

**Evolving global, port and
logistics factors and trends –
impact on property
& opportunities therein ©**

2013 Joint Annual Freight Meeting

Louisville Kentucky

13 March 2013



Summary

- Major logistical developments
- The infrastructure crisis & challenge
- Port challenges and opportunities
- The role of port real estate
- Conclusions



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21st century market dynamics

Dynamic

- Global trade growth
- Global Carriers
- Ship size
- Sea trade, logistics
- Political & social constraints

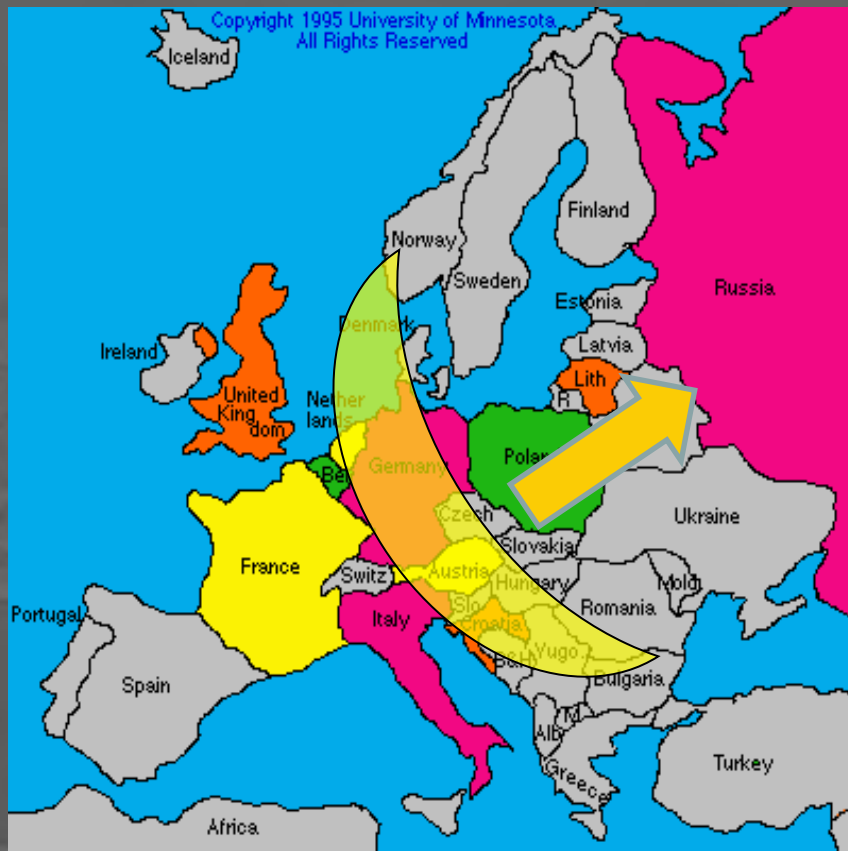
Impact

- Expansion, modernisation of infrastructure/ports require massive capital
- Increasing vertical integration of global carriers in logistics chain and influence/control - at the cost of both cities and ports and from local /regional to global
- Deeper reach into hinterland; integration of logistic chain; specialised facilities = more property
- Integrating supply chains = more real estate throughout hinterland
- Congestion & contamination = remove truck traffic, transfer non throughput activities off port = more property



Shifting manufacturing base - What are the implications?

Europe shift northeast



While Asia southwest



The China Factor now

- Higher production costs (approx 15% more expensive goods) due to:
 - Higher wages (20% increase pa last few yrs)
 - More expensive raw materials
 - Appreciating currency
 - Increasing transport costs
- Example: Foxconn (builds Apple phones) investing US\$12 billion in Brazil
- Mfg base shifting to Vietnam/Indonesia



Net result?

Regionalisation of manufacturing back to
Europe, US, Latin America



Ramifications of the Panama Canal Expansion (PC) – answers evolving

- PC crossing will not be cheap
- PC will still have 3/4 day advantage over WC ports
- WC ports & railroads will defend market share
- US East & Gulf Coasts – only one port today can handle ULC ships – in time more to follow
- ULC business model requires only 2/3 & massive on dock and hinterland infrastructure



