

Chicago Freight Hub Issues

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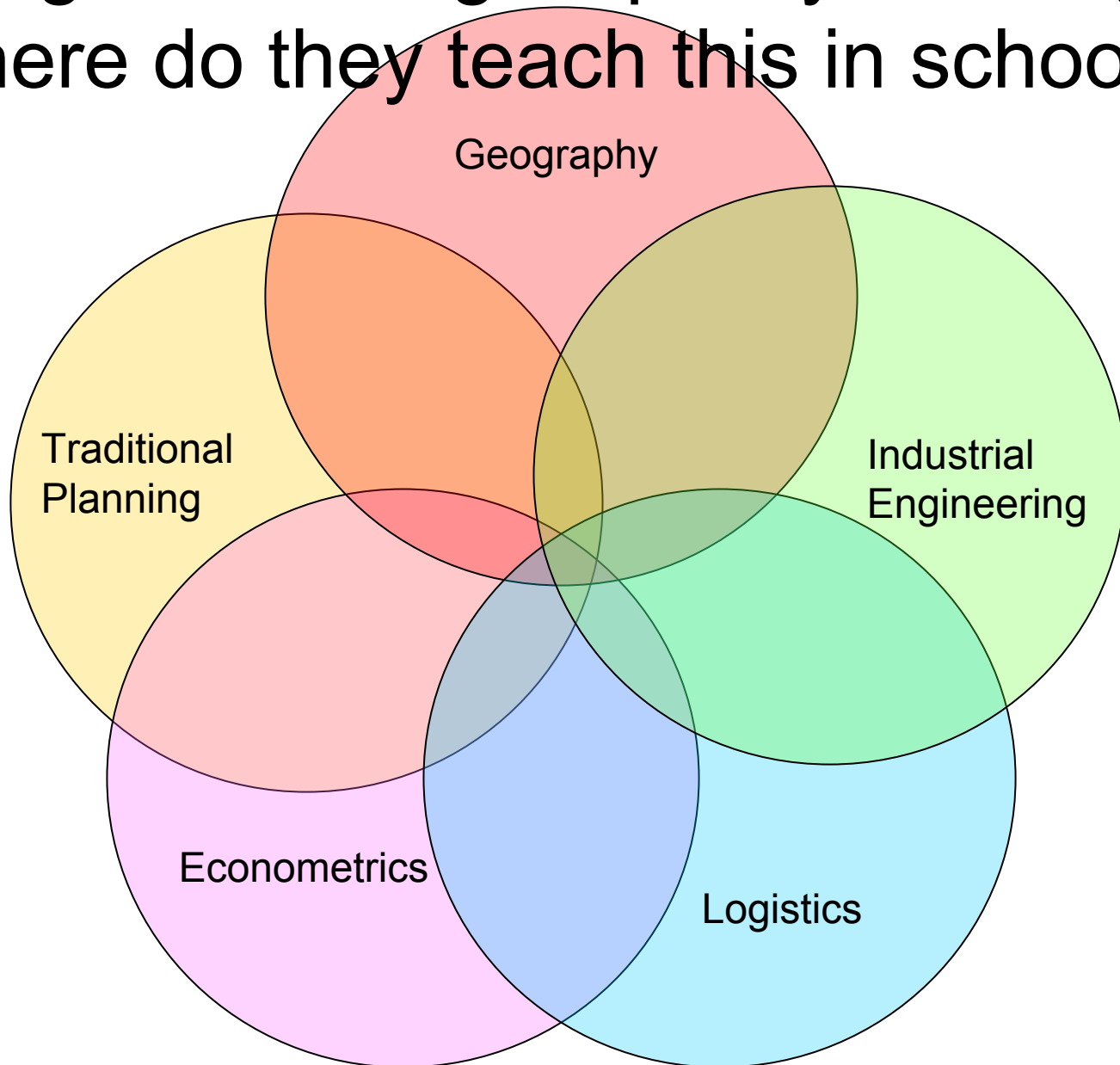
also see www.catsiatf.com

About the speaker

Who was that masked man ?

- 1/3 bureaucrat; 1/3 mad scientist; 1/3 performing artist

Freight Planning Capacity Building – where do they teach this in school ?



Invisible freight

- It's like electricity ... it's invisible ... not talked about except when it isn't there
(Rob Hoffman)
- but NIMBY → pandering
- 115,000 employees (6% of RDP) v.a.v.
15,000 in transit (Rawling to APTA)
- The Value of Freight to the State of New Jersey { 2/2001 }
- the Memorial Day fable

Freight doesn't vote - discuss

True or false ?

