



SMART CITY CONCEPT IN CHILE TRANSPORTATION SYSTEM

Richard Mora
SMART CITY UNIT

Innovation and Technology Projects Specialist
Ministry of Transport and Telecommunications
Government of Chile



Agenda

1

How have been handled the transportation system and which are the new challenges to solve in Chile?

2

What are the strategies and Smart City concept in Chile transportation system?

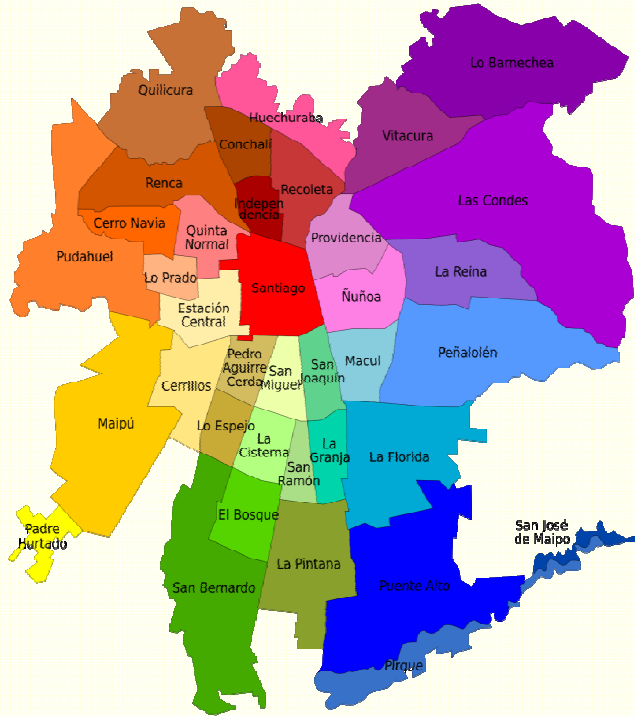
3

How Chile government apply Smart City concept in transportation system?

1

There are multiple problems to solve and a changing society in Chile

Santiago Metropolitan



41% of Chilean inhabitants live in Santiago Metropolitan

- A urban country
- Citizenship:
 - more educated
 - more connected
 - Getting old
- Citizens with more willingness to participate



