Infrastructure Needs of the Megaregion

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Overarching Issues and the Megaregion

Why Megaregions

Why is there a need to invest in infrastructure at a larger scale?

How do we enhance global competitiveness and what is the role of infrastructure?

What kind of infrastructure do we need?

Challenges to Sustainability

The Competitive Advantage
Mobility in the Megaregion

Cascadia
The states of Cascadia include Seattle, Portland, and Vancouver, British Columbia with high-speed rail, while promoting the area's unique and active environment. Other strategies highlight their cultural diversity and high-tech companies, as well as environmental sustainability and green building.

Texas Triangle
By 2050, about 60 million people, or 70 percent of the population of Texas, will live in the metropolitan area that comprises the Texas Triangle. Three of the nation’s 10 largest cities are in the Triangle, including Houston, which has spent the last decade creating more foreign trade than any other in the U.S. The Triangle also focuses on the potential for collaboration among the three metropolitan regions of the Triangle to address land use, transportation, and environmental concerns.

Great Lakes
The Great Lakes megaregion is exploiting ways to grow more efficiently in front of the declining role of the manufacturing sector. The region’s assets include a diverse natural ecosystem and amenities, the Great Lakes, and a strong research and cultural tradition and many leading public universities.

Northeast
The Northeast’s appearance of density and economic output, producing 20 percent of the nation’s Gross Domestic Product with 18 percent of the population and very few percent of the nation’s land area. Over the next generation, the Northeast will add 8.5 million new residents. This population growth will demand more transportation investments and economic growth to accommodate these new residents while preserving quality of life.

Piedmont Atlantic
The low cost of living and high quality of life in the Southeast are two reasons this megaregion is booming population, which is anchored by Atlanta but stretches east to Raleigh, North Carolina and west to Birmingham, Alabama. The region is facing challenges associated with growing population, such as increased traffic congestion, environmental sustainability, and infrastructure maintenance, which it hopes to address with sustainable solutions.

Florida
The Florida megaregion is one of the fastest growing in the nation and produces a wealth of diversity with one of every 10 young people in the last decade coming from foreign countries. It is both diverse and populous, with the spur to metropolitan area of Miami acting as a gateway to Latin America. Regional strategies to protect the Everglades have preserved this natural heritage of the state.

Southern California
With some of the largest parts in the nation, the economy of Southern California is closely tied to the logistical and goods movement industry. This region is taking aggressive action to build infrastructure that enhances its role as a global gateway while providing opportunities for its fast-growing native born and immigrant populations.

Arizona Sun Corridor
The Sun Corridor is equivalent in population size and population but will add another 1.5 million people before 2050. Located in a desert environment, Phoenix and Tucson are the megaregion’s largest metropolitan regions — has included water conservation requirements and are promoting the use of desert landscaping. These efforts provide the environment with enough space for population growth and sustainability.

Gulf Coast
The confluence of the Mississippi and the rivers and the interaction of the rivers and the environment, transportation, and economic links of the Gulf Coast. Despite the economic downturn, the region is expected to grow due to the combined economic forces from the Southwest.

Metro Area Population
- 150,000 to 1 million
- 1 to 3 million
- 3 to 6 million
- 6 million +

Theoretical Planning Frame for 21st-century Urbanization

- Megacities
- Megaregions
- Longer range planning
- Making Places
Infrastructure planning is a national priority and a lever to enhance growth.

America’s infrastructure is adequate for the 21st century with limited technological and modal integration.

Increased competitiveness in the global economy engendered through state of the art infrastructure that is:

- efficient and consists of different technologies,
- with different cost structures
- serving different trip purposes and different travelers
Continuing Challenges

- general deteriorated state of infrastructure
- inadequate transit
- climate change
- congestion
- insufficient rail freight and passenger capacity
- unsafe bridges and dams
- creating unhealthy places
- creating unattractive places
Continuing Challenges

- From Sidewalks to Jet Ports: making investment decisions considering the impacts locally and at the multi-state level

- Connecting MSAs and all parts to multiple spaces

- Connecting depressed areas to economically viable ones

- Infrastructure must support megaregion economic specialization with specialized infrastructure (reducing competition among megaregions and positioning them globally)
Mobility in the Megaregion

The Piedmont Atlantic MegaRegion (PAM)
Anchored by large metropolitan areas that create a chain of related urbanized areas.
How will people live and work in the future?
Mobility in the Megaregion

- **Transportation Options**: Southeast High Speed Rail
- **Green Infrastructure**: innovative financing to protect lands
- **Spatial Planning**: a strategic and forward looking strategy for growth and development to decrease inequities and promote overall sustainability
- **Indicators**: Developing quality of life, economic and sustainability indicators for the megaregions
Mobility in the Megaregion

- increasing traffic congestion
- limited water resources
- degradation of air quality
- rapid land consumption
- large increases and shifts in population
III. Challenges and Opportunities

- Need for long time, focused investment
- New roles for states, local government, regions and the nation
- America trailing other countries in innovative finance and integrated multimodal, multi-level infrastructure planning
- Integrated theoretical account to redevelop the built environment using infrastructure in innovative ways
Mobility in the Megaregion

III. Challenges and Opportunities

New road to Beijing Airport

Japan’s bullet trains

SOURCE: ULI, Infrastructure 2007
Transportation contributes to global warming

Increasing traffic, poorly maintained vehicles and an aging fleet cause increases in vehicle emissions

Congestion continues to spread temporally and spatially

Substantial amounts of increased travel will take place in rural and suburban areas
Demand for oil is rapidly using up the world's readily available reserve

Emissions causing health problems increasing in specific areas

Smog and acid rain are exported to other surroundings

Deaths and injuries occur in unacceptable numbers

Asthma affects nearly 20 million Americans.
A Megaregion Framework: the integration of regional planning, land use planning, population growth to guide infrastructure expenditures at a larger scale

- Need for long-term infrastructure investment
- The changing role of America on the global stage
- Sustainability and energy resources
- Creating infrastructure networks and financing them
- The suburban challenge
- Climate Change
Making Places Competitive

The Role of technology

Mega projects in Megaregions

Infrastructure Standards and Evaluation

Equity Partnerships and Infrastructure

Lessons from abroad