How does it vote ?

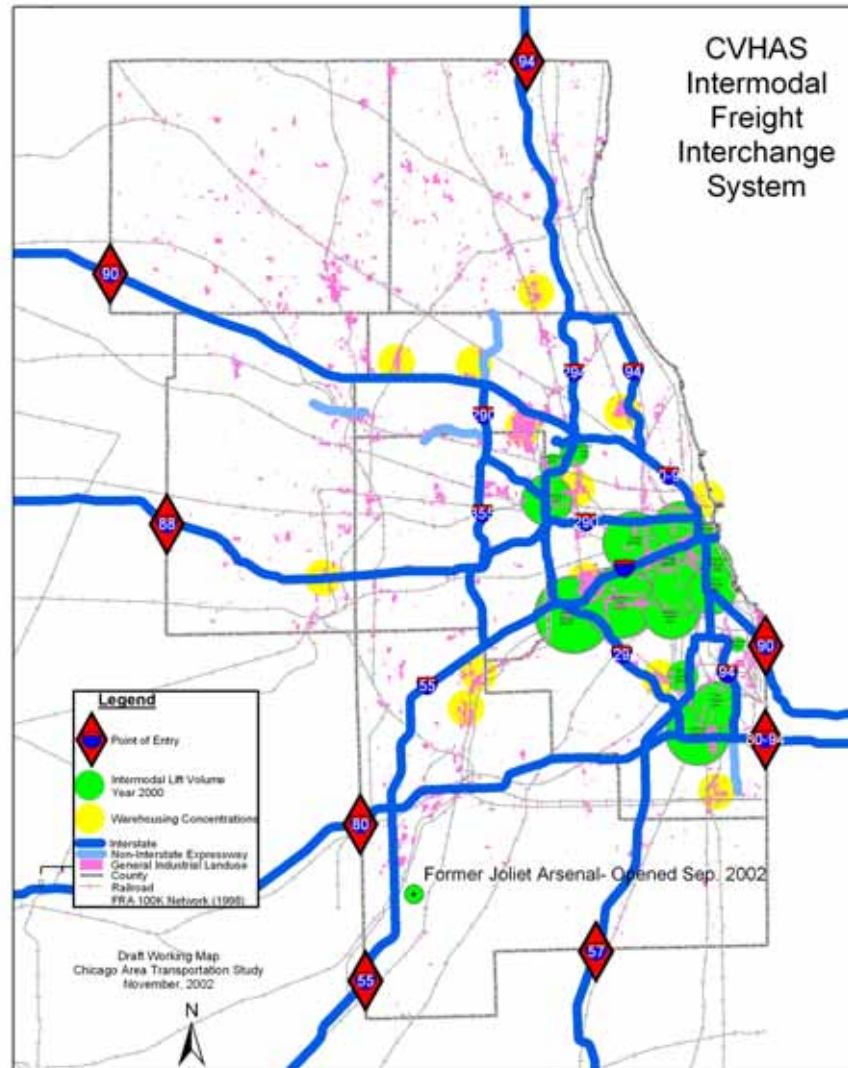
The split personality

The change in the body politic
between 1996 and 2006

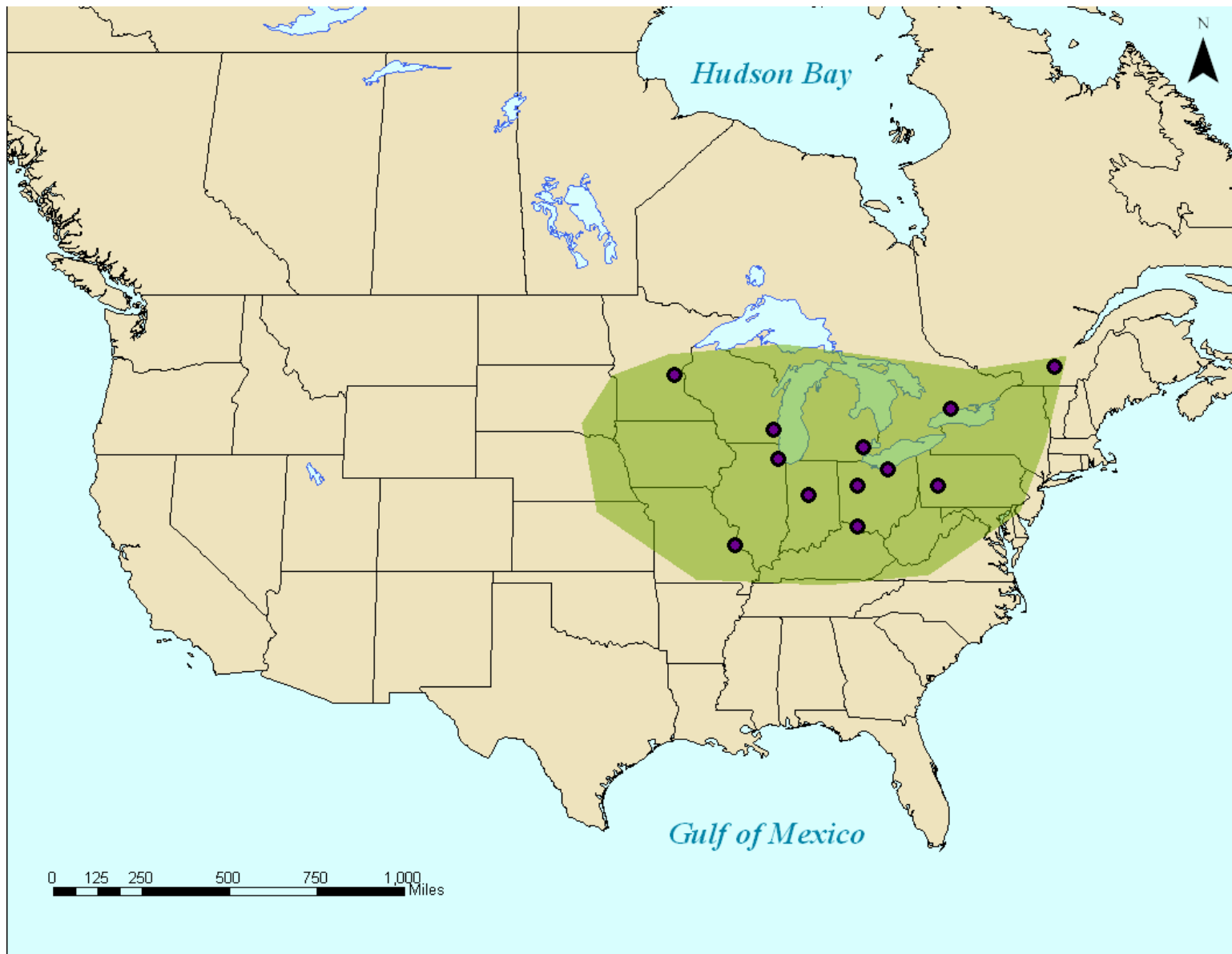
Chicago Freight Hub, defined

- Highway
- Water
- Rail
- Air
- Pipeline
- INTERMODAL
- the players {individuality v. holism} ...
“wood for the trees”

Creating the “mental map”



