TOLLING CASE STUDY

Autopista Vespucio Norte

Santiago, Chile

Santiago utilizes electronic tolling on urban highways to generate significant infrastructure revenue without impeding traffic flow

Since 2010, Q-Free and Autopista Vespucio Norte have worked together to create a better experience for drivers in Santiago, Chile. In 2015, this partnership grew from solely supplying dedicated short range communication on board units to a complete technological upgrade of its pre-existing electronic tolling solution across its urban highways.

SOLUTION

- ▷ SINGLE GANTRY
- ▷ ALPR AND DSRC TECHNOLOGY

TYPE: MULTI-LANE FREE FLOW ELECTRONIC TOLLING

CHARGING POINTS: 17

COMPLETION: 2017

About Autopista Vespucio Norte

Autopista Vespucio Norte is a Chilean Concession Company that operates one of the four inter-operable urban highway concessions in Santiago. The concession tolling system was designed by Chile's Ministry of Public Works in the early 1990s with the goal of financing a modern network of urban free flow toll highways in a very dense metropolis. This network of free flow toll highways connects the various areas of the city. Autopista Vespucio Norte is responsible for the functioning, repair, upkeep, maintenance, development, and operations of select public infrastructure and urban highways.

- Operating since 2005
- Oversee 8 municipalities
- Part of the first worldwide network of multi-lane free flow networks

Tolling Challenge

Outfit existing tolling gantries with new customized tolling sensors and equipment for rear picture toll enforcement

Implement and maintain new electronic tolling technology to continue automatic generation of significant infrastructure revenue

The Solution

Autopista Vespucio Norte selected Q-Free's multi-lane free flow (MLFF) electronic tolling solution to charge and enforce tolling in Santiago, Chile. The project consisted of the provision, assembly, and maintenance of 15 charging points with MLFF functionality across 54 lanes from Vespucio Norte and later added an additional 2 charging points in the San Cristóbal tunnel.

The roadside system installation consisted of a relatively new solution with only one gantry rather than the traditional three gantries. The complete system also included dedicated short-range communication (DSRC) technology and automatic license plate recognition (ALPR) cameras and software.

Results

Q-Free's MLFF electronic tolling solution deployed across 17 charging points and 54 lanes of the city's urban highways.

- Complete all roadside work in 8 hours with charging points fully functional 24 hours later to minimize revenue losses
- Adapt new sensor technology to outfit existing single gantry structure
- Allow continuous flow of traffic while electronically collecting toll information for automatic invoicing

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