STL

Kakinada now has a 'Smart' edge

Kakinada, Andhra Pradesh

Project Background

This case study enumerates how STL designed and deployed hybrid connectivity infrastructure ranging from 120 Km of intra-city fibre connectivity coupled with GSM connectivity. With its expertise in converged networks, this MPLS network not only connects various applications to the CCC but also makes the internet widely accessible. The most advanced Command and Control Centre provides 360° situational awareness and action mobilization for the city. Applying design thinking to each layer of the network, STL also created an end-to-end safety ecosystem, which will make the city safer and enable seamless action on real-time information.

Challenges Faced and Mitigated

- Designing and creating a massive IoT ecosystem from scratch
- Area-based development plan (retrofitting)
- Vast scope spanning connectivity, civic infrastructure, and centralised controls
- Lack of high-speed backbone to support smart city applications
- Traffic safety concerns
- Lack of public safety mechanism

STL Solution

STL had the capability to design and deliver an end-to-end ecosystem for Kakinada. We created India's one of the most advanced Command and Communication Centre (CCC) with over 2,000 elements of smart city technologies integrated into it. The Command and Control Centre is equipped with various technology firsts like horizontal Internet of Things (IoT) platform, Long Range(LoRa) based city-wide wireless sensor network, and a disaster management system through public announcement systems (PAS) and variable message displays (VMD).

We provided three end-to-end solutions incorporated into the traffic management system of the city namely:

a. Adaptive Traffic Control System (ATCS)
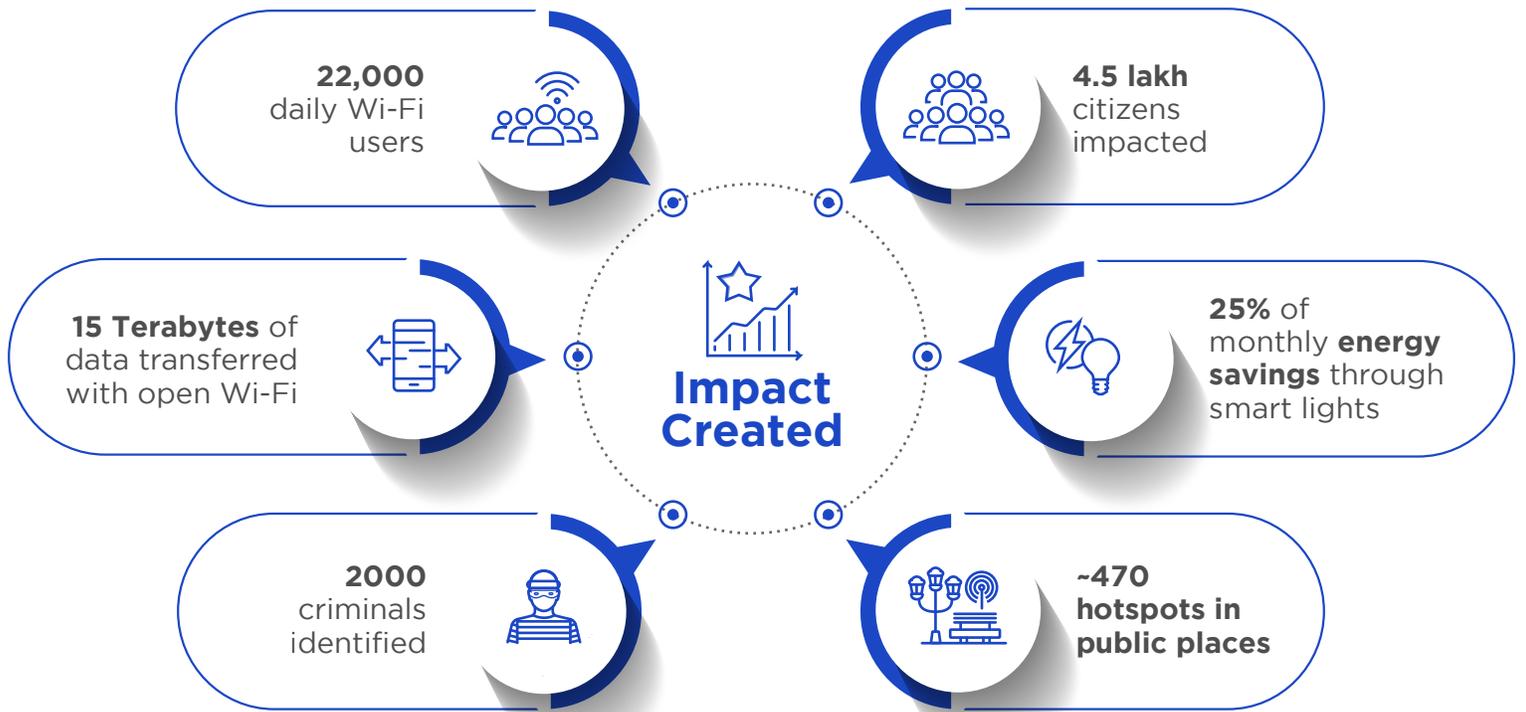Signalling depending on the traffic volume at four major junctions

b. Automatic Vehicle Number meter
For improving the traffic problem by creating e-challans based on Red Light Violation Detection (RLVD)

c. Crime Detection
Implemented by FRS (Face Recognition System) by installing 350 CCTVs. This significantly aided in reducing the crime rate in the city by detecting nearly 2000 criminals which led to solving more than 50 cases.

We worked relentlessly to provide an end-to-end safety ecosystem to make the city safer. In this prestigious smart city project, we implemented smart infra-spanning transport, smart surveillance, smart lighting, public Wi-Fi, disaster management, robust governance and energy conservation. We also created a dashboard for real-time CDP (City Digital Platform integrating about 20 different department-related government schemes) visibility and solid waste management based on data-driven monitoring and decision-making mechanism.

22,000 daily Wi-Fi users

4.5 lakh citizens impacted

15 Terabytes of data transferred with open Wi-Fi

Impact Created

25% of monthly **energy savings** through smart lights

2000 criminals identified

~470 hotspots in public places

With our unique STL solution, we facilitated smart city applications for CCTV surveillance, Wi-Fi, automatic number-plate recognition, and face detection on one single screen. We primarily focused on video analytics and automatic alerts on wrong parking, with congestion and unattended object detection by allowing seamless action on real-time information. STL has enabled data-driven decision-making for the local administration of the entire city.