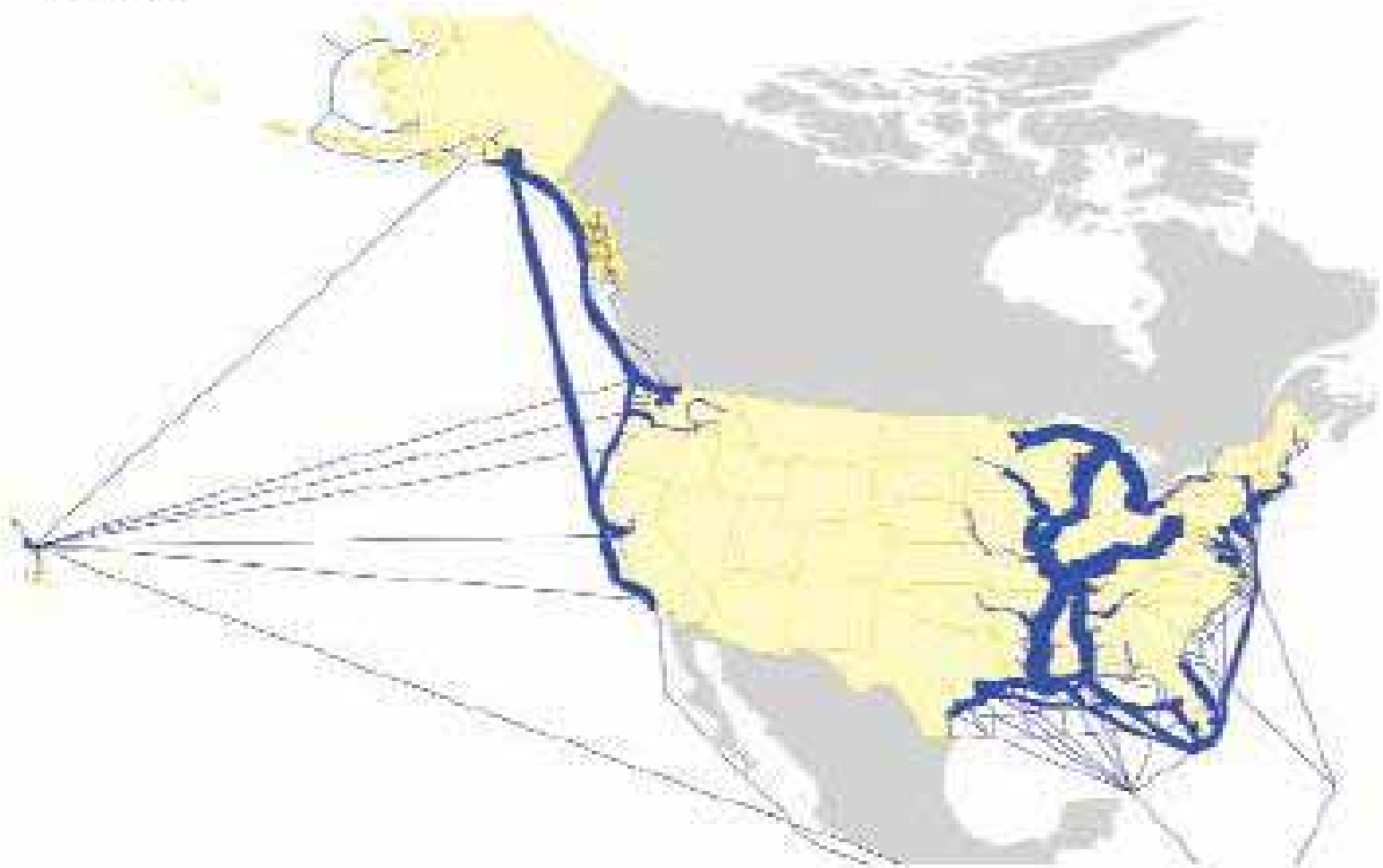
Intermodal Catchment Area of Chicago Load Center



National → Supraregional → Regional Networks

- Water
 - Rail
 - Highway
 - Pipeline
 - Air
-
- Silos NCBA ? NPTA ? in future ...
local applications ?

Year 2000



Source: Reebie Associates' TRANSEARCH and U.S. DOT Freight Analysis Framework Project

