STUDY ON SMART CITY SURVEILLANCE SYSTEM

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Abstract: *To develop a centralized facility center for availability, confidentiality, and Integrity of public security-related information (e.g., criminal cases in the city, accidents/incident records/security breaches happened in the city, cyber security incidents, Women security-related issues). A Systematic and integrated data center (SMRAT data) of public security-related information. Through this SMAR City surveillance project, we are going to make use of public information in a very effective and efficient way so that all interested parties (beneficiaries) will say WoW What we are presenting is going to be an entirely new kind of experience for Nasik City. However, this is a very well-proven model in most US/ Europe cities.*

Key Words: *SMART City, City Survillance, Cyber Security.*

1. THEME: CITY SURVEILLANCE:

1.1. OBJECTIVE: To develop a centralized facility center for availability, confidentiality, and Integrity of public security-related information (e.g., criminal cases in the city, accidents/incident records/security breaches happened in the city, cyber security incidents, Women security-related issues) A Systematic and integrated data center (SMART data) of public security-related information.

1.2. BENEFICIARIES :

- Police department - Expedite the criminal investigation process
- Traffic department – help in compliance for traffic-related rules/traffic Jam will be reduced.
- All Banks IT data center - Unified approach to tackling cyber security-related incidents
- Hospitals – Ambulance reach-out time will be improved
- Blood banks – distribution time will be improved
- General Public – Feel more secure in the city/traffic jam time wastage will be reduced

2. METHODOLOGY TO IMPLEMENT THIS PROJECT :

In today's competitive/digital world information plays a very critical role. Any Country/ city's development is completely based on the availability confidentiality and Integrity of public security-related information. Any Public information in bits or pieces won't serve its full purpose. Half or incomplete information is of no use. We need to mix and match this information (integrate) systematically so that it does wonder.

2.1. SMART city's surveillance essence is based on the CIA (Confidentiality, Integrality, and Availability) of Information.
Through this SMAR City surveillance project, we are going to make use of public information in a very effective and efficient way so that all interested parties (beneficiaries) will say WoW …
What we are presenting is going to be an entirely new kind of experience for Nasik City. However, this is a very well-proven model in most US/ Europe cities.

3. CASE STUDY:

Avani was born in Nasik, her parents registered her details in City Municipal Corporation (Capture information #1), and Avani completed her all mandatory vaccination in Nasik's local primary clinic (Capture information # 2), At age of 5, Avani got admitted in Nasik School (Capture information # 3) At age of 10, she had serious infection got hospitalized in Sahyadri Hospital (Capture information # 4), at age of 18, Avani got a driving license from Nasik RTO (Capture information # 5), She applied for election card, passport, etc. (Capture information # 6)

After she completed her education she got a degree in YCMU, Nasik (Capture information # 7)
Later she married Abhijeet with registration in the marriage bureau (Capture information # 8)

On one bad day, Avani had a critical road accident in Nasik,
Now with help of all the above information (1 to 8) that were available with the click of buttons to Hospitals and Police, they could deliver their services in no time.

Now Sweta, a resident of Nasik feels very proud of her city and the overall service she received.
This is just one example, there could be n member of information that can be digitalized, centralized, liked, and made extra SMART for the benefit of the Nasik public.
        Now let's go into detail structure of this concept, in this project, we are going to use existing public information. We are going to digitalize this information with help of IT. The latest IT tools/systems (Google, Chain block, Facebook. Metaverse, etc.) will be utilized with the help of IT professionals.
Digitalization of public information leads to fast availability and its integrity.

