CREATING A BLUEPRINT
for Cargo-Oriented Development in the Minneapolis – St. Paul Region
A Project Coordinated by the Center for Neighborhood Technology +
Prime Focus LLC with support from the McKnight Foundation
ABOUT CNT

- Non-profit applied research “think and do tank” based in Chicago
- Implement strategies that benefit the environment and the economy
- Bridge information gaps
- Areas: Energy efficiency, transportation efficiency, green infrastructure
Livability:
- Environment
- Health
- Land + Resource Use
- Community Accessibility + Walkability

Regional Economic Development:
- Employment + Employment Shifts
- Induced Development
- Fiscal Impacts
- Value Capture
- Cost of Living Reduction
- Equity Impact

Benefit-Cost + Cost Effectiveness:
- Travel Time + Costs
- System Accessibility
- Short-term Jobs
- Operational Costs

System Condition/Performance:
- System (Modal) Conditions
- Modal Connectivity
- Safety
METRICS FOR COD

A form of development that integrates freight system efficiency with the development of manufacturing and logistics businesses in ways that benefit local economies, the environment, and public safety.
A 5-TASK PROCESS IN THE MINNEAPOLIS – ST PAUL (MSP) REGION

1. – 3. Analyze the nexus of the MSP Region’s:
   Manufacturing Sector
   Freight Transportation System
   Environmental & Safety Initiatives

4. Conduct a workshop with MSP leaders to chart a path to COD.

5. Prepare a Blueprint for COD from analysis + workshop findings.
A PROCESS JUST BEGINNING DESIGNED TO ANSWER BASIC QUESTIONS

1. How can shipping services to MSP industrial businesses improve and shipping costs drop, increasing regional competitiveness?

2. How can employment in manufacturing and logistics reduce regional poverty?

3. How can change in MSP’s industrial – freight logistics nexus raise competitiveness and lower poverty while improving environmental quality and public safety?
ADVISORY COMMITTEE

- Not to meet as a body
- Respond to questions and share contacts
- Review and comment on interim documents
- Participate in a keystone workshop
TASK 1

Analyze MSP’s manufacturing economy in relation to the region’s freight transportation system and natural environment.
BUILD ON RECENT RESEARCH + PLANNING FOR MSP’S MANUFACTURING SECTOR

- UMN, Minneapolis-St. Paul Regional Cluster Competitiveness Study (2013)
- City of St. Paul, West Midway Industrial Area Comprehensive Plan Amendment (2014)
- St. Paul Port Authority, ICIC, Industrial Strategy for the City of St. Paul (2012)
- Mid-America Freight Coalition (MAFC) Economic Activity in the MAFC (2013)
Comparative Shift Share Analysis
PEER MIDWEST REGIONS

- Kansas City
- Dallas – Fort Worth
- Memphis
- St. Louis
- Chicago
Chicago Freight Facilities Are Major Job Anchors

Job Creation in Freight Zones

- Railroads: 37,000
- Trucking: 50,000
- Freight Centers: 553,000

David Chandler, Albert Benedict, and Stephanie Dock. *Quality of Jobs Linked to Freight Transportation.*
Based on research presented Metropolis Solutions, Chicago in their study *Critical Cargo,* 2005.
Compact Industrial Development Pattern
### 3 MILE RADIUS LEHD JOB DATA

<table>
<thead>
<tr>
<th></th>
<th>TOTAL JOBS</th>
<th>MANUFACTURING</th>
<th>WHOLESALE TRADE</th>
<th>TRANSPORTATION + WAREHOUSING</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP-Marion</td>
<td>447</td>
<td>3</td>
<td>121</td>
<td>148</td>
</tr>
<tr>
<td>NS-Rossville</td>
<td>674</td>
<td>367</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>BNSF-TN Yard</td>
<td>53,403</td>
<td>6,468</td>
<td>9,595</td>
<td>11,038</td>
</tr>
<tr>
<td>CSX/CN-Gateway</td>
<td>712</td>
<td>413</td>
<td>34</td>
<td>156</td>
</tr>
<tr>
<td>NS-Forest Yard</td>
<td>34,330</td>
<td>2,459</td>
<td>1,868</td>
<td>3,497</td>
</tr>
</tbody>
</table>