Figure 3-2. National Highway System Estimated Peak Period Congestion: 1998



Figure 3-3. National Highway System Estimated Peak Period Congestion: 2020

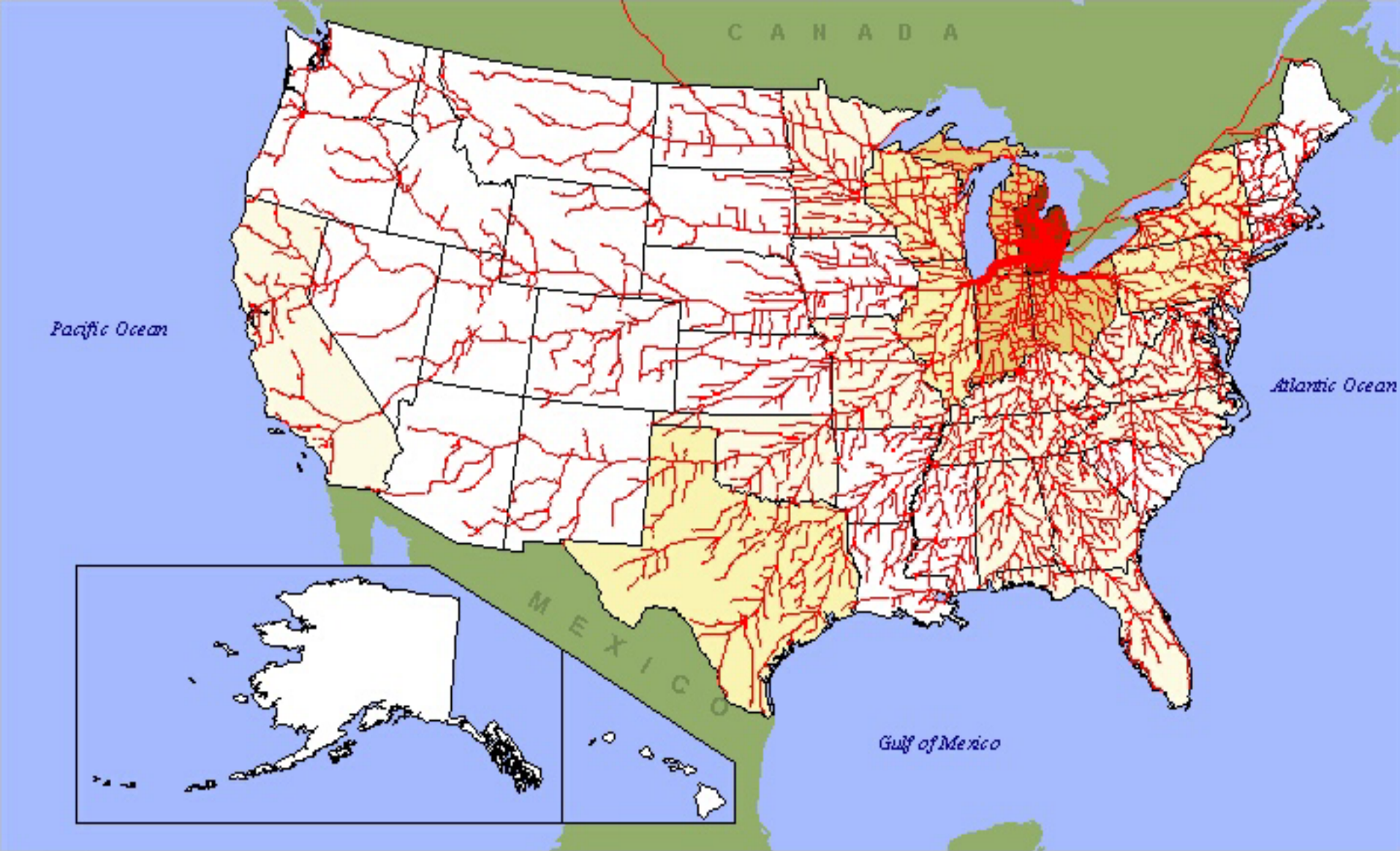


Figure 2-3. Estimated Average Daily Truck Traffic: 1998



Figure 2-4. Estimated Average Daily Truck Traffic: 2020

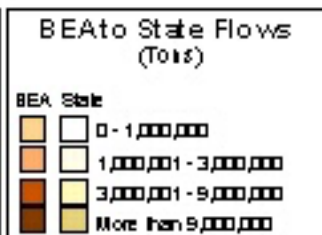