1. Process Mapping
2. Project Planning and Controls
3. System development
4. Integration, Pilot run & Testing
5. Comprehensive Implementation
6. Ongoing Maintenance & Improvement

Process Mapping

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3.1. PROCESS MAPPING :
Step 1. Identify the interested parties.
Listing all Government / private departments or institutes that going get benefited from this project.
Following are a few interested parties

Sr	Interested party
1	City Municipal Corporation
2	City Police
3	City RTO office
4	City Hospitals / Clinics
5	City Collector office
6	City Fire brigade (Municipal Corporation)
7	City Schools / Colleagues
8	City Residents (Children / Women / Senior Citizens)
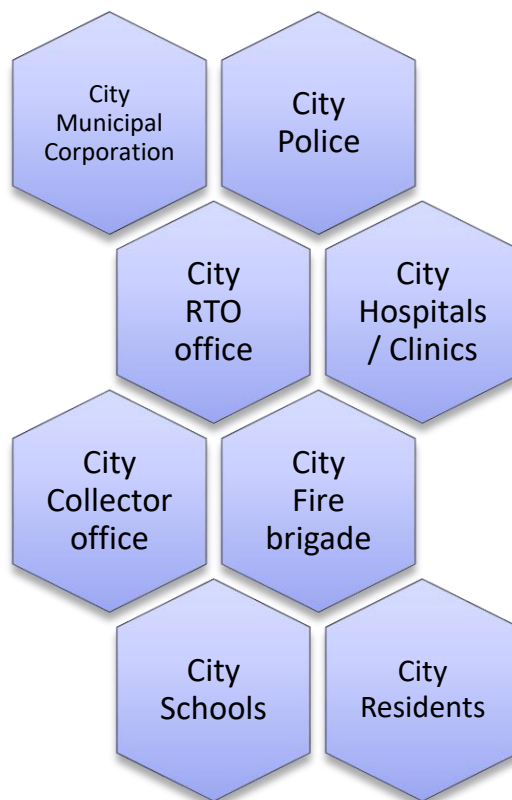
Step 2. Understand Interested parties' concerns, needs, and exceptions.
Step 3. Capture the information (Now it's being treated as Asset) that needs to be made SMART.

3.2. PROJECT PLANNING AND CONTROL:
Step 1. Identify the key objectives of the projects. Make sure that these objectives are in line with the overall project intent and interested parties' needs/expectations.
Step 2. Planning to achieve these objectives (e.g., who, when, where, How).
Step 3. Risk Management (identify the risk, analyze the risk, evaluate the risk and mitigate the risk) Some examples of risks are venerability and penetration by unauthorized entities.
Step 4. Identify applicable data security controls.

4.   SYSTEM DEVELOPMENT :
Step 1. Classification of data / information (e.g. Public, internal-only, confidential, and restricted.
Step 2. develop a complete architecture of the system (minute level and technical detailing of the entire project).

5.   INTEGRATION, PILOT RUN, AND TESTING:
Integration
Step 1. Accessibility of data/information from interested parties. (Proving work environment)
Step 2. Sharing or uploading of information on new data center
Pilot run
Step 1. ensure all project objectives are met (SMART information / SMART surveillance)
Step 2. Run the data for a sufficient period
Testing
Step 1. VAPT (Vulnerability and Penetration) testing
Step 2. Close the patches

6.   COMPREHENSIVE IMPLEMENTATION:
Step 1. duplicate the Model with other interested parties
Step 2. Integrate & test for all other models

7. ONGOING MAINTENANCE & IMPROVEMENT:

Step 1. Help desk and Incident Reporting (any compliant from uses shall be handled systematically)
Step 2. Asset Management / Capability Management
Step 3. Business Continuity Model (accessing new challenges and modification of existing system)

8. CONCLUSION:

Taking advantage of modern information and communication technologies (ICTs), smart cities aim at providing their residents better services as well as monitoring unexpected changes in city activity patterns. The globally rapid urbanization is proposing various inevitable issues, one of which is smart and efficient surveillance in urban areas. A case study of urban traffic surveillance is presented to highlight the concepts through a real-world application example (Nasik City).

REFERENCES:

1. Zaidatulnajla Hamdi Auckland University of Technology Auckland, New Zealand (Journal of Physics: Conference Series 2019)
2. Technical Committee ISO/IEC JTC 1 (ISO/IEC 27001:2013 Information technology — Security techniques — Information security management systems — Requirements)
3. Technical Committee ISO/TC 262 ISO 31000:2018 – Guidelines for Risk Management 2018