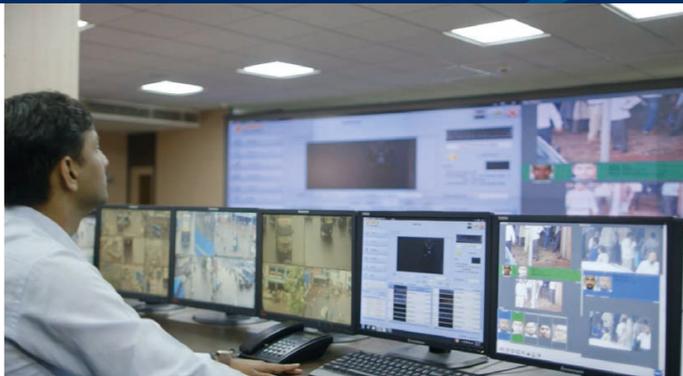


Safe City Solutions

Surat City Police

**Customer**

- Surat City Police

Industry

- Government

Challenges

- Meet changing needs of residents
- Provide security and safety as city grows
- Prevent crime and discourage public nuisances

Solution

- NEC NeoFace facial recognition solution
- NEC NeoFace Watch to match faces in real-time with police database
- NEC NeoFace Reveal for forensic investigation
- NEC Face recognition solution at Command and Control center setup to provide actionable intelligence

Results

- Enabled the authorities to better monitor important areas in the city
- Lowered crime rate
- Made Surat City the safest in the state and one of the safest in India
- Created conditions for the city to be attractive to business and tourism

Introduction

A port city on the west coast of India, Surat is the fourth fastest growing city in the world. A well-known diamond capital, it polishes over 90 percent of world's rough diamonds. In 2011, the government decided to adopt safer city technologies to boost the efficiency of city operations and better serve its 5.5 million citizens. It turned to NEC to provide the expertise and experience for the first such project in India.

Challenges**Meeting changing needs, preventing crime and providing security to residents**

Surat had been seeing an influx of visitors and vehicles in the city on a routine basis. Staying on top of the situation meant the authorities had to find a more efficient way to monitor the situation on the ground.

With rapid urbanization, the city also needed to upgrade its infrastructure and public safety services to meet the increasing demand and its residents' changing needs. Preventing crime and discouraging public nuisances were top priorities in town and city centers. Surat city wanted a way to respond to unforeseen events.

"The main challenge of Surat City police was that there was a lot of "floating" population," said Dr K L N Rao, Joint Commissioner of Police of Surat, referring to the city's position as a major trading hub.

"We wanted to establish the identity of each person," he explained, so that the authorities could easily bring down levels of crime or undesirable behavior in public.

Solution

Improved surveillance provides a force multiplier effect

Surat City authorities tested various vendors' technologies in their evaluation for a safer city rollout. In 2015, it picked a state-of-the-art solution. In collaboration with Innovative Telecom & Softwares, NEC provided a real-time surveillance solution that would offer much-needed intelligence with the recognition of faces.

Taking live video feeds from a growing fleet of cameras that are being installed throughout the city, the NEC solution enables police officers at a purpose-built command center to look out for possible criminal activity. These could range from snatch theft to other public disturbances.

With the world's most advanced facial recognition technology, the authorities have more "eyes" on the city than before. NEC's system has brought a force multiplier effect, enabling them to act more swiftly. It automatically matches faces against a database of 30,000 criminal mugshots and can alert the police immediately of anyone on a watchlist.

"The main motive of this was to make the citizens safe," said Dr Rao. The technology has made a difference by matching what is live on the ground with the existing data that the authorities have on hand, he noted.

While other competitors may provide either speed or accuracy in facial recognition systems, NEC's solution is the only one to provide both at the same time at the highest level. For that, it is widely considered the gold standard in the industry.

The technology is designed to enable police to monitor, scan, detect and search images of suspects, including even poor-quality photographs and video streams, for matches against different databases.

In multiple independent tests over 10 years conducted by the National Institute of Standards and Technology in the United States, NEC's technology has proven to be the fastest in search speed and the most accurate in matching.

Key to the Surat City authorities was how information was presented and used. A 280-square-foot video wall at the command center brings all the important video feeds in front of commanders, with data overlays providing situational awareness.

NEC is working with Surat Police to make the city safer by using the world's No.1 facial recognition technology, which will enable the

authorities to respond swiftly and effectively, said Pradeep Kushwaha, the head of NEC's Public Safety Division in India.

"At the control center, NEC's award-winning face recognition software analyzes the video feed from these surveillance cameras and matches faces in real-time against a watchlist of individuals to trigger an alert," he explained.



Pradeep Kushwaha
Head of Public Safety
NEC Technologies India

Beyond that, NEC's solution also enables investigators to quickly search through recorded videos to find any person of interest in an investigation. This new capability allows them to conduct forensic investigation that was not possible previously.

Results

"Surat is not only the safest city in the state of Gujarat, but one of safest in the country."

For Surat City, the improved surveillance capabilities provided by NEC have brought measurable results. The police department is now able to better prevent crime by monitoring vast areas on large screens from one single location, at any time of the day.

Since the system's rollout the surveillance system has helped to deter crime. Petty crimes, such as theft at public areas, have become less common with the new preventive measures.

There was a major impact on certain types of crime, like snatch theft, said Dr Rao. "After implementation of safe city project, the crime rate has been reduced by 27 per cent."

The holistic approach to building a smart city has created the ideal conditions to fuel growth in business and tourism in Surat. Even as the city prepares to cater to more residents and visitors in the years ahead, it is confident of providing the necessary safety and security. Surat City looks forward to associate with NEC in future projects so it can have good comprehensive coverage in terms of technologies such as CCTVs and facial recognition, said Dr Rao. "All these technologies put together will give a safe environment to the citizens of this city and make the city prosperous."