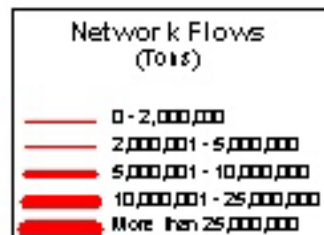




U.S. Department of Transportation
Federal Highway Administration
Office of Freight Management and Operations
Operations Core Business Unit

DETROIT

Total Domestic Truck Flows
(1998)



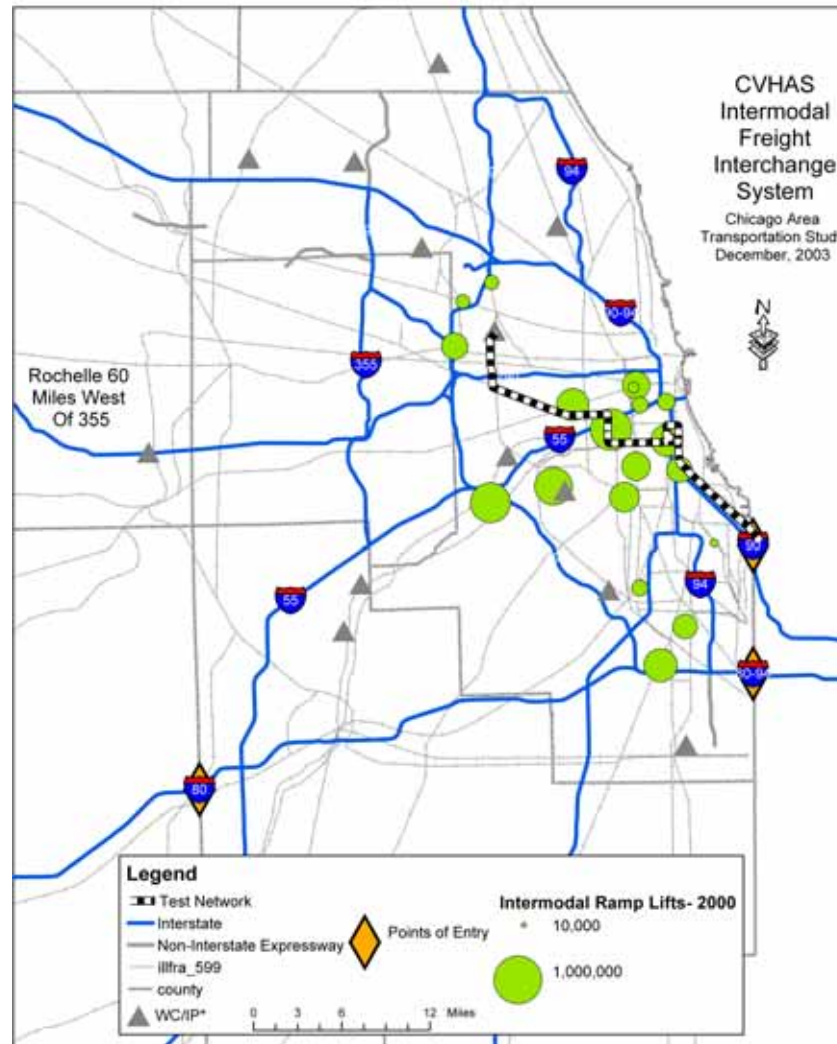
Coming soon to a terminal near you
This is one of our defining industries