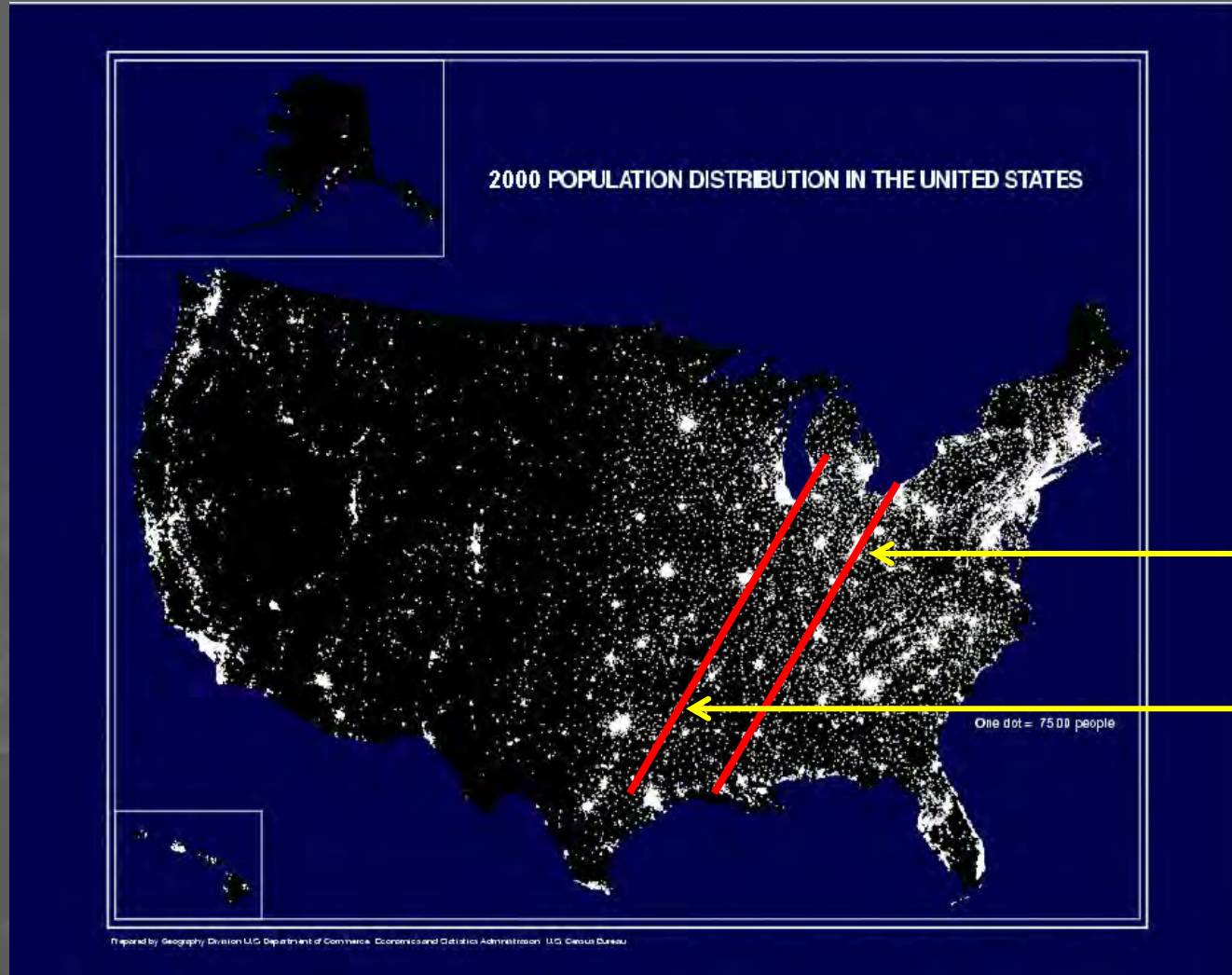
Ramifications of the Panama Canal Expansion – net results

- Average fleet size increases to 8-10k teu from 6-8k teu
- High value time sensitive cargo still goes through PC
- East/West Coasts ports will experience gradual throughout increases
- Suez increasingly an option, one with no restrictions – more later on this