2011 LED WAC Characteristics
COD Selector Results

LAND ASSEMBLY, REMEDIATION
Public-Private Collaboration for Redevelopment

**GIS**
- Identify Sites

**Planning**
- Build Regional Consensus

**Land Use**
- Assemble Land

**Brownfields**
- RemEDIATE Land

**Transportation**
- Improve the “Last Mile”

**Resources/Incentives**
- Create Funds/Programs

**Economic Development**
- Recruit Developers

**Workforce Development**
- Train for New Jobs

**GENERATE INVESTMENT + WEALTH**
COMPLETE TASK 1
Industrial District Site Visits
Interviews with regional experts
Advisor review of a findings memorandum.
LOCAL ECONOMIC DEVELOPMENT METRICS

- Location Efficient Land Development -- # acres
- Jobs created + careers sustained
- Worker transportation access
- Public cost savings + revenue growth
TASK 2

Analyze MSP’s freight system in relation to its industrial economy and natural environment.
BUILD ON RECENT + ONGOING PLANNING FOR MSP FREIGHT TRANSPORTATION SYSTEM

- MNDOT, The Family of Plans – related transportation and economic development plans (2010 -16)
  http://www.dot.state.mn.us/ofrw/freight/index.html
- MNDOT, Draft State Rail Plan (2015)
- UMN, Understanding and Enhancing the Value of the Freight Economy in Minnesota (2014)
- MNDOT, Freight Rail Economic Development (2013)
ASSESS MSP’S POSITION IN CONTINENTAL FREIGHT NETWORKS

- Commodity Freight Flow Analysis – considered with analysis of manufacturing industries
- Connections to the Pacific Northwest via BNSF and CP corridors
- Apparently indirect connections to southwest maritime ports
- Chicago as MSP’s intermodal hub (400 last miles by truck)
HIGH LEVEL DESCRIPTION OF INTRA-REGIONAL FREIGHT MOVEMENT

- Comparison of freight networks and handling capacity with peer cities
- Analysis of logistics business cluster distinct from manufacturing
- Review of investments to relieve congestion and accelerate freight movement
- Appreciation of trucking’s essential role and costs
## Fuel Consumption and Freight Ton-Miles Moved by Truck and Rail, 1980 - 2011

<table>
<thead>
<tr>
<th>Year</th>
<th>Truck</th>
<th>Rail</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diesel Fuel Consumed (thousands of barrels per day)*</td>
<td>Ton-Miles of Freight (millions)**</td>
</tr>
<tr>
<td>1980</td>
<td>1,302</td>
<td>1,266,631</td>
</tr>
<tr>
<td>1990</td>
<td>1,597</td>
<td>1,707,373</td>
</tr>
<tr>
<td>2000</td>
<td>2,298</td>
<td>2,326,524</td>
</tr>
<tr>
<td>2011</td>
<td>2,766</td>
<td>2,643,567</td>
</tr>
</tbody>
</table>

* Transportation Energy Data Book, Edition 34, Table 1.14
** Bureau of Transportation Statistics, National Transportation Statistics, Table 1-50, Ton-Miles of Freight
Expansion of Intermodal Market

- Current Rail Intermodal Market
- Projected Market Shift
- Truck Market

% Market Share

% truck, % intermodal conversions, % rail

Miles

0 to 249, 250 to 499, 500 to 749, 750 to 999, 1000 to 1499, 1500 to 2000, >2000

CNT
Intermodal Cost Benefit Depends on Drayage + Terminal Efficiencies
Shipping Efficiencies Especially Important to Smaller Companies
COMPLETE