Intermodal Ecosystem

- There are 5 pieces to the intermodal ecosystem in Chicago, namely
 - Inbound receipting and processing, & triage (what happens to each container)
 - “steel wheel” or “rubber tire” transfer ramp-to-ramp (both compete for capacity and velocity in their separate milieus)
 - Supraregional P&D
 - Infrastructures and infostructures [age & attributes matter] – rest areas
 - the players, the institutional milieu, the administrative milieu, CYs, etc. (the Chicago ordinance). Labor (shortages).
- Apply this structure to each “mode”

New Definition of Crosstown ? (cf. old definition)



New Definition of Crosstown

- Context (history)
- Current equivalent / location (Weber Rd.)
- Intermodal connectors
- Alternatives (competition for x-town)

Role of MPO

- What are the unique contributions of the MPO (i.e. the specific roles of the public sector?)
- 1. we can see the wood for the trees; we can provide a forum (our IATF – see www.catsiatf.com ; we can be an ideas factory
- 2. we know the geography and many of the ‘key’ people
- 3. we have (reasonable) access to data (from simple observation); we can integrate (the ‘ponzi scheme’); synthesize; influence the thought process
- 3a. We can develop data – nominal, ordinal, interval, ratio, **serial**
- 4. we have to be prepared to ask the rude question(s)

Archetypical Issues

- 1. we aren't a big player in shipment management – the box itself is our core interest
- 2. we can do market analysis - of potential reach of freight technologies: WP 03-03
- 3. we can be a productive discussant in freight practices
- 4. we can assist in R&D – it doesn't have to be national... (“ will it play in Peoria ?” – you don't hear that so much any more will it play in Chicago) ... the MPO's core responsibilities

