Engineering Systems Course – Spring 2019

IIIT, HYDERABAD

SAFETY AND SECURITY OF PEOPLE IN CITIES - TEAM 17

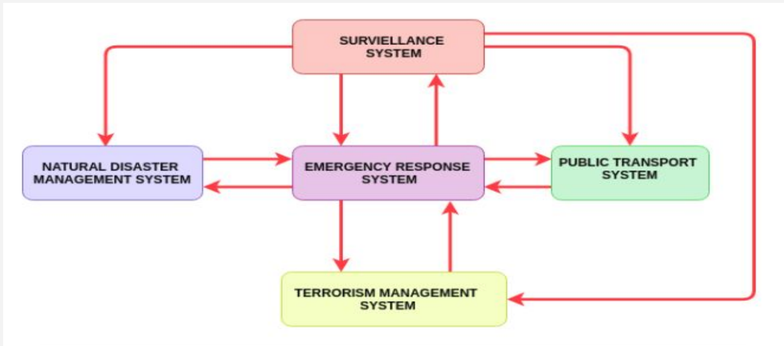
Overview

Safety and security is among the main concerns in any city.In our technologically interconnected world and in smart communities of the future, the scope of the term security is quite broad and is not limited to only physical security of gated communities. With the increasing risk of cyber-crimes and data theft, smart cities would have to be prepared to tackle them. Objectives of this project include identification and analysis of such challenges and various solutions proposed for them.

A systematic approach is required to tackle the challenges of safety and security.along with getting the priorities in order, changes in cyber laws, and recognizing data safety as a fundamental right.

Scope:
- City level
- State level
- National level

Stakeholders:
- All the citizens in the city
- The government
- Equipment manufacturers

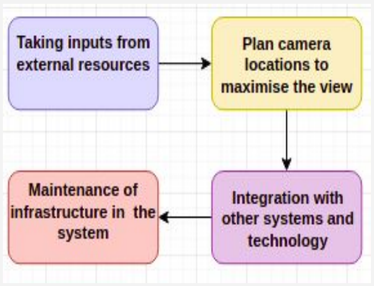


Surveillance System

Surveillance is the monitoring of behaviour, activities etc. for the purpose of influencing, managing or protecting people. So a surveillance system is a basic requirement when we talk about safety and security of people in cities.

Requirements:
- Control room with a team monitoring.
- Precise locations of cameras in the city.
- Patrolling and maintenance teams.

Challenges:
- Hacking of the cameras
- Power supply
- Installation of cameras

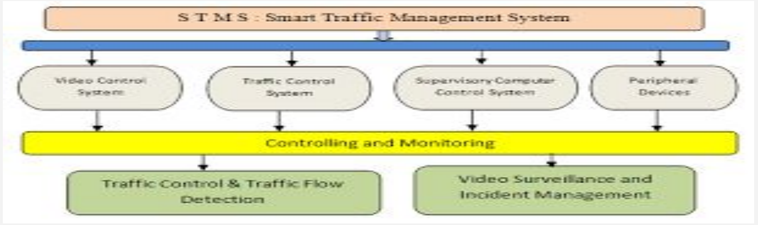


Public Transport System

Introduction of technology into the public transport system helps passenger travel with an ease. The call would be on the necessity of Smart Public Transport for smart cities and the basic solutions a public transport requires.

Requirements
- Strategic planning needs to be precise , extensive and prompt data should be collected.

Challenges
- Prevent hacking of Data
- Continuous power supply will be a challenge to the smart hybrid electric buses.



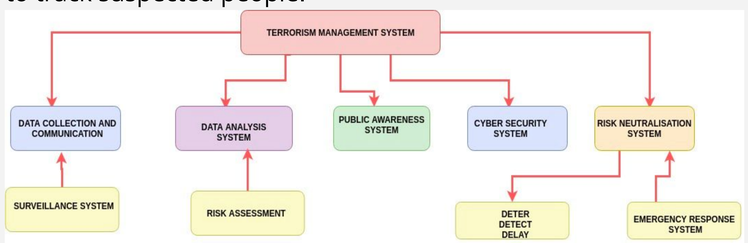
Terrorism Management System

-> The main goal of the system is to deal with all contingencies and tactics that terrorist aim and perform.

-> Design and planning of cities based on factors that impact on security and to conduct mass awareness drives and educate vulnerable groups.

Requirements:
- Data from surveillance subsystem.
- Potential of threat and reports of previous incidents.
- Quick reaction teams like swat and some manual police force to track suspected people.

Challenges:
- Engineering analysis of huge data.
- Tracking large number of suspected people.
- Identification of terrorist base camps.



Natural Disaster Management System

Disaster Management refers to how we can protect or preserve maximum number of lives and property during a natural disaster. We aim to - address problems caused by disasters like earthquake flood etc, provide prompt assistance to the victims as well as provide early warning of disaster.

Requirements
- Data of disaster prone areas and previous data of disasters which affected the city.
- Send the response team to the affected location and evacuate as many people as possible.

Challenges
- Evacuation of people
- Correctness of disaster prediction algo
- Resources for affected people
- Implementation in existing cities

Emergency Response System

- The primary goal of this subsystem is to provide immediate response in case of emergency.
- This system should be efficient and well-grounded.

Requirements
- System would be getting input from surveillance team about a situation.
- Inputs from surveillance team include
  - Location of emergency
  - Description
  - Severity of the situation

Challenges
- Limited police force
- Medical resources
- Response time
- Communication

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