New Jersey and the Evolving Supply Chain

Lehigh Valley Planning Commission
Lehigh Valley Transportation Study Freight Advisory Committee Meeting
December 2016
New Jersey is a Key Distribution Node

- 809 million square feet of industrial space in NJTPA area.
- Largest Port on the East Coast – 6.4 million TEUs in 2015.
- Robust Rail Freight Network – 2 Class Is, Conrail, shortlines.
- Extensive Roadway Network
- Newark Liberty International Airport – 10th largest in the US
Multi-Modal Private Sector
Supply Chain Discussion: A Plan 2045 Conversation

- Shippers
- Maritime terminals
- Trucking companies
- Railroads
- Third-party logistics companies
- Warehouse/Distribution center developers and operators
- Air cargo users and operators
What Keeps Supply Chain Professionals Up at Night?

- Managing the challenges of a rapidly evolving retail environment
  - Compressed delivery times.
  - Expanding delivery location options.
- Guaranteeing temperature controlled supply chains for pharmaceutical and food products.
What Keeps Supply Chain Professionals Up at Night?

• Identifying and undertaking the actions and investments needed to enable all aspects of the freight system to operate 24/7.
  – Bunching and pinch points.
  – Local ordinances that restrict hours of operation.

• Ensuring on-time delivery
  – Resolving unpredictable truck travel and turn times.

Source: WSJ
What Keeps Supply Chain Professionals Up at Night?

- Hoping that infrastructure investment will continue.
- Increasing number of governmental regulations and requirements.
- Obtaining and retaining sufficient workforce
  - Truck driver shortages are getting worse.
  - Securing sufficient workers for larger distribution and fulfillment centers can be an issue.
  - Supply chain professionals, logisticians and modelers are also needed.
Perceived Strengths of the Region

- Size of region’s consumer market and demands it generates
- Extensive freight infrastructure
- Willingness to work together to address issues
Perceived Challenges for the Region

- **Infrastructure**
  - Address legacy infrastructure – 286K, Plate F
  - Continually invest in infrastructure
  - Update utility infrastructure

- **Managing congestion**

- **Available properties for industrial development**

- **Need for consistent process linking potential businesses with available sites**

- **High costs**
Fulfillment centers have at least 3x the workforce of typical distribution centers.
- Workforce, access and traffic considerations

Brick and mortar stores are closing, shrinking in size or shifting their function.

Stores as distribution centers.
Changing parameters, markets and competitors

- Repurposing existing providers
  - In 2015, the USPS handled 40 percent of Amazon’s shipments.
- Going Uber style
  - Amazon Flex, Instacart, Postmates, Deliv
- Starting new services
  - Google, Curbside
- Bringing back modes
  - B-line freight bikes
- Prototyping new modes
  - City of Chiban (Japan) drone program
What to do with all those packages

- At-home delivery conveniences and issues
  - Residential buildings were not designed for the current and projected levels of package deliveries.

- Alternatives:
  - APLs operated by shippers, providers and third parties.
  - Alternative locations near the end users.
    - UPS Access Point
  - Alternative customer-controlled locations.
    - Audi/DHL/Amazon trunk trial program
    - Daimler/DHL Smart car trunk delivery service
Distribution Center Layouts
Fulfillment Centers – More Truck and Associate Parking
Increasing Accessibility to Emerging Workplaces

Sources: NJ.com and Greater Mercer TMA
Emerging Equipment and Technology

Sources: Maersk, Volvo, Amazon, Daimler
Examples of NJTPA Freight Initiatives

- NJTPA’s Freight Initiatives Committee
- Subregion Outreach and Field Visits
- Inventory & Assessment of Waterborne Resources
- Freight Rail Industrial Opportunity (FRIO) Corridors Program
- Pilot Freight Concept Development Program
Thank You

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