Megaregions: 21st-Century Way of Understanding
21st Century Issues Challenges

University of Minnesota: Center for Transportation Studies
21st Annual Research Conference
April 27-28, 2010

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Megaregions

Megaregions

Networks of metropolitan centers and their surrounding areas, connected by existing environmental, economic and infrastructure relationships.
UN report: World's Biggest Cities Merging into ‘Mega-Regions’

The world's first mega-city, comprised of Hong Kong, Shenzhen and Guangzhou, home to about 120 million people. Photograph: Nasa
Megaregions - Overview

Global Precedent

BESETO Corridor
[Beijing, Seoul, Tokyo]
100 million Inhabitants
112 cities each with population of over 200,000
1,500 kilometer strip

21st-century infrastructure is called on to support individual, local, regional, and global mobility needs.
<table>
<thead>
<tr>
<th>Megaregions represent a new context for American Transportation Planning</th>
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<tbody>
<tr>
<td>◆ funding</td>
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<tr>
<td>◆ policy and project selection</td>
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<tr>
<td>◆ implementation to address economic competitiveness and environmental issues</td>
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| Megaregions capture economic and network interactions in a spatial context |
A healthy city (region/megaregion) is a place with:

- a high quality of life (places to walk in a safe environment, opportunities to interact with other citizens/neighbors)
- good jobs
- cultural amenities/cultural attractions – how we perpetuate society
- natural assets and resources, from parks to ports.
“The neighborhood is a critical building block for a city, cities are now the building blocks for megaregions which in turn are the new economic unit in world markets.”

Ross, Catherine. Megaregions: Planning for Global Competitiveness, Island Press, 2009
By 2050, the U.S. population will exceed 400 million. More than 70 percent of those people will probably reside in or live near one of 10 mega-regions scattered across the country.
Megaregions - A National View

8-10 Emerging Megaregions in the U.S.

Source: Center for Quality Growth and Regional Development (CQGRD), Georgia Institute of Technology, 2007.
As shown in the table below, the estimated population of each megaregion by 2050 is more than 10 million.

<table>
<thead>
<tr>
<th>Megaregions</th>
<th>2007 (wood&amp;poo)</th>
<th>2040 (observed)</th>
<th>2050 (CQGRD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>6,296,238</td>
<td>11,092,530</td>
<td>11,455,268</td>
</tr>
<tr>
<td>California</td>
<td>38,333,016</td>
<td>53,730,432</td>
<td>60,330,531</td>
</tr>
<tr>
<td>Cascadia</td>
<td>8,597,720</td>
<td>12,680,926</td>
<td>13,448,032</td>
</tr>
<tr>
<td>Central Plains</td>
<td>7,138,741</td>
<td>9,415,844</td>
<td>10,051,065</td>
</tr>
<tr>
<td>Florida</td>
<td>16,290,110</td>
<td>26,114,382</td>
<td>29,195,929</td>
</tr>
<tr>
<td>Midwest</td>
<td>52,245,174</td>
<td>62,291,088</td>
<td>66,186,390</td>
</tr>
<tr>
<td>Northeast</td>
<td>47,569,659</td>
<td>56,062,292</td>
<td>59,047,751</td>
</tr>
<tr>
<td>Piedmont</td>
<td>21,243,165</td>
<td>31,052,858</td>
<td>32,744,171</td>
</tr>
<tr>
<td>Texas Triangle</td>
<td>18,770,478</td>
<td>29,743,314</td>
<td>30,805,799</td>
</tr>
<tr>
<td>D.C.-Virginia</td>
<td>10,334,763</td>
<td>14,945,460</td>
<td>15,616,250</td>
</tr>
</tbody>
</table>

Source: Ross, Catherine, *Delineating Existing and Emerging Megaregions*, July, 2009

Funded by the Federal Highway Administration, USDOT
## Megaregion Statistics

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Megaregion</td>
<td>29.60%</td>
<td>76.54%</td>
<td>76.98%</td>
<td>81.47%</td>
<td>67.82%</td>
<td>92.07%</td>
<td>86.77%</td>
</tr>
<tr>
<td>Non-megaregion</td>
<td>70.40%</td>
<td>23.46%</td>
<td>23.02%</td>
<td>18.53%</td>
<td>32.18%</td>
<td>7.93%</td>
<td>13.23%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.00%</td>
<td>100.00%</td>
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</tr>
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Source: Ross, Catherine, *Delineating Existing and Emerging Megaregions*, July, 2009

Funded by the Federal Highway Administration, USDOT
3. Procedure of Delineating Megaregions

**CONCEPTUAL FRAMEWORK**

**1st Stage**
- **METRO REGIONS**
  - Core Areas
  - Areas of Influences

**2nd Stage**
- **FUNCTIONAL REGIONS**
  - Clusters of Metro Regions

**3rd Stage**
- **MEGAREGIONS**
  - Considering Local and Regional Characteristics

**Metro Regions:**
- measuring centrality

**Functional Regions:**
- measuring interactions

**Megaregions:**
- considering physical relationships

**Periodic Reviews**
Conceptual Framework for delineating Megaregions

Structure of megaregions

- **Urban cores**
  - highly agglomerated,
  - physically and functionally interconnected,
  - interacting with each other via certain types of network

- **Areas of influences**
  - support the functions of the core areas,
  - characterized by shared characteristics, such as history, culture, and environmental corridors
Final Map of Megaregions
21st Century requires

........a web of seamless connectivity, metropolitan centers linked by roads, high-speed rail, commuter rail, water resources, alternative technologies, regional economic initiatives, connected international gateways a more perfect union.
Creation of freight corridors and networks linked to international trading opportunities and partners with expanded rail and transit

Achieving greater sustainability through synchronizing transportation policies with policies for housing, land use, energy, the economy and the environment.
Implications for Future Development: Facilitating Urban Redevelopment
About 63% of the proposed mileage for High Speed Rail (HSR) service in the United States is included in HSR corridors that cross state lines.
Mobility in the Megaregion

Trade Corridors

- Production
- Transformation
- Access
- Link infrastructure investment with economic growth

Mathis Wackernagel stated this sustainability goal succinctly as,

“Sustainability is securing peoples quality of life within the means of nature.”
Piedmont Alliance for Quality Growth

• MOU
• Implementation Focus
• WET
  (Water, Energy, Transportation)
Approximately 80% of the world’s carbon emissions are produced in urbanized areas, therefore megaregions can have significant impact on carbon emissions by:

- Encouraging land-use patterns that contribute to higher density
- Coordination of gasoline and transport prices
- Implement megaregion freight transport planning
- Adapt existing and new transportation infrastructure to more extreme climate events at the level of the megaregion.
Interactions Enhanced between all universities

Greater University-industry cooperation has positive impact on regional economy.

More venture capital investments needed in R&D.
Identify infrastructure and projects of national significance critical to our economy and global competitiveness. They are:

- Intercity and international commerce (port access, access to intermodal facilities, etc.)
- National defense
- National Standards for (air quality, safety, security)
- Preservation of existing “national” investments
- Diversify modal investments linked to enhanced economic productivity
Identify infrastructure and projects of national significance critical to our economy and global competitiveness. They are:

- Coordinate transportation, housing, energy and land use policies
- Assuring National and international connectivity
- Secure economic competitiveness (megaregions)
- Health
- Security
- New technologies
- Supra-regional coordination
- Develop Global Freight System
Megaregions: A 21st-Century Approach to 21st century challenges

Thank You