Panama Canal expansion – market reach

Source: PB Consultants, CSX, Vickerman & Associates



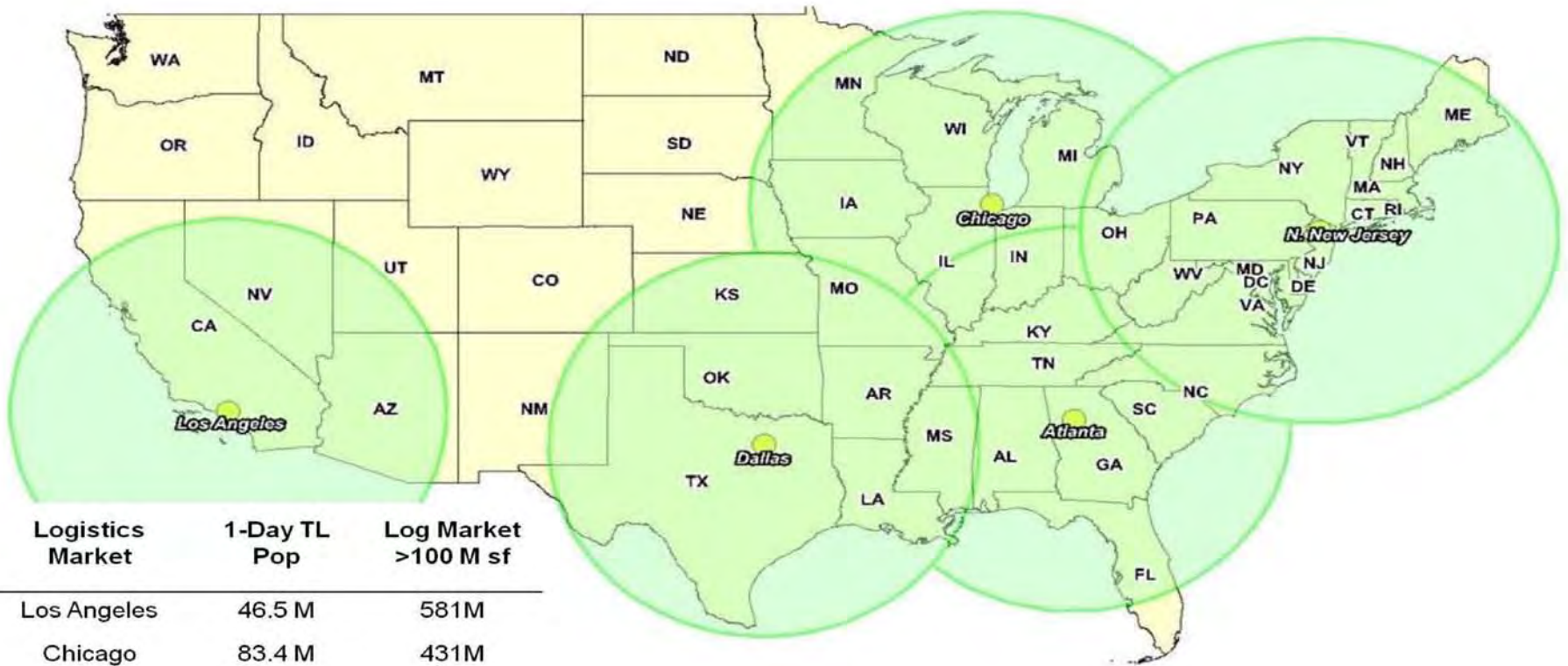
Before
PC exp –
46%;
after
63%

46%,
4k teu

63%,
8k teu



Top Five US Logistics Markets – we got you covered



Logistics Market	1-Day TL Pop	Log Market >100 M sf
Los Angeles	46.5 M	581M
Chicago	83.4 M	431M
Atlanta	80.5 M	325M
Dallas	46.5 M	265M
N. New Jersey	93.3 M	231M

Source: NGKF Global Logistics

Railways

'...the challenge for the future is to integrate the land use and transport planning system in order to continue to rework the freight railway into the country's industrial and commercial fabric.'
Haywood on the UK freight railway in 1999

Same should be said about the US; is occurring in spite of lack of US National Transportation Policy



Railways

- Infrastructure constraints, ecological demands points to rapid, ongoing demand for rail versus truck
- US railroads heavily investing in expansion: \$12.8b in 2013, \$12.6b in 2012 (USDA Grain Transportation Report)
- With transportation costs exceeding 50% of total shipping costs, demand by shippers/carriers to compress supply chain over water/rail route is acute
- Ports/railroads investing heavily in inland ports (intermodal hubs) & intermodal facilities, especially on and near dock



Intermodal Hubs (Dry Ports)

