

# Transportation in Venezuela and Possibilities for Cooperation

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## Transportation: Communication

### Where are we?

#### *Politics:*

- Organization, structure, authorities and responsibilities for each level of management in the field of transport.
- Security.
- International Relations.

#### *Economics:*

- Gas, parking, productivity, rates.
- Annual budget for transportation.

#### *Environment:*

- High pollution caused by traffic congestion.



## Diagnosis of Transportation in Venezuela

1. Fleet growth.
2. Lack of alternative routes.
3. Deterioration of existing public transport: Inadequate infrastructure and lack of maintenance.
4. Public transport in private hands, disorganized and uncontrolled.
5. Lots of road accidents. Most involving motorcycles.
6. Monopoly in maritime transport: Conferry.
7. Delays, accidents and insufficient supply of flights / air traffic.
8. Lack of public policies to encourage alternative ways of transportation, such as bicycles.



**LATAM:**

- Colombia
- Brazil (Odebrecht)

**USA (Consortium)**

- New York (Parsons, Brinckerhoff, Quade & Douglas)
- Washington DC (Alan Voorhees)

**EUROPA:**

- France
- Spain (TELVENT and ALG)
- Austria (Doppelmayr)
- Germany
- England
- Norway
- Sweden

**ASIA:**

- World Economic Forum: The Future of Urban Development (China)
- Global Smart SOC Initiative 2012 (Korea)

**Projects:**

- The Caracas Metro-cable
- The Cable-train Caracas
  - The Caracas Metro
  - Metro-Metrobus System
  - National Railway System
- Transchacao, Transmetrópoli and BusCaracas



Currently, there are alliances between us, as private company, and other foreign companies to integrate technology and develop joint projects.

- Alliances
- Vendor Integration
- Consortium

Cases in development with no cooperation:

1. INTT
2. Mérida
3. Transmetrópoli
4. Girardot



## Key issues of international cooperation



- **Travel times and average speeds**
- **Parking, navigation and routing**
- **Weather conditions and pollution levels**
- **Public constructions, accidents and events**
- **Cameras and Variable Message Signs (VMS)**

- **Centralized System of Traffic Lights Management**
- **Integral Systems of Traffic Information**
- **Dynamic Traffic Control**
- **Closed Circuit for Traffic Visualization**
- **Intelligent Tolls**

- **Data Collection Service**
- **Studies of mobility and traffic impact**
- **Simulation and modeling**
- **Consulting for reorganization of urban transport**

- **Automated System for Collection of Passage**
- **Collection centers**
- **Intelligent Fleet Management**
- **Operations Control Centers**

- **Automated Infractions System**
- **Weight and high control systems and capture plates**
- **IP Surveillance Systems**
- **Access Control and Intrusion Detection**



- ITS Venezuela.
- Joint research to compare LATAM's major cities.
- Develop academic programs to train professionals in this area and promote growth of the industry.
- Exchanges, internships and visits to cities advanced on ITS to understand the situation and propose solutions adapted to each country.
- Integration of the transport system in LATAM. We are very isolated if we compare ourselves to Europe, a continent where transportation networking makes easier the connection between countries, without considering air transport.



- Incubator to support the growth of SMEs.
- Global or regional educative campaigns for drivers.
- Support authorities for learning about technological solutions available to improve transportation in Venezuela. Convince them to invest in ITS.
- Successful implementations of our solutions in different regions of the country to demonstrate that it is applicable to several areas, no matter the territory.



- Consider the issue of information systems for users.
- Pay special attention to road safety systems.
- Maintain regular communication with countries interested in cooperation
- Develop educative programs considering interaction between countries in LATAM and Europe.
- Create a short, medium and long term plan and evaluate results every year.

