

1.212 Regional Operation Planning and Architecture (ROPA) Project

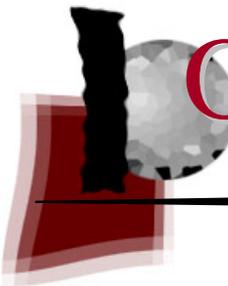


MEXICO CITY

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Outline

- **Background**
- Current Institutions
- Proposed Architecture
- Customer-Centric
- Cost/Benefits

Background

- Three Issues
 - Public Transportation
 - Congestion
 - Air Pollution
- In a complex institutional environment



Background

- Public Transportation
 - Represents 69% of all motorized trips
 - Half of those trips are in *colectivos* (“fixed route collective taxis”)
 - Metro has lost ridership
 - Buses have lost ridership
 - MCMA is highly dependant on *colectivos*



Background

- The economic and institutional model of *colectivos* is problematic
 - Competition *in* the market results in aggressive driving
 - Loose planning and operational control results in over-supply in some corridors and lack of service in others.



Background

- Congestion is a big concern
 - Authorities have built some physical capacity. **“We can’t Build Our Way out of Congestion”**
 - And implemented a demand management program: “Hoy No Circula”, but it resulted in more old vehicles and VMTs.



Background

- Air pollution
 - Transportation is a major source of pollution.
 - Congestion
 - Old fleet
 - Lack of maintenance
 - Poor fuel quality