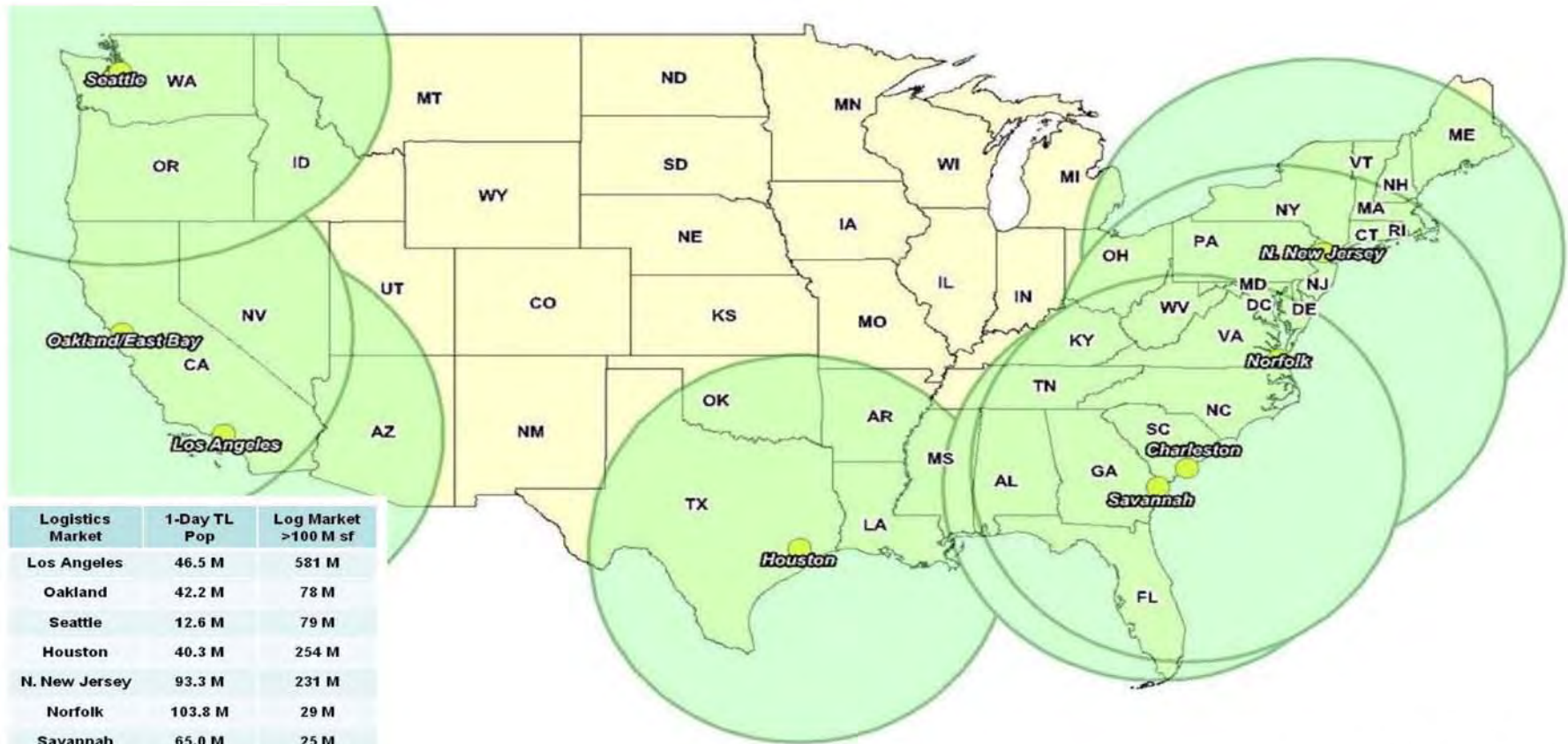
Why they are needed:

- Ports at capacity, land values high
- Transport infrastructure congested, trucks pollute
- Big ships = deep reach into hinterland (IH's effective in processing cargo)
- 'Just in time' shift to 'integrated time' ie, diversify entry points

Rickenbacker Global Logistics Park (Ohio)



