

CASE STUDY

(Surveillance)

The Client

The client (confidential), a telecom operator is based out of South East Asia. They have a customer base of around 55 million users. They are one of the largest telecom operators trying to be a leader and differentiator in the Surveillance Security space, and simultaneously build loyalty among the users.

The Pain Point

The client's need was to protect physical security of important facilities and infrastructure. Most of the client's video surveillance installations had a large number of cameras with central control rooms for manually viewing the camera feeds. The task was highly manpower intensive, error-prone, and not easily scalable. There had been instances of incidents not being reported or alarms not being raised for suspicious activities. Also, the client was facing difficulties in extracting specific incidents/activities from huge amount of video footage that was stored in the system. There was an urgent need to reduce the manual inspection and verification to improve effectiveness. The client was looking for video analytics solutions to be deployed for effective traffic management, security in public areas and car park monitoring system.

The Solution

The above-mentioned pain points were overcome through Graymatics Smart Surveillance solutions. The first phase of the project involved deploying video analytics for 10 cameras. These cameras were placed in predefined locations like highways, parking lots and junctions. The analytics helped to understand the project environment and design strategy for second phase of the project. The client chose the on-premise option for deploying the smart surveillance solution. However, both on premise and on cloud alternatives are available. After discussing the requirements with the client and finalising the use cases to be implemented, the system was trained for recognising number plates in that region. Following surveillance features were deployed for the client-

People Analytics

- **Face detection**

Smart Surveillance was configured individually for 10 cameras to detect and track faces of people present in the CCTV video feeds. The gender, age, ethnicity, and other attributes were recognized and captured. Optionally, emotion detection was included to recognize if the person is anxious, angry, happy, etc.

- **People counting**

The people counting feature present in the Smart Surveillance, configured in individual cameras, was used to count the number of people present in the CCTV footage at all times.

Smart Surveillance

monitored the count 24X7 and kept a record as metadata. This feature is especially useful for congestion, crowd detection and analysing the peak

- **Clothing and Attire attributes**

Graymatics Smart Surveillance provides detailed information about the clothing and attire of the people present in the Video feeds. This provided detailed insights of person of interest, which can help in identification during forensic video search.

- **Face Recognition**

Smart Surveillance provides the Face Recognition feature as a premium feature, to be configured by the security personnel in individual cameras. People appearing hence in any CCTV footage were then recognized and tracked.

Car Park Monitoring Car park monitoring feature of Smart Surveillance allows the parking locations to be continuously monitored and important information including entry and exit times, car waiting time, and illegal parking to be detected and reported. Since the camera was subscribed to the Vehicle make and model and Automatic Number Plate recognition features, more valuable insights about individual vehicles were generated.

- **Vehicle make and model**

The Vehicle make and model feature allows for vehicles present in the camera footage to be tracked, and details of the vehicles including make and model, along with timestamp, displayed and stored as metadata.

- **Automatic Number Plate Recognition**

Automatic Number Plate Recognition feature of Smart Surveillance possess the capability of reading and displaying the number plates of vehicles whether stationary or moving at high speed. The feature was especially useful in scenarios like identifying unauthorized vehicles

entering premises, and identifying speeding vehicles.

Intrusion detection- People and Vehicle

The intrusion detection feature was useful to monitor the activity in restricted areas, or unauthorized entrances in the premises. Smart Surveillance allows the security personnel to individually subscribe cameras to this feature, define the area to be monitored by simply demarcating the area on display, and setting the time for monitoring. An alarm is raised upon detection of intrusion, and detailed description of the intruder is hence displayed.

The Outcome

The client was benefitted in the following ways after deploying Graymatics Smart Surveillance solution-

- 100% detection of incidents – Incidents or activities which were left unnoticed previously were all detected and notifications or alarms were raised accordingly.
- It also led to savings on under reporting
- Reduction in response times for incidents- Prompt notifications across multiple channels ensured timely response by the security personnel in the event of any incident. This helped the client increase their efficiency and react efficiently before the situation aggravated. There was an enhanced response with instant alerts to authorised personnel.
- Cost savings compared to manual monitoring. The cost incurred in manual monitoring was much more than the investment made in video analytics.
- Another added advantage to the client was space optimization compared to manual monitoring.

Sample output for vehicle counting

Sample output for vehicle make and model and ANPR

Sample output for people counting

Notification View for Security Agent

Note- Figures and numbers are for illustration purpose.