A typical day

Source: WRI

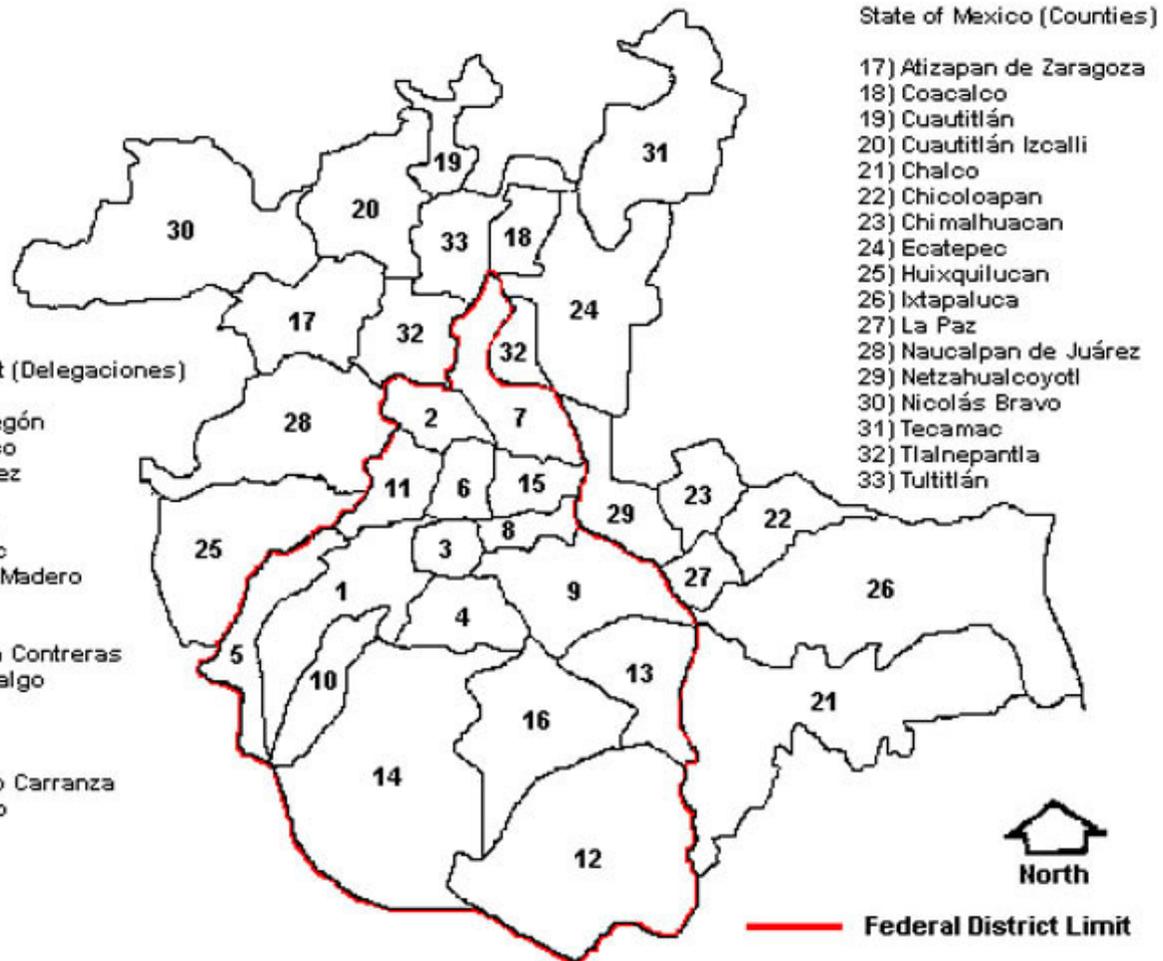




Background

- Complex institutional environment
 - MCMA is not a unified political jurisdiction
 - Distrito Federal (DF)
 - Estado de Mexico (EM)
 - Estado de Hidalgo
 - A total of 59 municipalities and 16 delegations

Background





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MCMA Transportation

- MCMA composed of 10,437 km of roads
 - 89% in the DF
 - 11% in the EM
- Limited Institutional framework
 - Difficult to plan and manage transportation
- Fragmented transportation system
 - "Transportation services are provided, regulated, and operated by different institutions with different goals and organizational structures."



Metropolitan/Federal

- SCT: Ministry of Communications and Transports
 - Federal transportation planning institution
- COMETRAVI: Transportation and Traffic Metropolitan Commission
 - “Virtual organization” – representatives from various organizations in the EM and DF



EM Organizations

- EM-SCT: Secretariat of Transportation
 - In charge of transportation planning
- SC-EM: Secretary of Communications
 - Management and regulation of private transportation
- ST-EM: Secretary of Transport
 - Responsible for management and development of primary road infrastructure and regulation of local communications
- SCM: Metropolitan Coordination Secretariat
 - To promote metropolitan agenda



DF Organizations

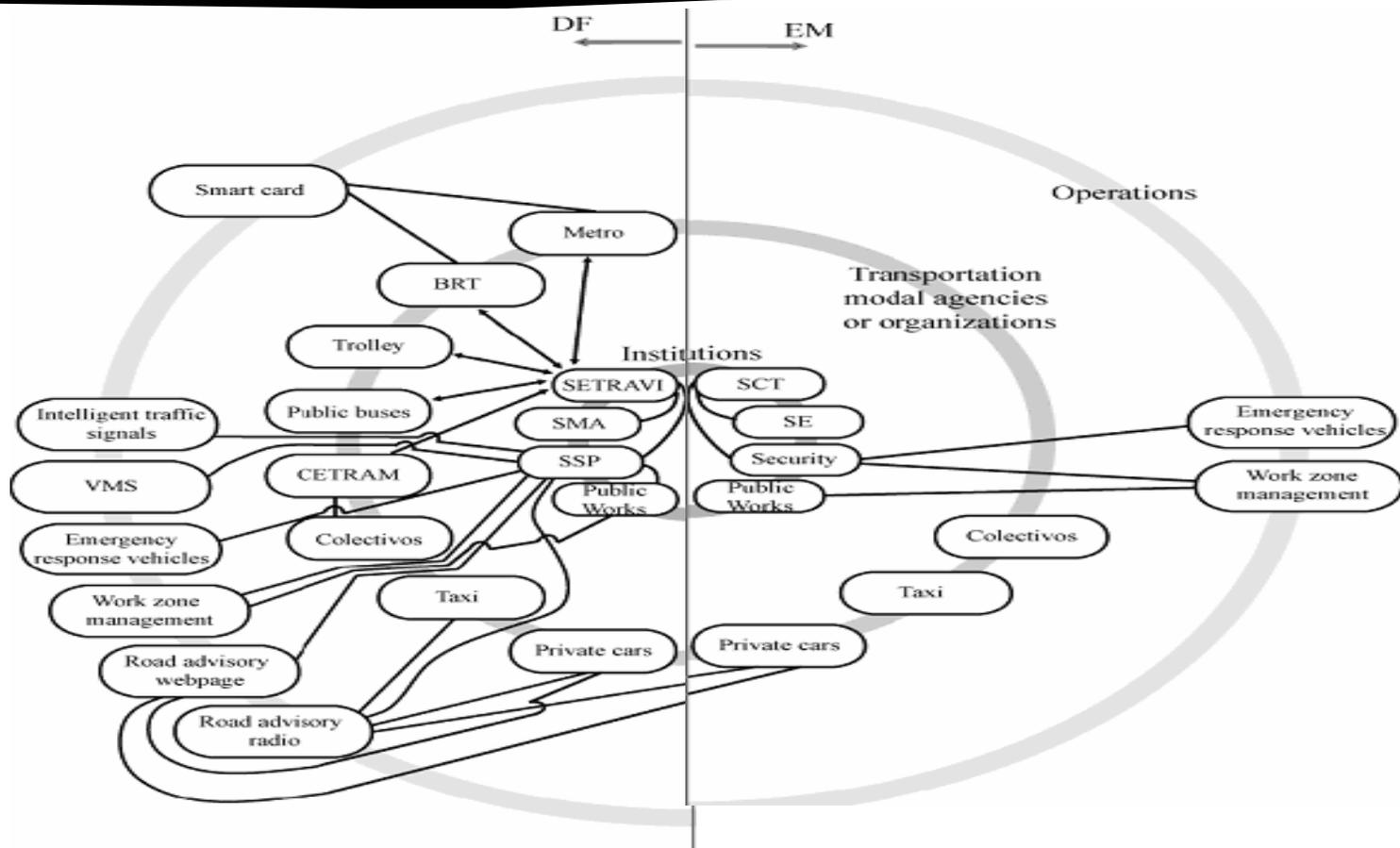
- SETRAVI: Secretariat of Transportation
 - Provides major planning guidelines
- SSP: Secretariat of Public Security
 - Responsible for fostering safe and orderly movement of passengers and vehicles
 - Optimize traffic control
 - Police, Traffic Enforcement