Major US seaport population reach – one day by truck



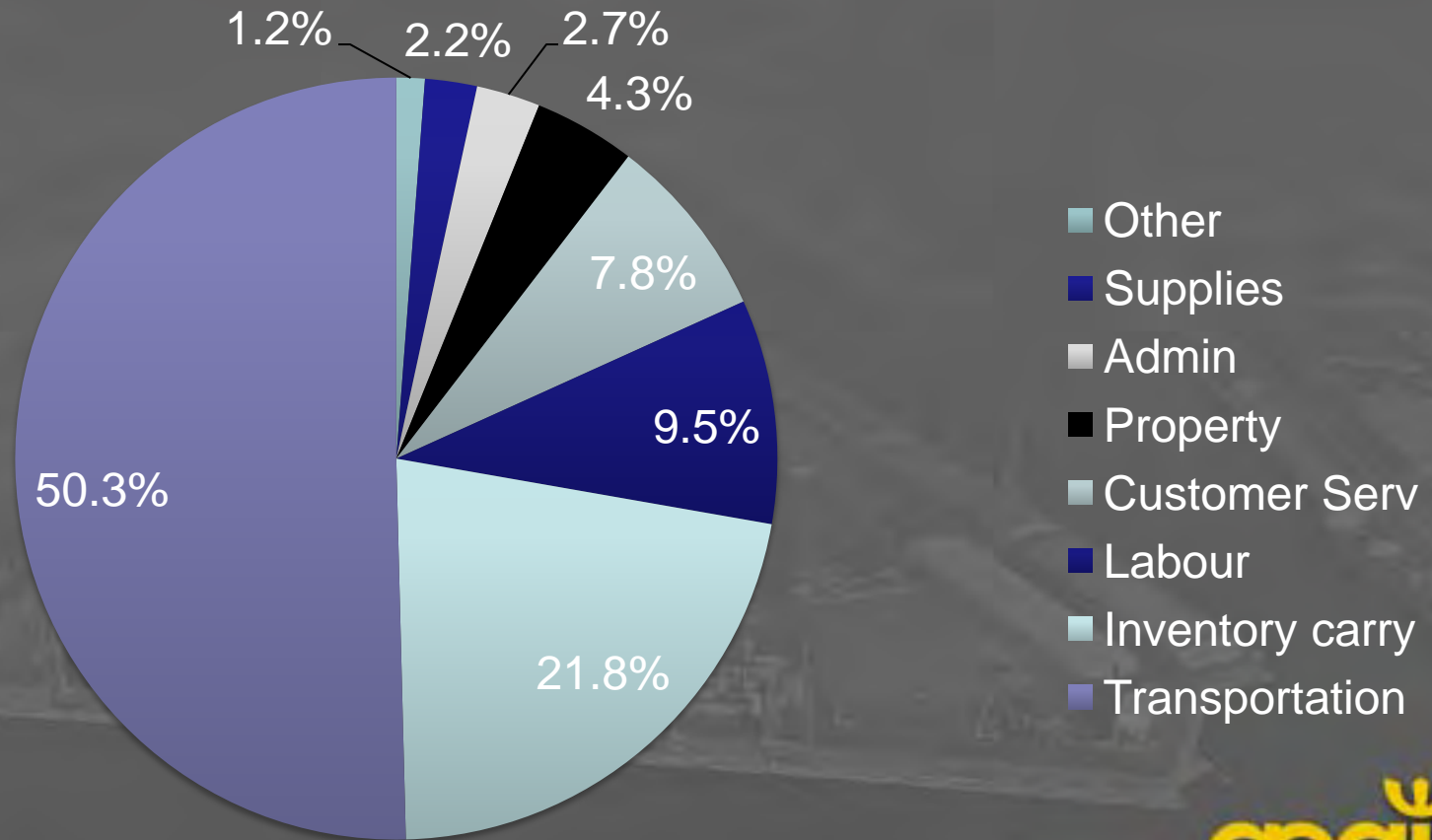
Source: NGKF Global Logistics

Supply chain realities in the new world order

- Compress supply chain ie, do more with less: **RQRVP**
 - Risk mitigation with flexible ports of entry
 - Quality service
 - Reliability - maintain high standards
 - Velocity, always strive for more
 - Price, disciplined cost controls



Logistics Costs Breakdown



Source: Establish, Inc/HWD & Grubb & Ellis Global Logistics



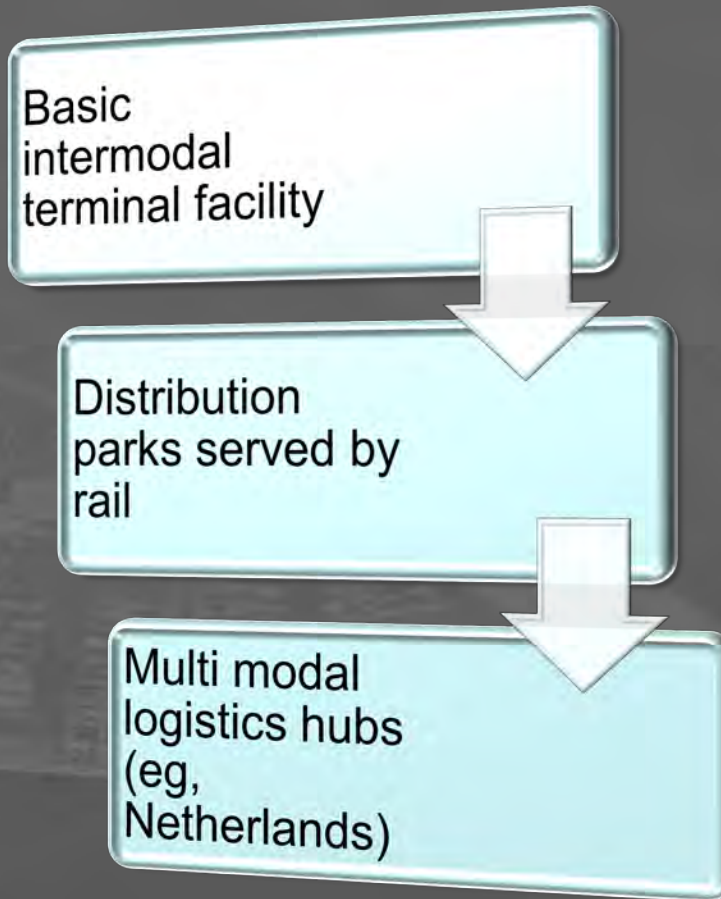
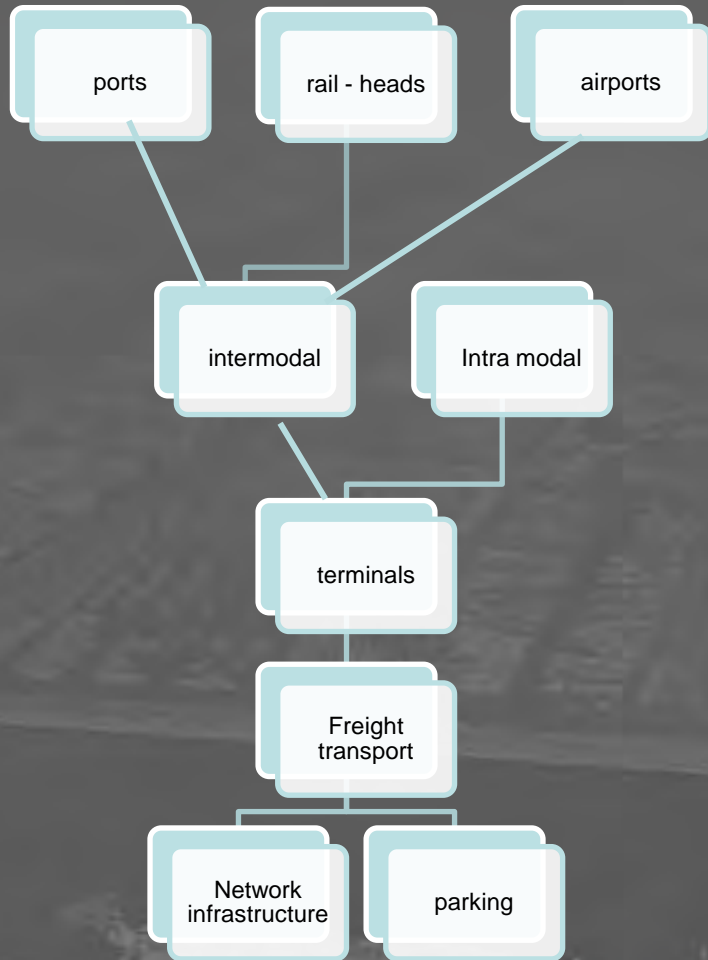
Logistics Cost Breakdown