87% of the population lives at cities

16,7% Population over 60 years

Average x7 Undergraduate enrollments between 1994 and 2014

1,3 Cellphones per person

1

HOW TO MANAGE THE EMERGENCY AND SAFETY SERVICES IN PUBLIC TRANSPORT

HOW TO MANAGE MULTIMODAL TRANSPORT



• FOREST FIRES



• TSUNAMI



• VOLCANOES



• EARTHQUAKES



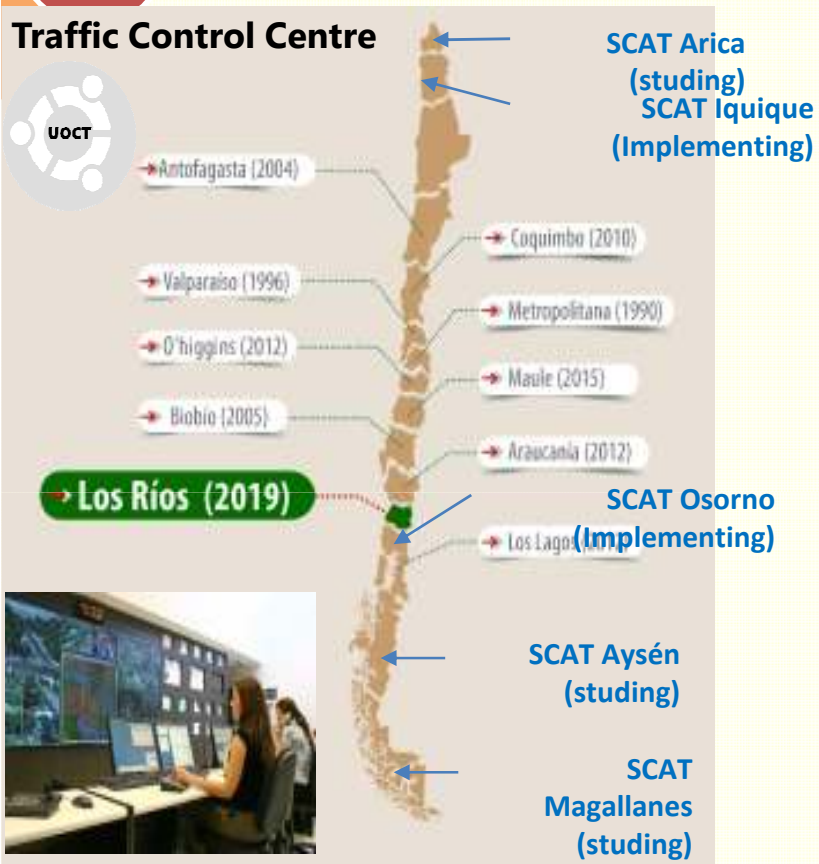
• MASS EVENTS



1

MORE THAN 25 YEARS IMPLEMENTING ITS IN OUR CITIES

Traffic Control Centre



IMPLEMENTING FREE-FLOW SYSTEM ON URBAN HIGHWAYS



7 concessioned urban highways in Santiago have an integrated free-flow tolling since 2006

In 2018 has begun the initiative #Chilesinbarreras in order to expand the free-flow tolling to all Chile

Traffic Lights Integrated	4346
Variable message sign (VMS)	22
Spiral detection system	2470
Closed-Circuit Television (CCTV)	479



Pioneering system in Latin America

1

ITS IN THE PUBLIC TRANSPORTATION SYSTEM

Integrated Electronic Payment System

Fleet monitoring and management

Passenger Counting



305 cameras to monitor routes only bus

MODERNIZATION OF PUBLIC TRANSPORT: BUSES

In 2018:

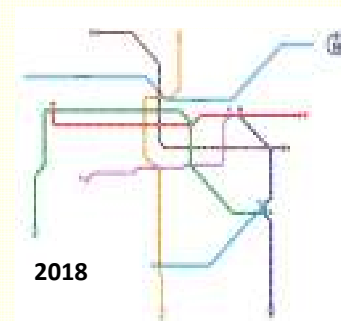
Adding 200 electric buses in Santiago

Implementing the first electric bus corridor ("electrocorredor") in Santiago

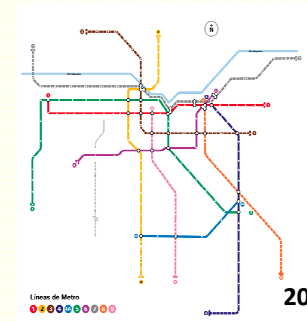
Pilots of face recognition project in buses

Pilots of payment by mobile phone and contactless system in cities of Temuco and Villarrica

SUBWAY



2018



2026

2017: First autonomous subway Line (6) in Santiago

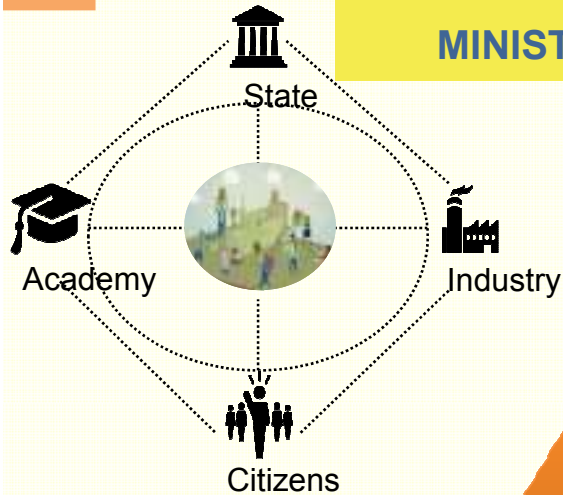
2018-19: Opening of Línea 3

Using renewable energy (solar and eolic) and regeneration of energy by braking

2

Have been Enough? Strategies and Smart City concept in Chile transportation system

OUR APPROACH OF SMART CITY:
MINISTRY OF TRANSPORT AS AN ARTICULATOR AND INNOVATIVE



Cities & Mobility

- Collaborative work model
- Comprehensive vision of mobility
- Technology and innovation
- Methodology prototype
- Sustainability of projects (governance, accountability, citizen demand)
- Inclusion of new problems