TASK 2

- Freight Facility Site Visits
- Interviews with regional experts
- Advisor review of a findings memorandum
FREIGHT SYSTEM METRICS

- Truck and freight system productivity – fewer truck VMT per volume of freight moved
- Travel time and reliability
- Efficiencies in intermodal drayage & terminal operations
- Right sized shipping
TASK 3

Analyze ongoing efforts to improve the MSP region’s natural environment and level of public safety.
BUILD ON RECENT RESEARCH + PLANNING FOR MSP
ENVIRONMENTAL SAFETY INITIATIVES

<table>
<thead>
<tr>
<th>Year</th>
<th>Truck</th>
<th>Rail</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diesel Fuel Consumed (thousands of barrels per day)*</td>
<td>Ton-Miles of Freight (millions)**</td>
</tr>
<tr>
<td>1980</td>
<td>1,302</td>
<td>1,266,631</td>
</tr>
<tr>
<td>1990</td>
<td>1,597</td>
<td>1,707,373</td>
</tr>
<tr>
<td>2000</td>
<td>2,298</td>
<td>2,326,524</td>
</tr>
<tr>
<td>2011</td>
<td>2,766</td>
<td>2,643,567</td>
</tr>
</tbody>
</table>

*Transportation Energy Data Book, Edition 34, Table 1.14
**Bureau of Transportation Statistics, National Transportation Statistics, Table 1-50, Ton-Miles of Freight
STATE OF THE ART TERMINALS MAKE GOOD NEIGHBORS
LOCATION EFFICIENT DEVELOPMENT LEADS TO SUSTAINABLE REGIONAL LAND USE
SAFETY ENHANCED BY

- Minimization\optimal efficiency of truck VMT
- Adherence to FMCSA rules
- Adherence to FRA Guidelines, including Positive Train Control
COMPLETE TASK 3

Interviews with regional experts
Advisor review of a findings memorandum.
ENVIRONMENTAL SAFETY + METRICS

- Air quality compliance with EPA standards for specific pollutants
- Facility compliance with LEED standards for industrial properties, including noise, night lighting, and storm water containment
- Land use: acres preserved for nature or recreation, and job density on industrial sites
- Safety: adherence to federal rules and guidelines
TASK 4
Conduct key workshop with MSP leaders to chart a path for COD in the region.
MAJOR TASK 4 STEPS

- Prepare Briefing Book that summarizes information gained through Tasks 1 – 3.
- Convene regional leaders with the help of the project’s Advisory Committee.
- Provide professional facilitation of sessions and documentation of proceedings.
TASK 4 ISSUES

Reach answers to the initial questions of the project: 
1. How can shipping services to MSP industrial businesses improve and shipping costs drop, increasing regional competitiveness? 
2. How can employment in manufacturing and logistics reduce regional poverty? 
3. How can change in MSP’s industrial – freight logistics nexus raise competitiveness and lower poverty while improving environmental quality and public safety? 
4. Other basic questions that arise in the course of the project
Task 5

- Freight Facility Site Visits
- Write MSP’s Blueprint for COD.
- Delineate specific actions steps, procedures for evaluation and updating.
- Identify short and long-term opportunities arising from FAST in conjunctions with the programs of other federal agencies including the Environmental Protection Agency, the Economic Development Administration, and the Department of Labor.
# Creating a Blueprint for Cargo-Oriented Development in the Minneapolis-St. Paul Region

**Tasks**

<table>
<thead>
<tr>
<th>Task</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Analyze MSP's Manufacturing Economy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0 Analyze MSP's Freight Transportation System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0 Analyze MSP's Environmental, Safety, &amp; Workforce Initiatives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.0 Workshop with MSP Thought Leaders</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0 Prepare Blueprint for Next Steps in COD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
THANK YOU

David Chandler, CNT
david@cnt.org | 773.269.4023

Cargo-Oriented Development at CNT
www.cnt.org/cargo-oriented-development