

## CASE STUDY

# Videonetics Empowers Asia's Biggest Real-time Governance Center in Andhra Pradesh with its AI powered Unified Video Management Platform

**Organisation:** Real-time Governance Center, Government of Andhra Pradesh

**System Integrator:** MATRIX Security & Surveillance Pvt. Ltd

**Project Location:** 13 Districts of Andhra Pradesh

**Industry Segment:** State Surveillance & Transportation

**Solution:** • Video Management System and Multi-Site Aggregation

- Video Analytics
- Traffic Management System and E-Ticket Management System
- Face Recognition System
- Command & Control Centre

## The Background

The state of Andhra Pradesh in the southern India is the country's seventh-largest state by area and the tenth most populous state with more than 55 million inhabitants. It is also one of the most technology-forward states that has conceptualised and implemented a state-of-the-art Real-Time Governance (RTG) Center that brings all state departments onto one platform. This initiative leverages technologies such as Artificial Intelligence (AI), Deep Learning (DL), Machine Learning (ML), Big Data, Internet of Things (IoT), and more, to ensure governance goes to the last mile.

The RTG Center, a marriage of technology and administration, aims to transform the lives of the state's citizens by making accessible, accurate and swift administrative services, resolving grievances quickly, and bringing transparency and accountability to various government schemes and services. It also strives to protect and safeguard people with 24X7 monitoring of incidents, climatic events, law & order violations, anomalies, and so on and taking swift action to save lives.



## The Challenge

The sheer size of the state, spanning over 162,970 square kilometres, spells a security challenge. Moreover, as it experienced rapid economic growth with more and more people flocking to the cities, infrastructure expanding and lakhs of visitors coming for religious tourism, there was an imperative need to have robust security measures in place.

The government was looking for a 'proactive' surveillance system that could ensure effective monitoring of all the key areas in the 13 districts of Andhra Pradesh from the RTG Command and Control Center. It wanted an intelligent solution that could provide real-time monitoring of public law and order, facilitate road traffic safety, prevent crime, improve urban amenities, and enhance the overall "Happiness Living Index" of the state.

An intelligent, state-of-the-art and future-proof, Videonetics Unified Video Management Platform fulfilled all their needs and more!



## The Solution

After rigorous evaluation, Government of Andhra Pradesh selected Videonetics as the technology partner for this project. Videonetics designed a solution based on its AI powered Unified Video Management Platform encompassing Video Management System, Video Analytics, Traffic Management System, E-Ticket Management System and Face Recognition System.

### Collaborative surveillance of 13 districts with faster action:

Today, over 14,000 IP cameras are deployed in 13 districts of Andhra Pradesh, which are being managed by Videonetics VMS. These cameras are strategically installed securing major entry and exit points of the city, places of importance, locations of public gatherings, police HQ, bus, and railway stations etc. To monitor urban operations round-the-clock, Videonetics VMS provides continuous viewing and recordings of these cameras, in a user-friendly interface. Authorities are equipped to instantly playback video directly from the live feeds during an emergency and handle investigation.

For proactive surveillance, Videonetics AI- Enabled Video Analytics have been deployed at vulnerable spots so that operators can quickly respond to any incident from petty theft to more serious offenses. With video analytics algorithms, the system detects situations of crowd gathering, parking violations, anomalies related to people's behaviour in a single unified interface of Videonetics VMS.

### Improved traffic management and road safety:

Road safety being paramount for the state of Andhra Pradesh, Videonetics deployed its Traffic Management System across more than 680 junctions of the region. The bespoke system comprised Automatic Number Plate Recognition (ANPR), powered with Red Light Violation Detection (RLVD) & Speed Violation Detection (SVD). In addition to the 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. This system is designed to help law enforcement monitor traffic round-the-clock, as well as record traffic violations in real-time.