Challenges

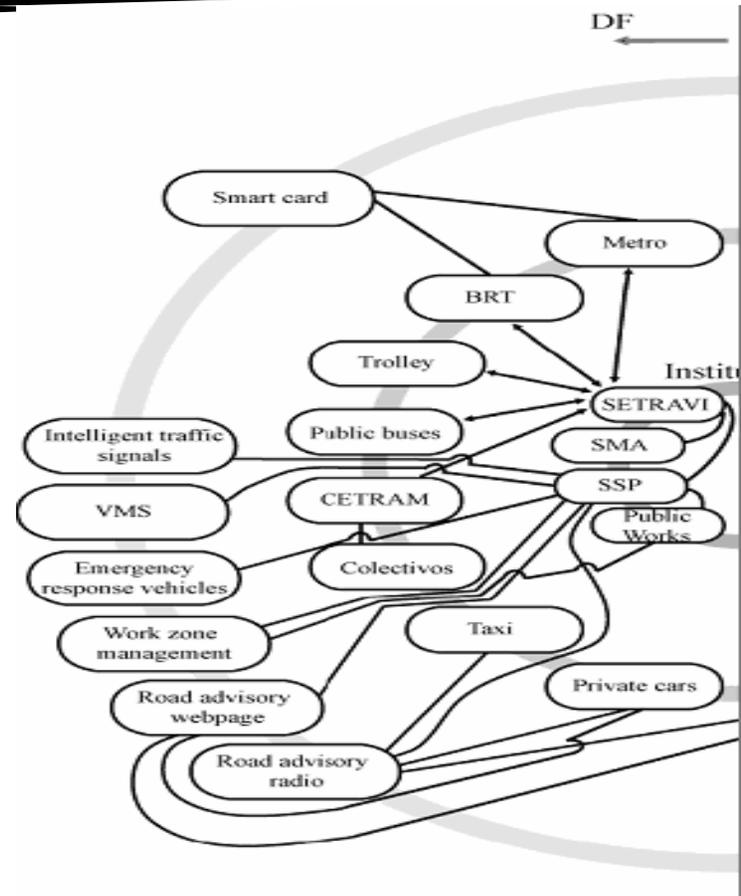
- While more than half the trips are made between the DF and the EM:
 - Different organizations, political parties running transportation in the DF and EM
 - Lack of communication between the different organizations
 - Different set of laws in the DF and EM

DF/EM Information/Resource Flows



DF Information/Resource Flows

- Links within jurisdiction
- Resource flows
 - SSP – Limited ITS
 - Some links with private sector





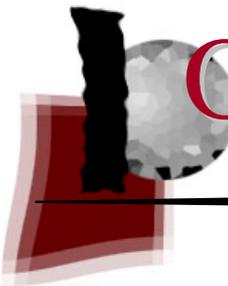
Levels of Authority

- Well established in planning!
 - DF – SETRAVI
 - EM – ST-EM
- Metro/Federal
 - COMETRAVI – advisory
 - SCT – Sets Standards