The box itself

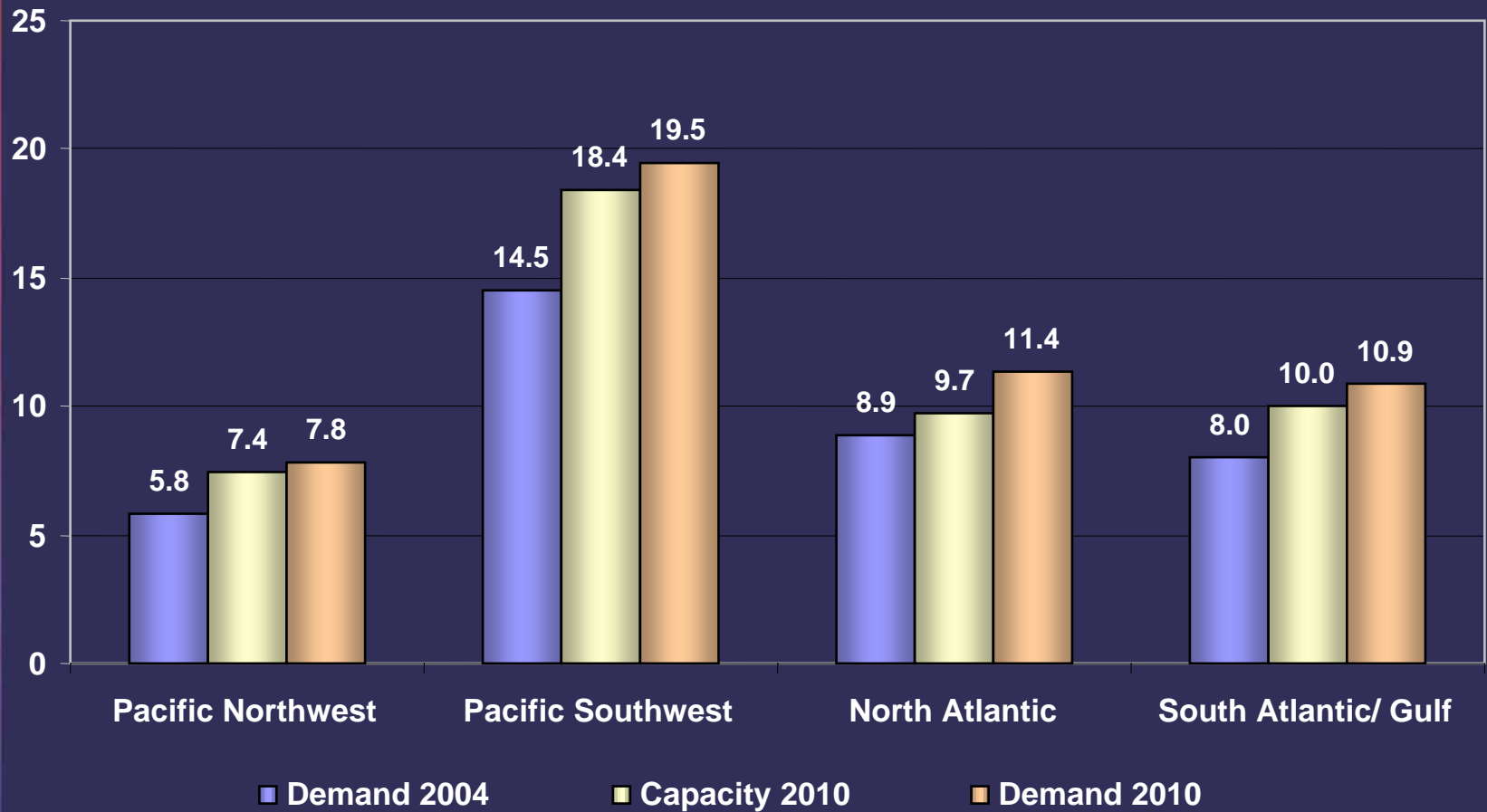


Whose intersection is it, anyway ?





Forecast Port Capacity/Demand



Find your issue

“ Chicago is the 3rd Largest Port in the
World after Hong Kong & Singapore ”

{ CREATE project in context – status }



Improvement Needs Working Group (1996-2001)

- Projects submitted: 63 total
- Projects pink slipped (to 2001): 33 (52%)
- Projects in Process (to 2001): 12 (19%)
- Connectors projects: 13
- Non-starters: 5

INWG

- Second iteration after 1990-92 OGL ... the every 10 years theory
- Process grew from project-specific, location-specific
- Was a way to involve “implementers”
- Not exactly “quick” but certainly responsive
- Not likely to repeat ... now more systems-oriented [adds to the RTP]

Mode split

- By weight/ by value (**recent BTS announcement** re: 2002)
- 19 billion tons; \$ 13 trillion; 4.4 trillion ton-miles
- [daily] – 53 million tons; \$ 36 billion
- This is 23% more weight, 25% more value than previously thought
- Trucking = 70% of value; 60% of weight; 34% of ton-miles
- Electronics/electrics/office equipment = 11% of value carried
- Gravel+crushed stone = 17% of weight (believable ?)
- Coal = 686 billion tons (22% of CFS ton-miles)

Commodities by truck: urban / regional (from CATS' CVS)

- Top 5 by weight (internal) = waste&scrap @ 13.6%; parcel post&express @ 13.4%; food&kindred products @ 9.0%; excavation @ 7.0%; printed matter, incl. mail @ 6.6%
- Note: 2% of registered freight vehicles are USPS

Commodities by truck: urban / regional (from CATS' CVS)

- Top 5 by trip starts (internal) = parcel post&express @ 19.4% {11.8% is FAK } ; printed matter, incl. mail @ 12.1%; electrical machinery 10.3 %; food&kindred products @ 9.0%; empty @ 7.8 %
- excavation @ only 1.1 % (vav 7.0%)
- waste&scrap @ 3.0 % (vav 13.6%)
 - Note: 5% of trip starts involve people (are people a commodity ?)
- Containers/trailers FAK/noibn as commodity
 - The “empties” question
- Warehousing as component of TCUW
- **Common sense audit** / statistical integrity (UPS)

