



São Paulo Metro: ISS Keeps World Cup Visitors Safe

*Video Surveillance  
Technology Installed in 50  
Metro Stations*

## KEY FEATURES

- SecurOS Enterprise
- Video Analytics
- Distributed Architecture
- Facial Recognition
- Command Center Management

## BACKGROUND

As the largest metro in Brazil, and the second largest in South America, the São Paulo Metro system handles over three million riders daily. The Companhia do Metropolitano de São Paulo – Metrô operates four of the five metro lines in São Paulo and has 58 stations.

## CHALLENGES

With the 2014 World Cup arriving in São Paulo, the Metro management was aware that their already very busy metro system would have to handle hundreds of thousands more riders on a daily basis, particularly on Line 3 – Red, which goes to the stadium. For some time, works for improving video surveillance have been planned, but the approaching World Cup pushed those plans along even faster.

## WHY ISS

Intelligent Security Systems (ISS) have been deployed in metropolitan and public safety projects throughout the world, including subway and rail systems. Its flagship software product, SecurOS, encompasses both Video Management Systems (VMS) and Video Analytics. The Metro viewed the ISS as a one-stop solution for all their video surveillance and video management needs.

A key driver in its public safety and incident management process was the ability to review video locally (at each station) as well as visualize and manage incidents from a command center. The Metro had further requirements of scalability in its video management architecture and the need to deploy video analytics. A final consideration, but of significant importance, was ease-of-use; the approved system needed to be deployed rapidly and operator trained and experienced in its use immediately. After detailed evaluation of a multitude of VMS solutions, the Metro chose ISS.



## THE SOLUTION

The project is currently being implemented, and it is already installed and operational in three lines of the São Paulo Metro. It has involved approximately 400 new IP cameras from Axis, and the installation of 600 Axis IP encoders for analog Bosch cameras. There are three switches at each station interconnected by two optical Gigabit Ethernet rings. There are three video wall viewing station platforms.

Each station has local monitoring by the attendant for the specific cameras within that particular station, allowing immediate response to any incidents at a granular level.

The stations are then federated for viewing and management of video and analytics data at a centralized Command Center running SecurOS Monitoring and Command Center. The Command Center, which is manned with 12 operators and 6 administrators, has access to all video and views the entire security operations of the Metro from a situational awareness perspective. Personnel at the Command Center can manage and deploy security staff preemptively based on pre-defined scenarios or as incidents evolve. The deployed solution allows for local attendants and trained operator at the Command Center to work in conjunction to rapidly and intelligently respond to immediate incidents as well as manage public safety concerns such as crime, disturbances and mass evacuation needs.

In order for the system to work seamlessly, training and ease-of use of the enterprise video solution was a critical component. Operators required SecurOS to mimic the same functionality they had with their legacy analog solution. Of all the IP Systems tested, none offered the degree of versatility to customize interfaces and maps that was offered by SecurOS. The ability to extensively customize the user interface to meet training requirements of personnel accustomed to a legacy system, as well as being a bridge for a newly defined Concept of Operations (ConOps) allowed for a perfect transition to the SecurOS Video Management platform.

“ISS proved their worth to us in a very short time. [ISS has] to assure maximum security for our visitors and citizens”

Adriano Oliveira dos Santos,

Specialist Engineer

Companhia do Metropolitano de São Paulo

## USAGE OF SECURUS FACIAL RECOGNITION

A final consideration was system stability. In its testing prior to deployment, the Metro tested a multitude of IP solutions for video management, and determined the most stable ISS architecture to best fit its. ISS minimized the impact of IP redundancy in all their systems via their flexible architecture and database replication on all servers. This contributed to significant savings in both cost of deployment as well as total cost of ownership (ToC).

## THE RESULTS

Adriano Oliveira dos Santos, specialist engineer for Companhia do Metropolitano de São Paulo - Metro said, “ISS proved their worth to us in a very short time. With the whole world watching, we need quick access to cameras and to know right away from individuals that are trying to enter the stadium who is red flagged due to past problems with security or even criminal acts. The ISS Face Recognition solution has allowed us to automate security procedures in tandem with law enforcement to assure maximum security for our visitors and citizens.”

The deployed solution has had immediate impact. Several individuals have already been apprehended for criminal activity in the Metro, primarily due to the ability to quickly search and pinpoint activities from the video surveillance system. The solution has also been instrumental in quelling disturbances rapidly – the system’s centralized architecture allows operators at the central command center to quickly deploy security staff at the first inklings of an incident, allowing more intelligent and efficient use of personnel.



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