - Command and Control applications, control and monitoring rooms



SAFE CITY



Sensors

- The system utilizes a large variety of sensors with diverse capabilities. These sensors are spread throughout the area to assure large scale coverage

Central Command and Control Center

- System is designed to integrate all the information gathered by the sensors into one unified and comprehensible picture. Automatic commands can occur, such as sending police to a certain area or even turning off electricity in a certain area



Thank you

