American Association of Port Authorities Seminar

Port and Terminal Planning & Congestion Mitigation Options

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Agenda

- Congestion Issues
- Mitigation Options
- Overview of Options & Critical Success Factors
- Solution Determination Process
- Concluding Thoughts
Congestion Issues

- U.S. container imports are expected to double to 30+ million TEUs in the next decade.
- Port and terminal capacity is only one piece of the network.
- Rail, road and air infrastructure is also operating at or near capacity.
- Increasing Community pushback.
- Proximity of other ports in the area provides the opportunity for competition or collaboration.
One Size Does Not Fit All

- The needs and priorities of one port community are not necessarily the same as another.
- Vendors offer a wide variety of both stand-alone and integrated services.
- Many vendors are competing to provide the same solution (RFID, DGPS, OCR, Automated Gates, Security).
- Standards for new technology may not yet be in place.
- All the stakeholder groups should be involved before selecting solutions.
Congestion Mitigation Options

There are lots of options:

- Off Dock Container Yards
- Chassis Pools
- Virtual Container Yards
- Traffic Mitigation Fees (Pier Pass or other models)
- Trucker Appointment / Gate Management Systems
- Shuttle Car Systems
- And others.
Off Dock Yards

➢ Primarily used for empty containers and/or chassis.
➢ Frees up storage space in terminals for loaded moves.
➢ Introduced a non-revenue “third leg” to trip patterns.
➢ Can create additional moves for imbalanced areas.

➢ Critical Success Factors:
  ▪ Limit third leg distance.
  ▪ Real-time integration with marine terminal operating system.
  ▪ Partnership between terminals, equipment providers and truckers.
Chassis Pools

- Originally limited to only one terminal.
- Expanded to cover multiple marine, rail and intermodal terminals.
- Pool results have been very successful.
  - Increased utilization.
  - Decreased fleet size.
  - Freed yard space for other equipment.
  - Lowered “cost per chassis day”.

- Critical Success Factors:
  - “C-level” commitment from equipment providers.
  - Continuous process improvement.
  - Strong 3rd party Pool management with continuous corporate oversight.
  - Partnership philosophy between Terminals and Vendors.
Virtual Container Yards (VCYs)

- AKA Street Turns or Street Interchanges.
- Most current programs for international cargo are port affiliated (Oakland, LA/LBC, Virginia, NY/NJ).
- VCYs benefit multiple parties but have started slowly.

Critical Success Factors:
- Low cost.
- "Shared Pain."
- Critical mass of truckers and equipment providers.
- Ease of use.

Environmental and Container Fee legislation could expand usage of VCY programs.
Virtual Container Yards (VCYs)

- VCY vendors offer commercial, for profit systems.
- Most were off shoots of other equipment interchange systems.
- The main difference between the systems is the amount of data automation.
Traffic Mitigation Fees / Extended Gate Hours

- PierPASS is a Traffic Mitigation Fee.
  - Was created to change behavior since its fees are applied only against daytime gate moves.
  - Fees are used to pay for extended gate hours.
  - Other ports are looking at the model to raise money for infrastructure or environmental mitigation.

- Traditional Extended / Night Gates have been underutilized.

- Critical Success Factors:
  - Leadership is key.
  - Stakeholder buy-in.
  - Neutral managing body.
  - Fees specifically allocated to the solution.
  - Provides a forum for other port-wide initiatives.
Truck Appointment / Gate Management Systems

> Standard operating procedure in busy Asian ports.

> Method to comply with reduce truck engine idle time laws.

> Time windows vary from broad to specific.

> Programs at Vancouver, Oakland, Los Angeles, Long Beach and Napoleon Yard at New Orleans.

> Success has been mixed.

> Critical Success Factors:
  - Requires priority both at the gate and in the yard.
  - Should ensure data for move is “clean” before truck arrival.
  - Integration of OCR, Pedestal, Truck Tag and Terminal Operating Systems data.
  - Trucker ease of use.
  - Multi-terminal solutions.
Shuttle Car Systems

- Known as “shuttle cars”, “maglev”, “freight shuttles”, “cargo rails”, “container platform trains”, “LIMs”, etc.
- Used in heavy industry (e.g., Steel Mills), passenger trains, and thrill rides.
- New technology is introducing high-speed container shuttle cars.
- Automated and Semi-Automated platforms.

- Critical Success Factors:
  - Moderate manufacturing and operating costs.
  - Infrastructure costs and ability to use existing rights of way.
  - Flexibility of car dispatch – single or “trains”.
  - The first live implementation.
Solution Process

Planning Phase
- Identify initiatives to be considered.
- Interview stakeholders – gather requirements, current metrics, and cost / benefits.
- Develop funding proposals.
- Prepare vendor Request For Proposal (RFP).
- Evaluate vendors, costs and funding.
- Make recommendations on preferred solutions.

Execution Phase
- Facilitate stakeholder buy-in.
- Contract with vendor.
- Address public relations activities.
- Facilitate implementation.
- Conduct post implementation audits.
Concluding Thoughts

➢ There are lots of choices. Strong leadership is key.

➢ Successful solutions require consensus building – get stakeholders on board.

➢ The most successful programs are port wide.

➢ Public/private partnerships can increase participation.

➢ Define and develop metrics early on in the process to better demonstrate the success of the programs.

➢ Data exchange must be easy.
  ▪ Allow multiple conveyance types (EDI, XML, flat files, Excel / Access uploads, etc.).
  ▪ Provide on-line data input capabilities for small companies or infrequent exception updates.
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Thank You!

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