Regional/Organizational Capacities

- Limited, few resources
 - COMETRAVI (virtual)
- Regional coordination
 - A threat to local officials
- Unequal Distribution of Resources
 - EM- 45% pop., 17% funding



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Regional Operating Architecture

- New Organizations
 - Mexico City Metropolitan Operations Organization (MCMOO)
 - Farebox Collection Company
- Changes to Existing Agencies
 - Increase capacity in EM
 - Coordinate through MCMOO
 - DF and EM agencies establish relations with counterpart organization

New ROPA

Farebox Collection Company

SCT

- Coordinate planning, ops
“planning for operations”

COMETRAVI

Metropolitan

SETRAVI

- Planning for DF
- Operations for DF
- DF congestion changing

MCMOO

DF

ST-EM

- Planning in EM
- Operations in the EM
 - ATMS
 - Incident detection

EM

SC-EM

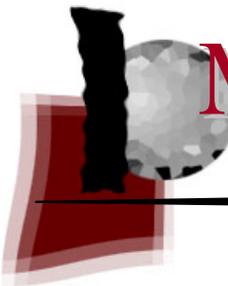
- Planning for Mass Transit
- BRT
- Coordinate with DF transit agencies

SSP

- Deploy ITS in DF
- VMS info available to CETRAMS
- Collision/incident detection

Mexico City Metropolitan Operations Organization

- Similar to TRANSCOM in acting as coordination forum
- Developer of regional standards
 - ITS and interoperability
 - Smart Card
- Data Manager
 - Backup for local agencies
 - Platform for future ATIS services
- Regulator of colectivos



MCMOO as Colectivo Regulator

- Similar to Bogotá, Colombia
- Formalize routes and put out for bid
- New incentive - Pay on basis of routes, not passengers
- Mandate technological change – LEVs and GPS
- Fare collection using smart card system



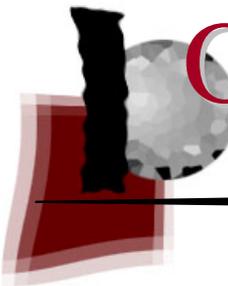
Farebox Collection Company

- Created with the agreement of the MCMOO and colectivos
- Independent of government and colectivos
- Distributes collected fares
- Provides funding stream for MCMOO



Changes to Existing Agencies

- ST-EM and SSP manage operations, incident response, and ITS deployment in EM, DF respectively
- SETRAVI (DF) institutes congestion charging
- Hoy No Circula eliminated
- SC-EM works with DF on BRT and other public transportation initiatives



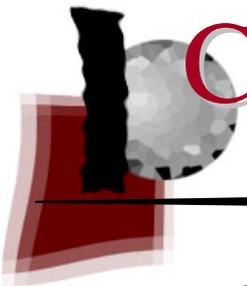
Other Organizational Changes

- SOS (DF) sends construction schedules to SSP (DF)
- SCT (Fed) and COMETRAVI (DF) works closely with MCMOO
- SCM (EM) integrated into ST-EM
 - “Metropolitan Agenda” mission can be carried out by enlarged ST-EM



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Customer-Centric Approach

- Greater use of Information Systems
 - VMS at Intermodal Centers
 - Potential ATIS services
- Enhanced safety – Incident Detection
- Colectivo Enhancements



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Benefits – New ROPA

- More communication
 - EM public trans, DF trans agencies
 - Public Works, Transportation Operations – DF
- Greater system interoperability
 - Uniform ITS standards - MCMOO
- This leads to greater service coverage, smoother traffic flows, lower emissions

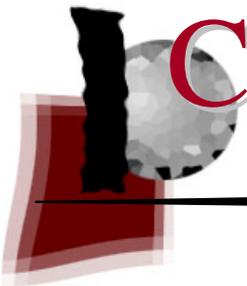
Potential Weaknesses

- Hiring necessary expertise
- Sustained commitment
- Funding of ITS
- Generating public interest



To Overcome Drawbacks

- Success in phases – Smart Card, Congested Pricing
- Customer-Centric Approach
 - Balanced Scorecard – assess customer service
 - Independent surveys



Conclusion

- MCMOO Encourages Regional Solution
 - Needed for ITS
- Customer-Oriented
- Long Term Benefits
 - Reduced Congestion
 - Safer Transportation
 - Less Pollution