Transportation Planning and Infrastructure Delivery in Major Cities and Emerging Megaregions: 
Selected Issues for Shaping Solutions to the Emerging Urban Form

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Outline

- Background/Motivation
- Pressure points in urban landscape
- Opportunities for change
- Conclusions
Background

Two out of three people will live in urban areas by 2030.

**Megacities** are cities with over 10M people.
- 5 megacities in 1975 vs. 26 megacities in 2015

A **megaregion** is a contiguous region that comprises multiple major cities or megacities.

A fundamental change in the way we live
Motivation

Current infrastructure planning and procurement approaches have outgrown their effectiveness.

The emergence of megacities and megaregions may call for a broader vision and planning framework.
Objectives

To articulate major pressure points expected with the emergence and growth of major and megacities

- Scope
- Approaches used for reporting
- Public-private partnerships

How will megaregions affect mobility?
Need for Megaregional Planning Efforts

Transportation systems in megacities/regions

- Growth and the Megaregion
- Planning at a Megaregional Level
- Assessing and Reporting on Infrastructure Quality
- Infrastructure Finance and Public Private Partnerships
Growth and the Megaregion

U.S. has at least two megacities and several major cities.

- New York-New Jersey-Pennsylvania (18 million)
- Los Angeles–Long Beach–Santa Ana (12 million)

“Transportation agencies in major, highly-congested metropolitan areas will need to fundamentally rethink the kinds of solutions that make sense.”
Growth and the Megaregion

Infrastructure challenges will appear/intensify

Need megaregional efforts to implement far-reaching and more sustainable solutions
Planning for the Megaregion

Evolution of Transportation Planning (TP)

- Classical TP (50s and 60s)
- Neoclassical or Open TP (early 70s)
- Fragmented TP (1975 - 80s)
- Consolidated TP (From the mid-80s onward)
- Congestion reduction and quality of life improvement, transportation/land use planning (90s - )
- Planning for the megaregion (2000s - ?)
Planning for the Megaregion

Planning approaches must evolve over time to meet changing needs.
- May require a paradigm shift

Application of scenario planning methods
- Incorporating uncertainty
- Used to develop *plausible* scenarios and plan for *robust outcomes* independent of which scenario actually emerges in the future.
Planning for the Megaregion

Some states and MPOs are undertaking innovative solutions

Longer timeframes and broader geographic scopes in Megacities/megaregions
- 40 years for sustainability-oriented planning

6,400-km (4,000-mi) Trans-Texas Corridor
- 145-billion dollar megaproject
- Public-private partnership (PPP) taking 50 years
- Addresses both passenger and freight needs and opportunities for multiple metropolitan areas

New problems mean new solutions
Assessing and Reporting on Infrastructure Quality

Should incorporate planning elements (inputs and outcomes) in infrastructure evaluation

- Include the range of inputs considered critical to achieve intended goals for the infrastructure system
- Address not only the symptoms but dominant causes or influences of infrastructure performance
Demographic trends increase pressures on the public funds available for providing infrastructure and public services.

Public-private partnerships (PPPs) are becoming more common for financing or otherwise procuring infrastructure facilities.

- Chicago Skyway
- Orange County SR 21 (California)
- Virginia Interstate Routes for Asset Management
- Atlanta I-75 HOT Expansion
PPP involve long term relationships between the public and private sector to accomplish explicit objectives.

Growing number of states have enacted or are in the process of enacting supporting legislation for PPPs.

- Alabama, Colorado, Delaware, Florida, Georgia…

Changing PPP legal framework reflects a growing general willingness to create legal environments that support PPPs.
Implementing the Megaregion

Current transportation-related **quality of life** of the megacity or megaregion community

Willingness of planning officials to take **leadership** in developing formal/informal measures or partnerships

Extent to which the current performance measures used in evaluating the system capture appropriate planning inputs

Proactive leadership taken by executive-level transportation officials and their political decision makers
Implementing the Megaregion

Current and expected growth rates of the metropolitan areas

Initiative of planning leaders with their political decision makers to identify supra-regional opportunities

Broader federal role for establishing a new vision for the nation’s transportation system
  - Recognizing the efforts of different regions
  - Providing cohesive guidance and standards

How do we get things done?
Conclusions

Infrastructure demands will outpace the ability of traditional long-range transportation planning and funding mechanisms.

A paradigm shift is needed beyond piecemeal and transient improvements to address congestion.

- **Broader** geographic and temporal frames of reference for planning
- **Broader** range of performance measures and indicators
- Public sector’s clear commitment to PPP
- **Leadership** at federal and state levels

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