CASE STUDY

Transitioning from the ‘City of Lakes’ to a Smart City

Organisation: Bhopal Smart City Development Corporation Limited

System Integrators: Technosys Security Systems (P) Ltd.

Project Location: Bhopal, Madhya Pradesh, India

Industry Segment: Smart City

Solution: • Videonetics VMS and Video Analytics
• Videonetics Traffic Management System with E-Ticket Management System
• Command & Control Centre

The Background

The Smart Cities Mission is an innovative initiative by the Government of India to drive economic growth and improve the quality of life of people. It aims to achieve this by enabling local development and harnessing technology as a means to create smart outcomes for citizens. A hundred cities across the country were shortlisted by the government, which were to be promoted as ‘Smart Cities’. Based on an all-India competition, Bhopal was selected in the first round of 20 smart cities, to transform the city into a leading destination for smart, connected and eco-friendly communities focused on education, research, entrepreneurship and tourism.

The Challenge

Known as the ‘City of Lakes’, Bhopal is a historic city with a population of over 2.5 million. With the expanded planning area of 463 square kilometres, Bhopal is among the 16 largest cities in India. In view of its growing population, the city leaders wanted to upgrade the security of its residents, migrants and visitors, by ensuring diligent monitoring across the city. Also, Bhopal faced chaotic traffic flows and repeated violations, causing traffic jams, accidents and fatalities. This not only made everyday life uncomfortable but also increased transport time with a negative effect on economic activity. The stakeholders wanted to implement an end-to-end video surveillance system to support law enforcement, to build a secure environment for citizens, and to also ensure road safety across the city.

The Solution

After rigorous evaluation, a panel of city leaders, stakeholders and industry leaders selected Videonetics for this project. Videonetics designed a solution based on its AI-powered Unified Video Management Platform encompassing Videonetics VMS, Video Analytics and VideoneticsTraffic Management System.

1. 24x7 city-wide surveillance: Today, over 350 IP cameras are deployed in Bhopal, covering major entry and exit points from the city, places of strategic importance, locations of public gatherings, traffic junctions and business districts etc. Operators are quickly responding to any incident from petty theft to more serious offenses. To monitor urban operations round-the-clock, Videonetics VMS provides continuous viewing and recordings of these cameras, in a user-friendly interface. Specifically, the authorities can also detect overcrowding, unattended baggage, break-in prediction, counting people and traffic violations in a single interface.

2. Round-the-clock traffic monitoring: Today, the city has an Videonetics Traffic Management System suite covering 23 junctions across the city. The suite encompasses Automatic Number Plate Recognition (ANPR), Red Light Violation Detection (RLVD), Over-speeding Detection, No Helmet Detection and Triple Riding detection. In addition to intersections, the ANPR solution has been integrated with IP cameras at entry-exit points in tourist spots and other places, helping law enforcement to identify non-standardised/ duplicate licence plates, blacklisted and stolen vehicles, and much more.

3. Automated violation prosecution management: The Videonetics TMS solution not only enables monitoring of the traffic situation 24x7, but also records traffic violations in real time. Videonetics E-Ticket Management System has been integrated with regional vehicle database to generate e-ticket along with incident evidence and violator's address – all in a transparent manner and with the audit trail of all transactions with evidence. With the help of E-Ticket Management System, traffic personnel can easily maintain record of all payments, both received and pending.

4. Centralised city view: Combining Videonetics VMS and TMS into the unified interface empowers city management officials and traffic police to view real-time alerts, manage them, and respond to them swiftly, from the Integrated Command & Control Centre (ICCC).

The Impact

The Bhopal Smart City project has proven to be a great success and has become an exemplary model for other cities. Today, operators have become more efficient and make better decisions by having consolidated monitoring and reporting in the single interface. From helping law enforcement authorities in apprehending vandals to addressing instances of theft, physical confrontations and street crimes, now authorities have critical video evidence available to aid in the investigation of crimes and other incidents.

Also, with citizens becoming more sensitised to traffic rules and beginning to follow them, violations have come down rapidly. The traffic data of each junction now provides insights to the administration, which is helping to manage chaotic traffic conditions and create situational awareness at the levels of local and central authorities.

"As challans were dispatched to the residence address, people had to pay, and it was quite strict," says **Nitin Dave, Media Manager, Bhopal Smart City**. "Now people are more aware about traffic rules, leading to a reduction in the number of e-Challans" he added.

With ITMS, e-Challan Goes Hi-Tech But Fine Collection Is Still Low Key

Ten Habitual Offenders Issued E-Challans Over 35-50 Times, But Few Paid Up

HOW TO CHECK WHETHER YOU HAVE BEEN E-CHALLANED

BHOPAL UNDER SMART-EYE?

Traffic RAVAILS

Now, digi-eyes to help track and recover stolen vehicles

Traffic Mgmt System To Get Next-Gen Version

ON ALERT

आज से हेलमेट नहीं पहना तो घर पहुंचेगा चालान

आईटीएमएस : बिना हेलमेट डिटेक्ट हुए 680 दुपहिया चालक, इनमें 80 महिलाएं

दोपहिया वाहन चालकों ने आज से नहीं पहना हेलमेट तो घर पहुंचेगा चालान

“We are proud to be associated with Bhopal Smart City project. Videonetics unified solution is not only monitoring the entire city but also helped in reducing road fatalities. Now law enforcement is further equipped to make decisions faster and respond towards any incidents or threat. Thanks to Videonetics team for their constant support and untiring efforts for making this project successful. The implementation of this solution has made the city smarter as well as safer for the citizens”, **expressed Mr. Neeraj Kushwaha, Founder and Director at Technosys.**”

Key Results Areas:

- Increased security with 24x7 monitoring of city area
- More alert and ready operators, from traffic control to citizen security
- Reduction in traffic rule violations by 80% and improved traffic discipline among people
- Drastic reduction in incidents involving stolen vehicles, duplicate licence plates etc.
- Minimisation of human intervention and elimination of biases in decision making

The open and modular architecture of the solution not only allows the city to continue adding more applications to make its traffic management more robust, but also integrate with the city surveillance system in a single unified interface, to address overall security concerns with a holistic approach.

Awards & Recognitions:

The Bhopal Smart City has received various awards from the government and industry bodies:

1. Project Awards:

a. The Innovative Idea Award for Integrated Command and Control Centre (ICCC) by India Smart Cities Awards
b. The Urban Mobility Award for Security Integration & Intelligent Traffic Management System
c. Best Smart City of the Year by Smart Cities Conclave
d. CSR Smart Cities Leadership Award for Security Integration in Traffic Management (No Helmet Detection)

2. Technology Awards:

a. SECONA Innovation of the Year 2018 for ‘No Helmet Detection System’
b. Finest India Skills & Talent Award (FIST) Best Innovation in Security 2018 for ‘No Helmet Detection System’
c. NASSCOM Technology Excellence Award 2019 Rising Star in AI & DL for ‘No Helmet & Triple Riding Detection System

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