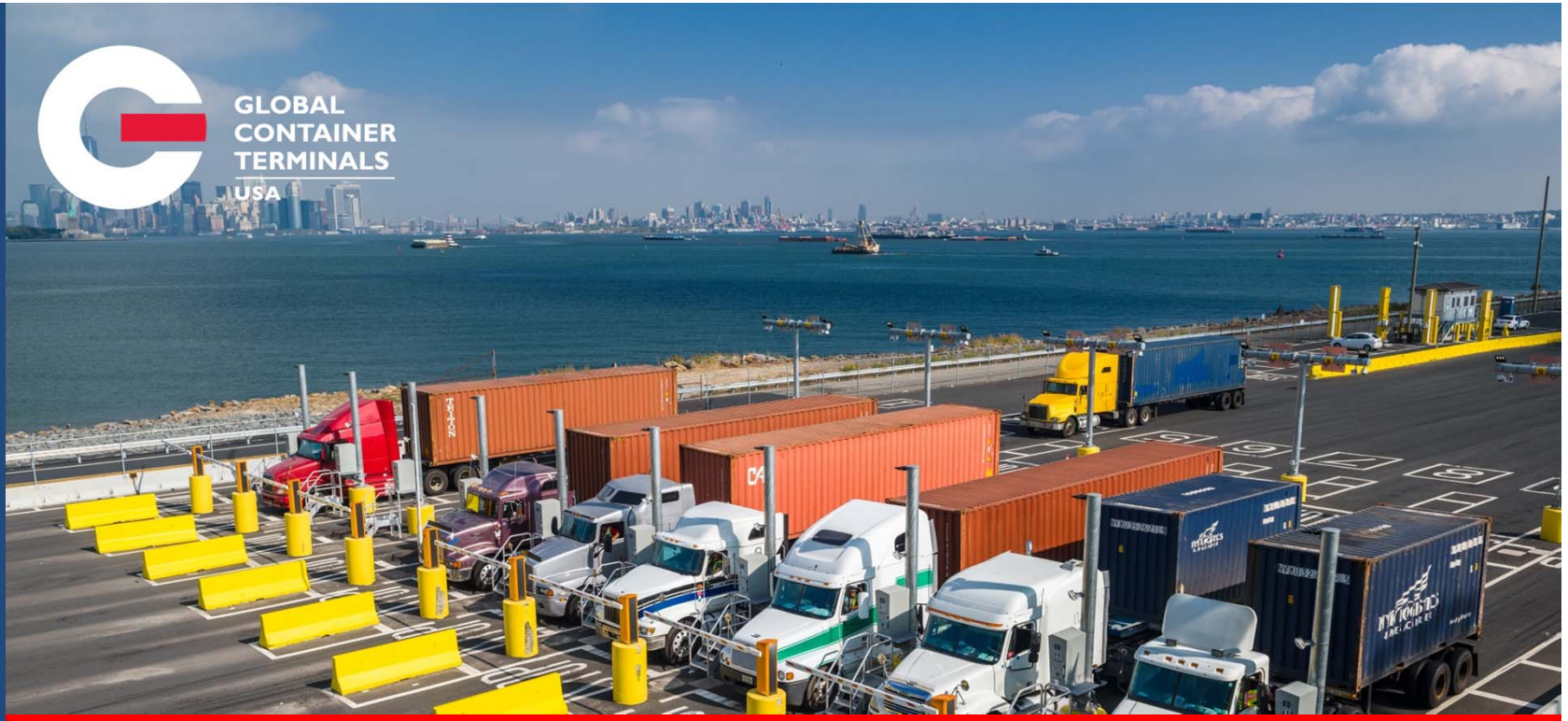




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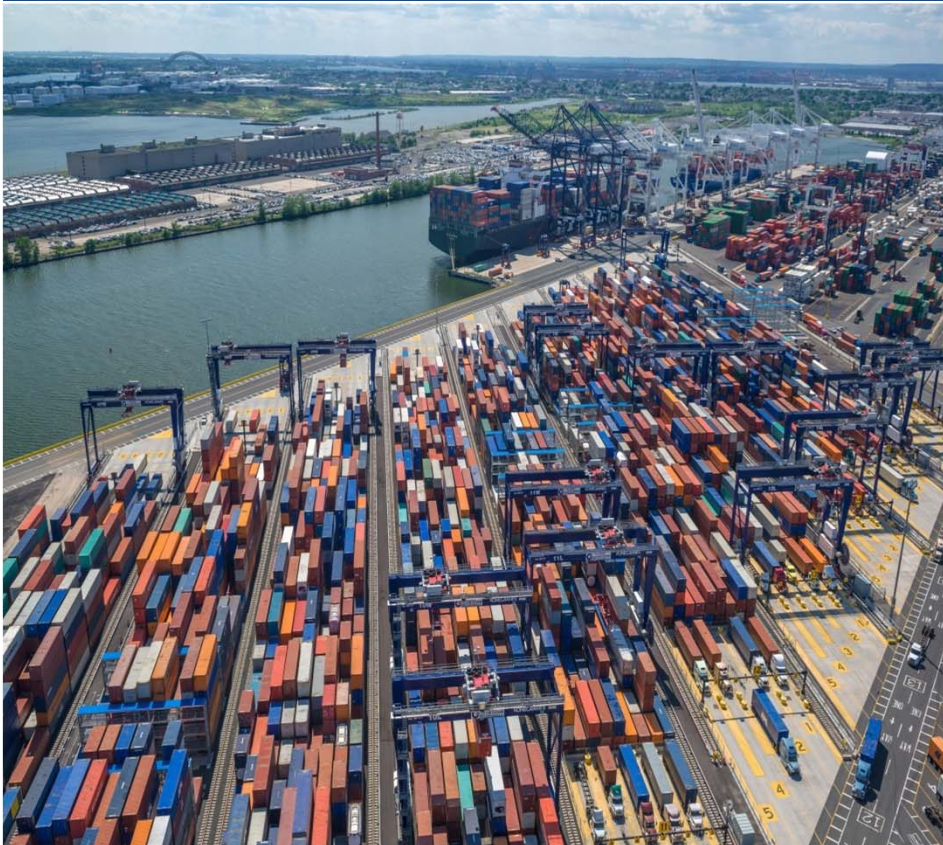


## Vibrant Ports – Healthy Ports

Philadelphia, PA | Dan Mulligan, Director Sales & Marketing, GCT USA



@BigShipReady



- 1. About GCT**
- 2. America's East Coast Gateway and GCT USA**
- 3. Truck Emissions Reduction**
- 4. GCT Bayonne Truck Turntimes**
- 5. Summary**



# Global Container Terminals At a glance



## GCT CANADA

 **BIGGER GATEWAY**  
with further reach

 Leading industry transaction times:  
**NIGHT GATE**

Strategic Class 1  
 **RAILWAY PARTNERSHIPS**

GCT Vanterm  
GCT Deltaport

GCT Bayonne  
GCT New York

## GCT USA

 **TECHNOLOGY LEADER**  
of terminal operations in North America

 **HIGHEST PRODUCTIVITY**

 **SEMI-AUTOMATED**  
state-of-the-art terminal



### **Port of New York and New Jersey**

- Home to most affluent consumer market on the East Coast
  - 30mm people within 2 hours of the port complex
- 6.3mm TEUs handled in 2016
  - 86% or 5.4mm TEUs of total volume moved by truck

### **GCT USA**

- Operates 2 terminals in NY/NJ, with GCT Bayonne:
  - Semi-automated, most advanced container terminal on the East Coast
  - Handled 25% of NY/NJ volume, or over 1.3mm TEUs of truck moves



*GCT leads N. America in implementing truck reservation systems*

**Award-winning GCT Bayonne features state-of-the-art equipment and processes**

- Reflected in the 96% score for its 2016 Green Marine verification
- In collaboration with stakeholders, implemented the first true truck appointment system in NA
- Voluntary introduction ahead of all other terminal operators in the port

