

Monterrey, Nuevo León brings the Safe City project to a new level with adapted new AI technology for enhanced security and public safety

MONTERREY

THE CUSTOMER AND THE CHALLENGE

Every country has its own driving culture, and Mexico is no exception. Many foreigners visiting Mexico for the first time notice the peculiarities of its road infrastructure, the non-standard use of turn signals and emergency signals by local drivers, and most importantly, the established culture of somewhat aggressive driving. All of this affects traffic safety in Mexico, particularly in metropolitan areas. Monterrey is a colossal city with more than 5 million inhabitants. It is a historic, industrial, and rapidly growing metropolis. Not surprisingly, in recent years, the security situation on its streets has become so difficult that drastic decisions have been required of the authorities - equipping the city with video surveillance cameras. With their help, it was planned, first and foremost, to control road safety, improve the protection of historical and cultural monuments, reduce the number of illegal parking, and optimize urban infrastructure. Thus, collecting, processing, and analyzing large datasets of people and vehicles were required. Such work demanded either a large human resource or tireless artificial intelligence. That is what the Monterrey authorities turned to IncoreSoft for.

THE SOLUTION

It took several years to implement such a large-scale project named "Safe City", equipping Monterrey with 20,000 cameras, laying hundreds of thousands of meters of fiber-optic cable, hardware and, of course, the intelligent video analytics from IncoreSoft.

With VEZHA® unique solutions and its modules for LPR, Object Detection, Traffic Lights, Traffic Analytics, and Crowd Detection, law enforcement agencies and municipal services have been empowered to:

- Prevent vandalism
- Improve the system of city parking.
- Optimize the operation of traffic lights.
- Optimize pedestrian and vehicle traffic.
- Collect data on lawbreakers in public places.
- Solve critical problems in various places for the city.
- Control smoking in inappropriate places, carry out preventive measures to prevent fires.
- Monitor traffic violations such as crossing the road in inappropriate places, running red lights, changing lanes, speeding, and crossing the public transport line.

The unique hardware optimization solution from IncoreSoft also resulted in significant savings on the number of servers. This innovation is based on the reduction of resources for video stream processing - RTPS stream from CPU → GPU (all operations on GPU) → CPU metadata. Thus, one server can contain up to 4 GPUs that process up to 400 streams.

For example:

- Processing 50 LPR/Face Recognition 2MP H265 streams using an RTX A4000 video card.
- 80 LPR/Face Recognition 2MP H265 streams processed by an RTX A5000 video card.
- 100 LPR/Face Recognition 2MP H265 streams using NVIDIA A40 video card.



The Safe City project was a large-scale endeavor, requiring a lot of effort and time to implement. However, thanks to the well-coordinated work of the IncoreSoft team, their innovative ideas, and good partnership relations, the project was completed on time, satisfying all customer requirements. The main result was the improvement of law enforcement resources, traffic and security in the large Mexican city of Monterrey.

Contact the sales representative today or visit incoresoft.com to download complete specification sheets.

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