Model parameters/input

- 1970 CATS' CVS
 - Light = 4.4 miles ave. trip length
 - Medium = 6.5 miles
 - Heavy = 11.1 miles
- 1979 several US cities
 - Light = 3.0 miles ave. trip length
 - Medium = 3.5 miles
 - Heavy = 7.0 miles
- 1986 CATS' CVS
 - B truck = 11.1 miles ave. trip length
 - Light = 9.6 miles
 - Medium = 10.5 miles
 - Heavy = 24.9 miles

Data vs. comprehension: Discuss

- Data
 - Nominal
 - Ordinal
 - Interval
 - Ratio
 - Serial
- Data management
- Rudyard Kipling's "six serving men"
- Comprehension (still "let them run in the night hours")
- Performance analysis (9mph – 14 mph)
- Implications for action

What is a truck ? Configuration vs. Licensing ?

What is a truck impact ?

- PCEs
- Diurnal distribution
 - Comprehension (still “let them run in the night hours”)
- Counting (factoring; consistency)
- Implications for policy and programs ?

What are the metrics/ rates of change/implications for public policy ?

- Lanes
- Nodes
- Events: stop, start, P&D, gate in, gate out, lift, etc.
- Units of conveyance: e.g. TEU
(the one barge = 5 trains = 543 trucks) ?
- Commodities ?

Density

- Highway & density [WP 97-07]
 - State data and maps
 - City data and maps
- Rail & density
- Air & density
- Water & density (x-ref. intermodal)
 - Niche of water intermodal (Osprey)

Capacity

- What is it – how is it measured – the UP/UPS anecdote as anecdote

Productivity

- The AAR pocketbook
 - Performance measures
- The Union Pacific 1 mph calculus
 - 1 mph is worth about \$ 750M
- Lifts per acre / TEUs per hour
 - Apples and pears syndrome

The Call to Arms

- TRB papers and reports
- Brookings institute papers
- AASHTO

Best Practices

In the aggregate:

- FAST program
 - (and over the border – PacificGateway Strategy)
- Florida
- SCAG
- Portway
- Toronto

In the specific

- Alameda Corridor
- KC
- Reno,NV

Misrepresentations

How does one engage the freight industry ? What is their issue ?

What is the appropriate response in product &/or service ?

- the CEO (maintaining a viable business; valuation; income stream; cost containment, etc.)
- the VP of intermodal business unit (BU profitability and traffic growth/capture; product velocity, etc.)
- the AVP of govt. affairs and PR (image; civic responsibility)
- the RDC manager (inventory management – set by whom ?)
- the dispatcher (asset management, human and physical)
- the 3PL provider (velocity; security; privacy; punctuality)
- the drayman / the OWNER-OPERATOR (paying the note)
- The “Transportation” division within a railroad

It doesn't look like much but :

- they all move in different professional circles
- each has a stake in how “Chicago” performs, and this is what the “planner” tries to factor in.

If you are in technology, which of these issues will you influence for the good ?

- Speed management; steering management; collision avoidance; vehicle performance; fuel consumption; L&D; etc. Who is buying ?

Major political problem – **equity** – allocation of resources

China !?!?!!!!! / Hong Kong ?!?!?!?

- Shanghai – 20 billion for one port project (20 miles out to sea) = 2.1 million TEUs = 1 year's growth
- Port rankings – 2001-04, top 5 Chinese ports grew 137%, Hong Kong a relatively modest 23%, but second port and second landside infrastructure

Peer Group Assessment/Comparison I

Does it have to be a problem before we can consider resolving it ?

INDIA

- “the old concept clearly has not worked ... for it to succeed you need pockets of state-of-the-art infrastructure and you need to keep the government away from intervening with the companies”

[Chetan Ahya, economist at Morgan Stanley in Bombay, India, quoted in Easing India's Export Jam, by Eric Bellman in the WSJ, 11.30.04]

USA

- “it is time (**it is always time**) to assess if the old concept is approaching the end of its life cycle and to consider what might be the next concept”
- “we need pockets – make that nodes and links and conveyances – of infrastructure that are state-of-the-art”
- “we need to involve the government, but only to the degree that it needs to be involved (public benefits), and to the degree that it does not compromise private sector performance”
- “you can lead, follow, or get out of the way”

[Rawling, et al, 84th TRB, January 2005]

- “It’s the **GLOBAL**
economy, stupid !!!!!!!



Dramatic increases in projected freight demand



Forecast figures based on a 10-year linear regression



Dramatic increases in projected freight demand



Forecast figures based on a 10-year linear regression

Reminder

- an unashamed commercial
- www.catsiatf.com