**Technologies in transport
(ITS)**

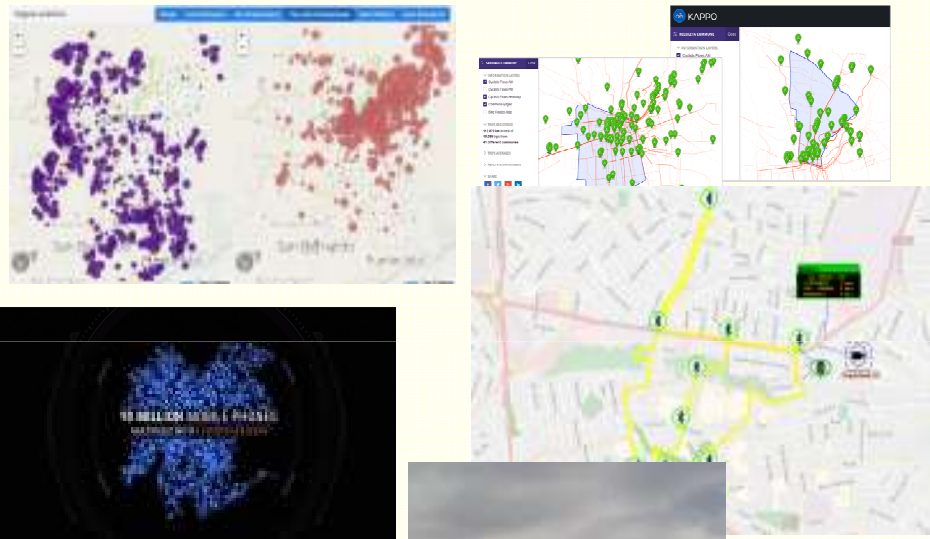
How do we do the work?

Working collaboratively with all the actors of society in the adoption of technologies and new ways of working to improve citizen services.

3

How government apply Smart City concept

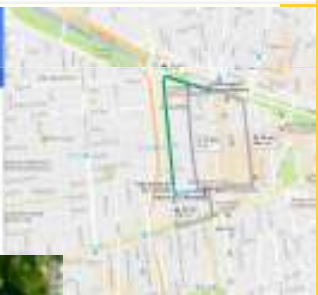
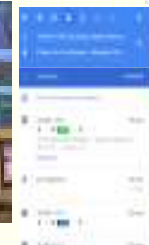
THE BIG DATA TO IMPROVE INFORMATION AND MAKE DECISIONS OF PLANNING AND MANAGEMENT OF THE TRANSPORTATION



Sensors to measure travel times and using data from the telecommunications network to obtain travel patterns of users.

MOBILITY INFORMATION SERVICES

- Public transport trip planners
- Integrated information center



3

How government apply Smart City concept

PROMOTING A CULTURE OF INNOVATION AND ENTREPRENEURSHIP IN MOBILITY

Promote the development of innovative disruptive solutions that improve the travel experience of users and improve the efficiency and sustainability of the transportation system.



Creation of a Community of Entrepreneurs

Carpooling App

Online ticketing system for bus

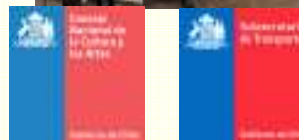
Promoting the bicycling to go to work

PROMOTING A MOBILITY CULTURE

Promoting a culture of mobility from an early age, impacting on the relationship between children and young people with the public space, the road environment and mobility.



AllRide



3

How government apply Smart City concept

AN INNOVATIVE MINISTRY REQUIRES AN INNOVATIVE CULTURE

- ❖ To adopt new technologies faster
- ❖ To work collaboratively and multidisciplinary
- ❖ To include citizens in the design, implementation and evaluation of solutions



ADVANCING IN A MORE HOLISTIC VISION OF MOBILITY AND THE CITY

Technologies

- Introduce electric mobility in public transport.
- Advance in taxi technology platforms.
- Advance in open data platform and information systems to users.
- Implement Integrated Mobility Control Centers.
- Advance in open standards for interoperability of technological systems.
- Move towards creating the conditions for connected and autonomous vehicles.

Citizens

- Strengthen a culture of mobility and road coexistence.
- Promote collaborative work aimed at generating better mobility.

New ways of working in transportation planning and management

- Adopting Big Data tools for planning and management.
- Understanding the emerging transport technologies as carsharing or autonomous vehicles and their impacts on the car ownership model.

Thank you for your attention!

**Ministry of Transport and
Telecommunications
Government of Chile**



Amunategui 139
Santiago de Chile
www.ciudadesinteligentes.cl

Richard Mora
Innovation and Technology Projects Specialist
rmora@mtt.gob.cl

