

EN

Chile: a successful urban road network.



always one step ahead

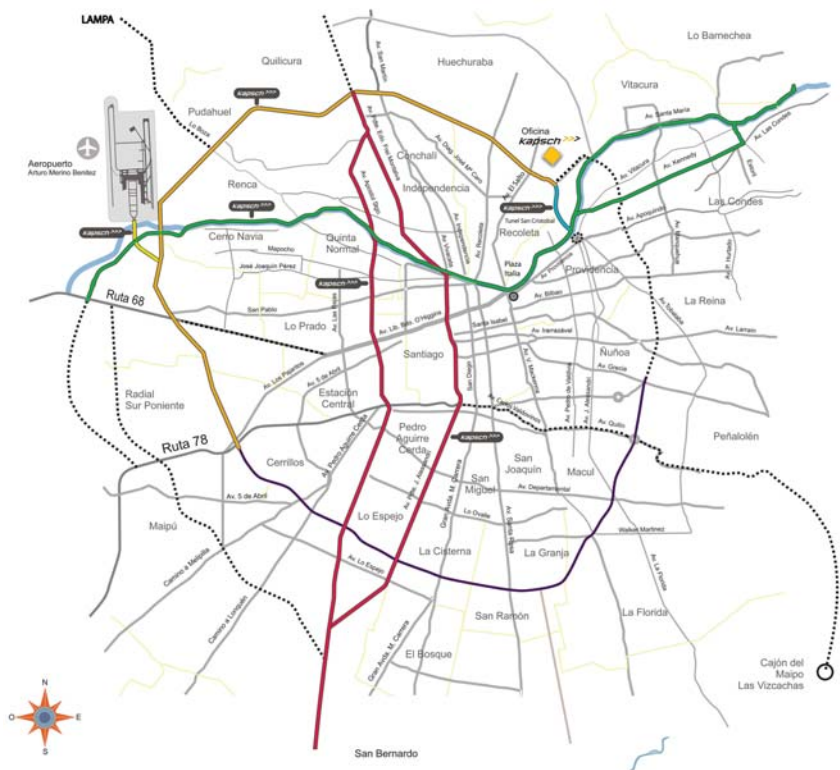
7 years of successful Free-Flow Tolling and more...

Santiago de Chile was a pioneer in the development of concession-interoperable, multi-lane free-flow urban highways. This network crosses the city from north to south (Autopista Central), from east to west (Costanera Norte), covers also the northwestern (Vespucio Norte) and southern (Vespucio Sur) ring road surrounding this busy metropolitan area of 7 million people. Recently the urban highway network was extended through San Cristobal Tunnel and Santiago Airport.

As the supplier to the multi-lane free-flow (MLFF) road network in Chile, Kapsch TrafficCom supplied full interoperable DSRC systems, back office and operational control. As a mature and proven technology, the electronic toll collection system has served as the backbone for new opportunities such as parking and single lane solutions integrated with the existing interoperable system.

In this context, interoperability means that any customer of one these four concessions can use its unique electronic identification On Board Unit (OBU) to make use of the others 5 concessions. Furthermore interoperability implies future access to newer multi-lane free-flow networks as well as to new applications.

The Ministry of Publics Works played an active role in this interoperability concept by establishing the central database of the National Record of OBU Users (RNUT). The lifecycle of any contract of any concession is known to the other concessions, and able to have access to all available services.



Interoperability was made possible with the application of a common electronic transaction, based on the DSRC CEN-278 standard and a standardized transaction profile based on the Chilean ST1 norm. All the concessions adhere to this standard to be part of an interoperable services platform.

The result is an improvement in travel time leaving furthermore available to the users a broad variety of payment channels and payment media that all work together toward customer satisfaction and loyalty.



Multi-Lane Free-Flow: a tradition

Since 2005 Kapsch TrafficCom has been leading the multi-lane free-flow systems market in Chile. Three of the four main supply contracts for interoperable urban highways of Santiago were awarded to Kapsch TrafficCom: Costanera Norte, Autopista Central and Vespucio Norte. In 2008 an innovative project San Cristobal Tunnel and in 2011 Santiago Airport MLFF project and the distribution of more than 3 million On Board Units, implementation of 63 gantries, 180 lanes and more than 3 billion transactions among all concessioners consolidated the predominant position of Kapsch as a reliable and proven MLFF supplier in this market.

Back Office Central System: from single concession to multi-concession

With the incorporation of parking transactions and interoperable transactions from other concessions, the local market required the industry to create a solution to simplify the invoicing process of multiple services in a single invoice. A second version of the Back Office Central System (BOCS) was developed for the concession Costanera Norte to provide this support. The first implementation was released in 2009 to incorporate interoperable transactions coming from Santiago's Airport Single Lane Pilot (AMB). and in 2011 was consolidated by the implementation of Santiago's Airport Multi Lane Free Flow Project entirely managed by Costanera Norte BOCS platform.

Operational Control System

With the evolution of modern highways the management complexity involving operational and electromechanical systems requires an integrated solution to balance both fields as part of normal operation. Operational Control System (SCO) is a working concept product which establishes an operational bridge between philosophy and technology where a simple but powerful tool supports safety operations. Although a common reference in many fields, integrated control is a pioneer within the ITS industry.

Transaction Gateway

As road infrastructure in cities becomes more important, urban access management systems, including parking, become critical elements toward establishing an overall and articulated solution to improve the travel and parking experience. Both users and service providers develop urban traffic solutions in new contexts, such as using OBUs for parking. The ever-growing size of a city's vehicle fleet makes it necessary to optimize the existing services infrastructure available to increasingly demanding users, especially in a setting where every second counts which contributes to reducing congestion. Transaction Gateway is a solution that simplifies the incorporation of DSRC technology and an interoperable invoicing concept in its existing parking solution. The awarded contract for Parque Arauco Mall which incorporates more than 5500 parking lots and 38 entrances/exits is a simple but flexible and extendable solution for access control that allows not only to cover parking needs, but also offers other applications such as interurban single lane.

Maximizing the infrastructure usage – on the road – in-vehicle – in the back office – to optimize the benefit in traffic management will be the key toward effective development of safer and more intelligent roads for the future.



www.kapsch.net