- 72.1% of costs are transportation and inventory carrying costs
- Property/rent is only 4.3%
- Shippers will pay a premium, are demanding locations that offer speed to market , 'integrated time' delivery of goods



Land usage by logistical activity/ rail connected property development

Source: Prof Alan McKinnon, Heriot – Watt University,
LRN 2009 Conference Cardiff Business School



Impact on warehousing – more throughput required by:

- Larger scale (eg, 1m sq ft DC's)
- Greater height (cubic versus square feet)
- Smart building technology/automation/management systems
- More land needed surrounding facilities for parking, manoeuvring



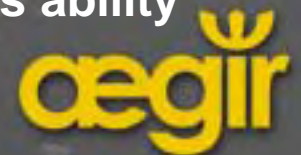
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Infrastructure Crisis

- Global need for infrastructure next 25 years = \$40t (Cohen & Steers 2009 Global Infrastructure Report)
- US Infrastructure needs to stay at 'acceptable levels next five years = \$1.6t (ASCE)
- US ports sector underinvestment costing \$49b by 2020 (ASCE)
- Past four years USDOT spent \$357m in infrastructure improvements in 25 ports - \$40m less than the Port of New Orleans spent alone (ASCE)
- US port infrastructure ranked 22nd in world with Iceland & Estonia (World Economic Forum)
- Infrastructure capital demands has now outpaced government's ability to fund it; this will change everything



Pending infrastructure questions

- Current government deficits to force rationalisation of port/infrastructure assets – how long can the US go without effective National Transport Policy?
- Dredging to 50 ft is just the beginning – what about the infrastructure throughout supply chain?
- How many ‘gateway’ ports required in NA?
- Transshipment question in the Caribbean



Challenges

- Funding requirements not being met; private sector being frustrated by bureaucracy
- Bottlenecks resulting from lack of adequate hinterland infrastructure
- Integration of regional transport assets between and within countries

