

# Metrô de São Paulo, Line 4, Brazil

Boosting safety for Latin America's most innovative metro line



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José Luis Bastos, Service and Operators Manager, ViaQuatro

Since May 2010, the metropolis of São Paulo, Brazil, has boasted Latin America's most innovating metro line. All trains of the new Line 4 - 'the yellow line' - have air-con and ambient sound. More groundbreaking are the glass partitions separating the platform from the tracks, for improved traveler safety and comfort, and the driverless technology: the trains use computerized technology, instead of a conductor. All train functions are controlled directly from the Operational Control Center. Here too, the technology is top-notch. A curved Barco Overview video wall helps the operators monitor everything that happens on trains and in stations, in real time.

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With a fleet of a dazzling six million cars, the Brazilian metropolis of São Paulo suffers some of the world's worst traffic jams. Committed to tackling this challenge, the city's public authorities are investing heavily in expanding the metro lines and suburban rail networks. In March 2007, construction started on the new line 4 - called 'the yellow line' - which will connect the center with the west side of São Paulo. Once fully operational, it will cover a distance of 12.8 km, serving 11 stations and transporting an estimated one million people per day. The first stretch of Line 4 was inaugurated in May 2010.



José Luis Bastos, Service and Operators Manager, ViaQuatro

"In addition to serving a region that lacks public transportation, Line 4 also has a strategic importance because it connects the other subway and CPTM railway lines. It is also driving a revival in the Vila Sonia and Pinheiros neighborhoods," José Luis Bastos started off. Mr. Bastos is Service and Operators Manager at CCR ViaQuatro, the concessionaire that will operate and maintain the Yellow Line for the next 30 years. The majority shareholder (a 58% stake) in the project - Brazil's very first public-private partnership - is the CCR Group. One of the largest infrastructure concession companies in the world, CCR Group is responsible for about 2000 km of roads managed by its eight concessionaires in the states of São Paulo, Rio de Janeiro and Paraná.

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### An OCC is a must

In 2007, ViaQuatro commissioned a consortium of Siemens and Rotem to supply the metro cars, the signalling system and the complete automation of Line 4. They were also involved in equipping the Operational Control Center (OCC). "No subway works without an OCC. For Line 4, it is even more essential as the trains drive without conductors," said Bastos. At the OCC, controllers set up the route plans for each train and monitor the operations. A good control system, including a first-class video wall, is crucial to help them track the movement in stations, on trains, across the line extension, the maintenance yard, etc.

### Positive past experiences

Siemens and ViaQuatro felt confident that a Barco wall would best meet their demands. "Firstly, it met all the technical requirements and integrates seamlessly into the Siemens applications. In addition, Barco has many references in control centers and Siemens as well as the CCR Group had positive past experiences with them," Bastos explained. "On top of that, Barco has a subsidiary here in Brazil, which is a guarantee for prompt technical support and the speedy delivery of spare parts."

### Professional and committed

In December 2009, Barco set up a curved video wall consisting of 18 rear-projection 70" cubes. Integrating powerful DLP technology, the Overview wall ensures outstanding picture quality, high contrast and wide viewing angles. Everyone at ViaQuatro is satisfied with the high-brightness wall, its ease-of-use as well as the training and support they got - and are still getting - from Barco. Eduardo Yamaoka, Project Manager: "The contact with Barco was very professional. Both the sales and technical people immediately understood our needs and were committed to the project."

### Improved services

"Our operators now have a great overview to monitor all the systems and the images from the CCTV cameras at the platforms, stations and in trains. If they need more image detail, they can easily zoom in", Bastos explained. "The overview facilitates better cooperation and more effective decision-making. It even helps us to anticipate risk situations instead of simply reacting to them. Fortunately, we've had no crisis situations so far but we are convinced that the Barco system will help us mitigate problems and deliver a better operational quality, which, ultimately, will be reflected in improved services to São Paulo's population."

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