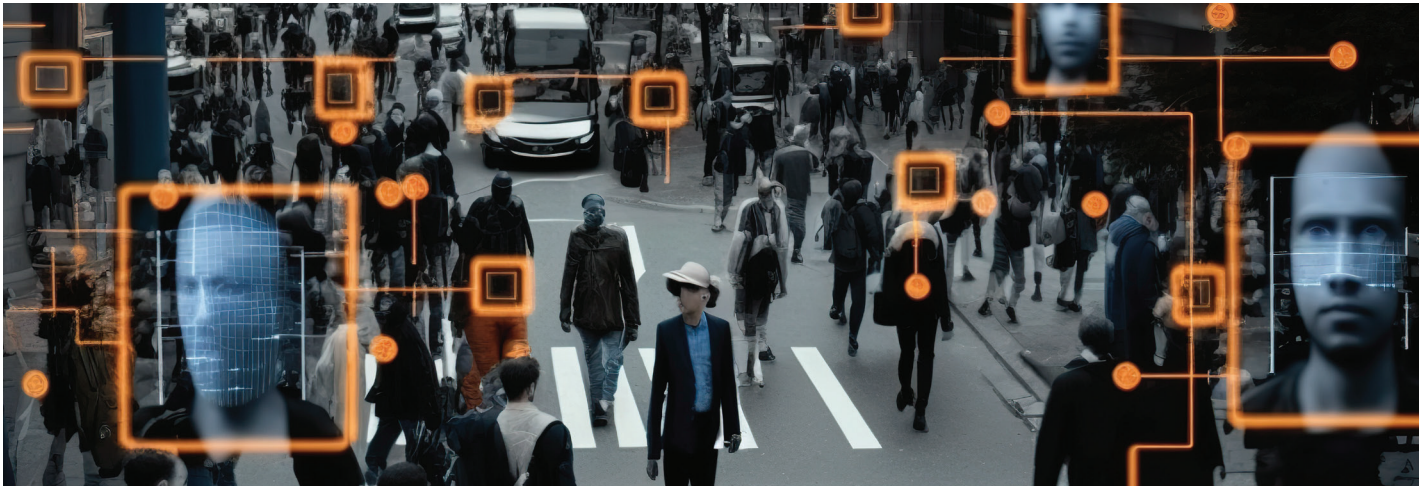
Videonetics E-Ticket Management System has been integrated with regional vehicle database to generate e-ticket along with incident evidence and violator's address – all in a transparent manner and with the audit trail of all transactions with evidence. With the help of Videonetics TMS, traffic personnel can easily maintain record of all payments, both received and pending.



### Highest precision, real-time face recognition to prevent and solve crimes:

As part of a unified solution, leading-edge Videonetics Face Recognition System has been deployed at nearly 1000 public places and government institutions in the state. This software instantly detects, tracks, recognises and analyses people in live video streams and compares with a database of wanted or criminal individuals. If there is a match, it notifies law enforcement instantaneously. The Face Recognition System has been integrated with Crime and Criminal Tracking Network & Systems (CCTNS), National Crime Records Bureau (NCRB) and many other databases to perform matching of the suspect in both live as well as in an offline manner.





### **Collaborative surveillance of 13 districts with faster action :**

Combining Video Management System, Video Analytics, Traffic Management System and Face Recognition System into the unified interface empowers district management officials and traffic police to view real-time alerts, manage them, and respond to them swiftly, from the Command & Control Centre (ICCC). These 13 districts are well-connected to the RTG State Centre, situated in Amaravati city. Today stakeholders have visibility on 'what's happening' across these districts from traffic control to citizen security.

## **The Result**

Asia's biggest, Real-time Governance State Center became an exemplary project, for various countries.

One of the most significant impacts of the Videonetics Unified Video Management Platform has been, enhanced situational awareness at the district and state levels. From traffic violations, petty thefts, major crimes to issues of national security, Videonetics unified solution is helping the government departments stay on the pulse of what is happening across the 13 districts of the state.

Andhra Pradesh has also been successful in making the roads a lot safer for its citizens with the Videonetics solution. Traffic modernisation is ensuring smooth flow of traffic, improved lane discipline, better air quality due to reduced congestion and lower carbon emissions, and fewer speeding and accidents, among several many other benefits.

Real-time detection of traffic offenders is helping the traffic police track, penalise and deter them from breaking the law again. This has brought down road accidents that occur due to negligence or indifference. The E-Ticket Management system is also digitising penalty, fine payments and driving transparency in the entire process.



The surveillance system has helped bring down the crime rate, as well as enabled faster investigations. With 24X7 live footage being viewed from the thousands of cameras at the city as well as state level Command & Control Centre and real-time alerts being sent to the law enforcers on the ground, the police are better equipped to interject just in time to prevent mishaps. With unified solution, authorities can easily navigate and prompt specific video feeds on the video wall during an emergency.

Additionally, face recognition has given them the right tools they need to keep a watch and identify and apprehend criminals running from the law. It plays a vital role in solving crimes efficiently, making Andhra Pradesh a safe and secure state where people can live peacefully, thrive, and grow.

Further, the open architecture of Videonetics unified solution is highly scalable and enables the Andhra Pradesh state administrators to add more applications and functionalities as and when their requirements grow to make its surveillance and traffic management infrastructure more robust, expandable and up to date.



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We are proud to partner with Videonetics for this project. Its innovative unified video computing platform is proving to be a game-changer for government entities and businesses alike. This comprehensive solution has the power to help them make the most of their visual data, ensure security and governance, as well as build scalability to become future-proof,” expressed by **MVS. Subba Raju, Chairman of MATRIX Security and Surveillance Pvt. Ltd.**

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