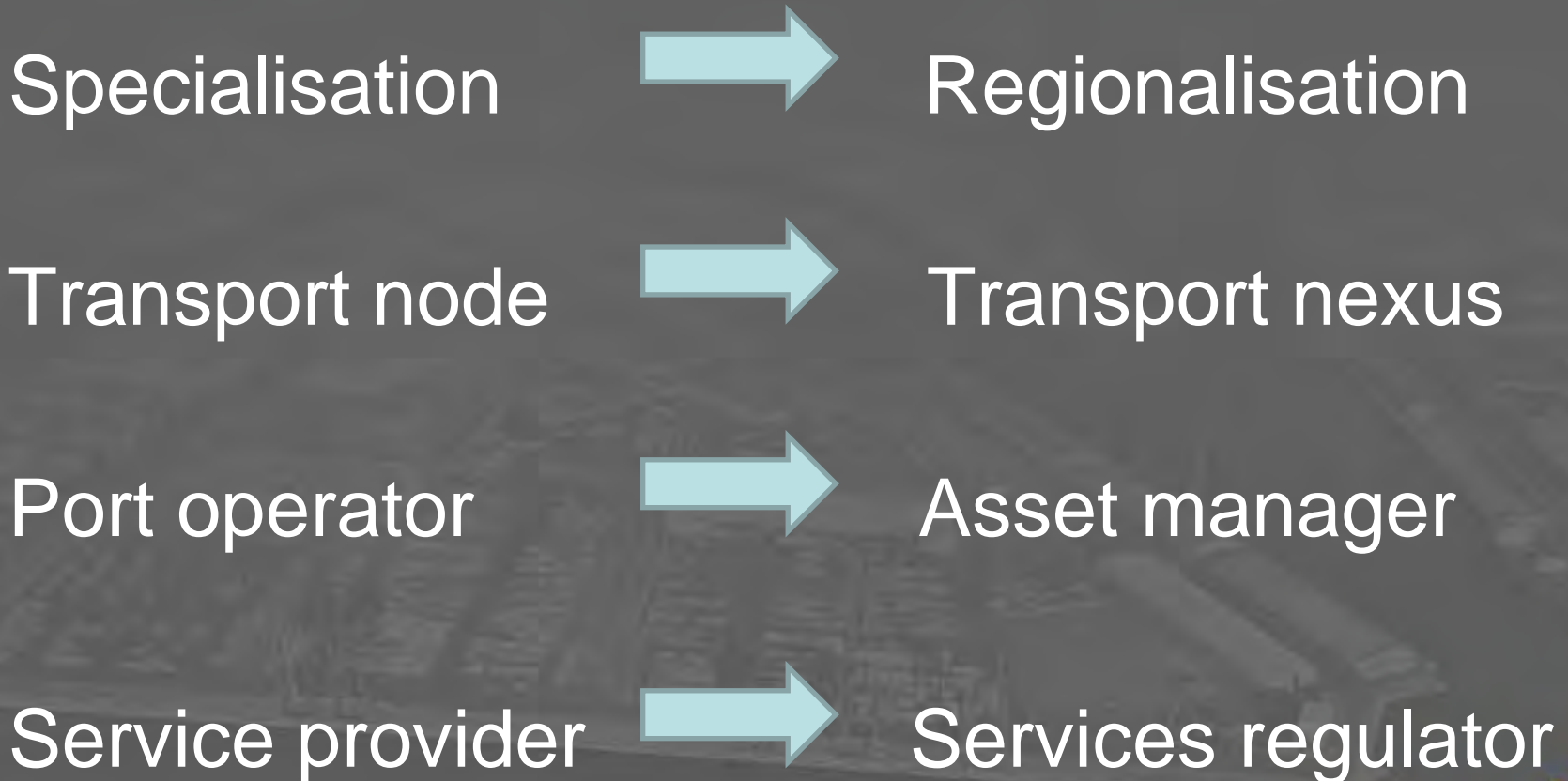


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Port Authorities' evolution



Ports – nodes in ever expanding/ integrating global supply chain

- Present supply chain weak link - ports' inability to process more throughput faster
- 'Just in time' now 'integrated time', requiring more specialised facilities such as 'fast buildings'
- Property at, near and related to ports is key to addressing these issues
- Logistics is highly efficient industry – transport is balkanised – major opportunity for ports (nexus)



PA's moving forward

- PA's must look beyond being an asset manager within port confines
- Actively look to facilitate supply chains and logistics corridors with direct infrastructure investment
- Such investment in time, knowledge and capital leads to growth in two main revenue drivers:
 - Land values
 - Throughput
- And both are intrinsically intertwined through rent revenue



Big Ships' impact on port property?

- Most large ports are land constrained
- 8,000 TEU ship requires ~100 acres for smooth inbound container flow
- Throughput per acre - key for customer profitability and satisfaction (US around 4,500 teu pa versus 10,000 in Asia and 7,000 in Europe)



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Role of port real estate:

- Higher integration of hinterlands with port, increased port efficiency
- Major opportunity for investment and port financial performance
- Port property is the key to ports self-funding in the future



Example:

Charleston Development Site

- 110 acres between Port of Charleston's new Navy Terminal (1.5M TEU est. +/-) and major underutilised CSX rail yard
- Originally planned as a 'Big Box retail development' by pension fund owner
- Strategic intermodal location difficult to replicate



Private Intermodal Challenge

- Pioneering project: first privately owned, built and managed intermodal facility in the US on or near dock (typically controlled by ports/railroads, operated as cost centres as strategy to increase throughput.
- Requiring being a 'port within a port'



Advantages to Port

- Major competitive advantage for port - better serve clients in competitive market
- Potential future line haul service direct to Midwest/Chicago – one of few EC ports to do so
- 300,000 TEU on rail in 2015 (post Panama Canal widening); 500,000 TEU in 2020
- No investment required by port (\$110M US +/-)
- Biggest positive ecological impact to port and community by removing the aforesaid TEU off roads



