**Smart City**

**Introduction**

**A smart city is an urban development using Information and Communication Technology (ICT) and Internet of Things (IoT) to provide useful information to effectively manage resources and assets. This includes data collected from citizens and mechanical devices that are processed and analyzed to monitor and manage traffic and transport systems, power plants, water supply networks, waste disposal, etc.**

**What makes a small city in to smart city?**

City having;

1. Smart People
2. Smart Governance
3. Smart Infrastructures
4. Smart Economy

**Using information and technology to collect the data.**

Role of IoT in Smart city

TheInternet of Things (**IoT**) applications are enabling **Smart City** initiatives worldwide. It provides the ability to remotely monitor, manage and control devices, and to create new insights and actionable information from massive streams of real-time data.

For example;

**IoT technology is** making it easier for buildings with legacy infrastructure **to** save energy and improve their sustainability. **Smart** building energy management systems, for instance, **use IoT** devices **to** connect disparate, nonstandard heating, cooling, lighting, and fire-safety systems **to** a central management **application.**

**In short, SMART means;**

**S = Sustainable**

**M = Measurable**

**A = Accessible**

**R = Replicable**

**T = Technology**

**Characteristics of Smart City**

There are so many characteristics of smart city but the main are as follows;

1. Smart People
2. Smart Governance
3. Smart Infrastructures
4. Smart Economy
5. **Smart People**

The smart city mainly focused on the peoples need and services that they required. So smart city means safe, healthy, educated and creative people in the process of making the inclusive society.

**Index of Smart People**

* Inclusiveness
* Education
* Health
* Creativity
* Security

 **Inclusiveness**

* The percentage of households where the internet access is available
* The percentage of smart phone users in total population
* The number of basic program which is regulated by the local government
* The index of gender empowerment

 **Education**

* The rate of literacy
* The percentage of student who passed the secondary education level
* The percentage of using internet in the school or the academic institutions
* The percentage of using/not using distance learning and e- library

 **Health**

* The percentage of population who comes to check their health in the hospital or the health related institutions
* The distance of health center from the home
* The doctor or the health specialist in every 10000 people
* The percentage of people of having health insurance
* Life expectancy
* The percentage of people who have access in the Yoga and spiritual knowledge

 **Creativity**

* The percentage of people who are engage in the industry or other work
* The number of industry, business and work

 **Security**

* The percentage of people who feel secure
* The number of terrorism work per month
1. **Smart Governance**

In the smart city, there should be smart governance for the equal services and decision process to people. Proper use of ICT in the process of governance is called the smart governance.

 **Index of smart governance**

* Information and technology infrastructure
* Online services
* Transparent and open government
* Identity

**3) Smart infrastructures**

The basic need for the smart city is smart infrastructures. Smart Infrastructures comprise several operators from different domains of activity, such as energy, public transport, and public safety. They deploy and operate “cyber-physical systems”, that are data-controlled equipment which interact with the physical world.

**Index of smart infrastructures**

* Physical infrastructures
* Urban infrastructures for the services
* Social infrastructures
* Green infrastructures
* Security infrastructures

**4) Smart Economy**

The smart economy signs towards the sustainable production and job creation. Using the creative mind for job creation with the help of ICT to improve the productivity called the smart economy.

**Index of smart Economy**

* **Innovation and Entrepreneurship**
* **Productivity and job creation**
* **Green business**

**In our project we mainly focused on the smart governance for this time. The smart governance includes the following indexes**.

In the smart city, there should be smart governance for the equal services and decision process to people. Proper use of ICT in the process of governance is called the smart governance.

 **Index of smart governance**

* Information and technology infrastructure
* Online services
* Transparent and open government
* Identity
* **Information and technology infrastructures**
* The number of hot-sports (Wi-Fi) per square kilometer
* The number of internet connected houses
* The number of hot spots in the public areas
* The percentage of people using high speed internet
* The percentage of the number of public services like parking , water , electricity etc. using the sensor devices
* The number of digital notice board in the public areas
* Intelligent transportation system percentage
* **Online services**

For this time we are focused on these services. This includes

* The percentage/ number of people/staff uses e- tender /permit /license/ attendance
* The number of public services the people can uses by using their smart phones or other devices
* The percentage/number of people who easily can give the suggestion/grievances to the local government and related organizations
* The facility that uses by people for the social security services and other services from their home
* **The number or the percentage of people that uses the online services like vital registration and the all the services that provide by the local government**
* The percentage/ number of people uses the system of online tax system
* **The online services mainly includes the following module ;**
* **System for the municipal services**
* **System for the municipal constituent wards**
* **System for the Human Resource and Educational institutions**

**Objective:**

* To make a through study about the day to day services by Municipal and its constituent wards.
* To figureout types of services of the municipal to the local people.
* List all the services by municipal and wards.
* To find main services and the supportive services that municipal providing to the people.
* To find the capabillity of the civil servants, staffs, politically elected person to use the municipal service management system that municipal will use to deliver faster services.
* To find feasibility of the recommended system for Municipal.

The main study is ;

1. **Dailly service system to people from ward**
2. **Dailly service system to people from municipal**
3. **Human resource system for the municipal**
4. **System for the education department.**

**Methodology:**

* **Descriptive Method :** Use of interview , jounal, paper , book etc
* **Designed Science Research methodology:** It is an outcome based information technology research methodology, which offers specific guidelines for evaluation and iteration within **research** projects
* Riverside Progression Model