Advantages to investors

- Healthy Return on Investment, difficult to replicate now or in the immediate future
- Critical mass of investment ie, \$110M US +/-, required by major investment funds
- Diversification of investment portfolio risk from traditional property investments
- Investment well matched to pension fund holding time frames



Charleston South Carolina – Emerging US Market



Inter modal Facility

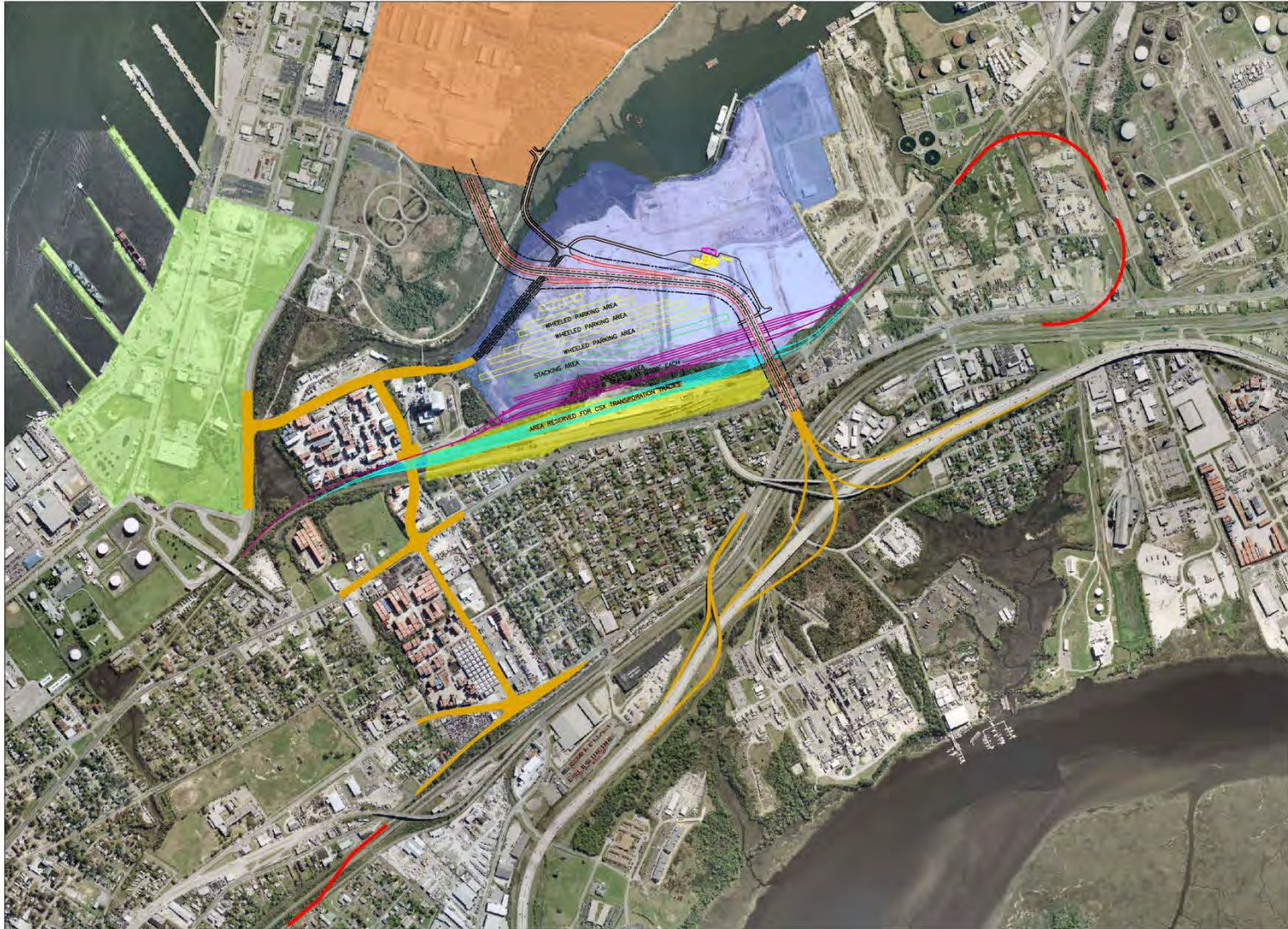
Historic Charleston

Image © 2008 DigitalGlobe

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Macalloy Intermodal Site Charleston South Carolina



**Access Road Realignment
Bridge Alternative**

SCALE: 1"=400'-0"
DATE: 3/11/08
March 11, 2008

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Where is the future for ports and logistics?

INLAND & IN LAND!



Thank You

Helping you navigate the world of port properties

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