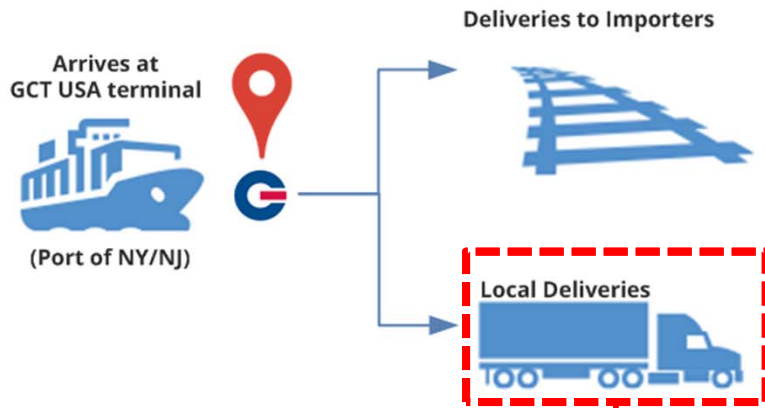




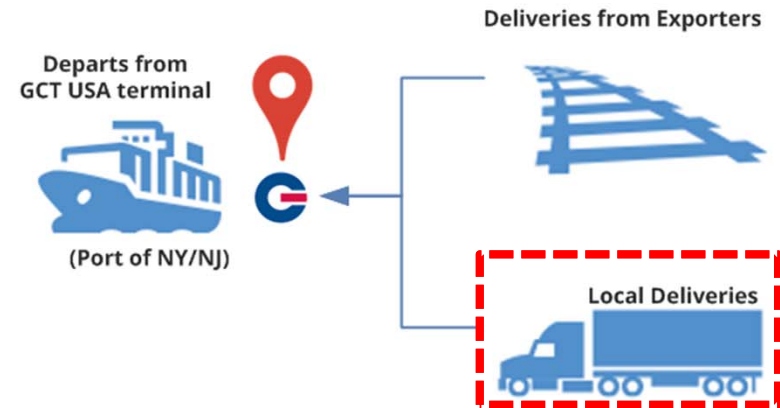
# GCT USA Truck Emissions Reduction



## IMPORTS TO THE US



## EXPORTS FROM THE US



***Truck reservations reduce emissions in this mode***



## Problem Definition

- Historically, third-party street trucks line up for service on an ad-hoc basis
- Truck arrivals unpredictable, causing congestion from idling

## Why truck reservations?

- Reduce truck idling
- Introduce discipline into truck queuing at the terminal
- Smooth street traffic during peak hours
- Improve terminal capacity within same footprint
- Eliminate unnecessary equipment



## How did we do this?

1. Multi-year collaboration with the Committee for Port Performance
2. Funding and support from the Sustainable Terminal Services Group
3. Stakeholder enhancements to build versatility and high user-acceptance
4. Priority scheduling and traffic metering
5. Phased introduction
6. Consistent truck turntimes

## This in turn:

- Innovated how trucks are processed
- Influenced supply chain behavior





## GCT Bayonne Truck Turn Times 2017 Results



Led port of NY/NJ and introduced a staged, truck reservation system

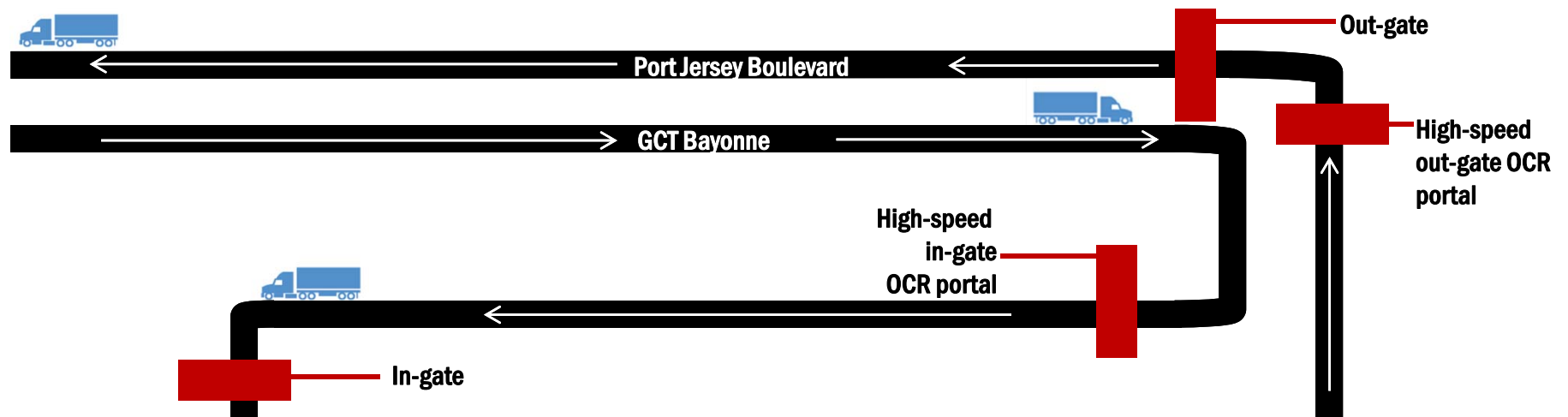
- Jan 15 Mandatory appointments 0600-0800
- Jan 25 Expanded mandatory appointments 0600-0900
- Apr 20 : 0600-1000
- Jun 28 : 0600-1100
- Sep 20: 0600-1100

**RESULT: 46% reduction in truck turn times YTD  
vs non-appointment times**



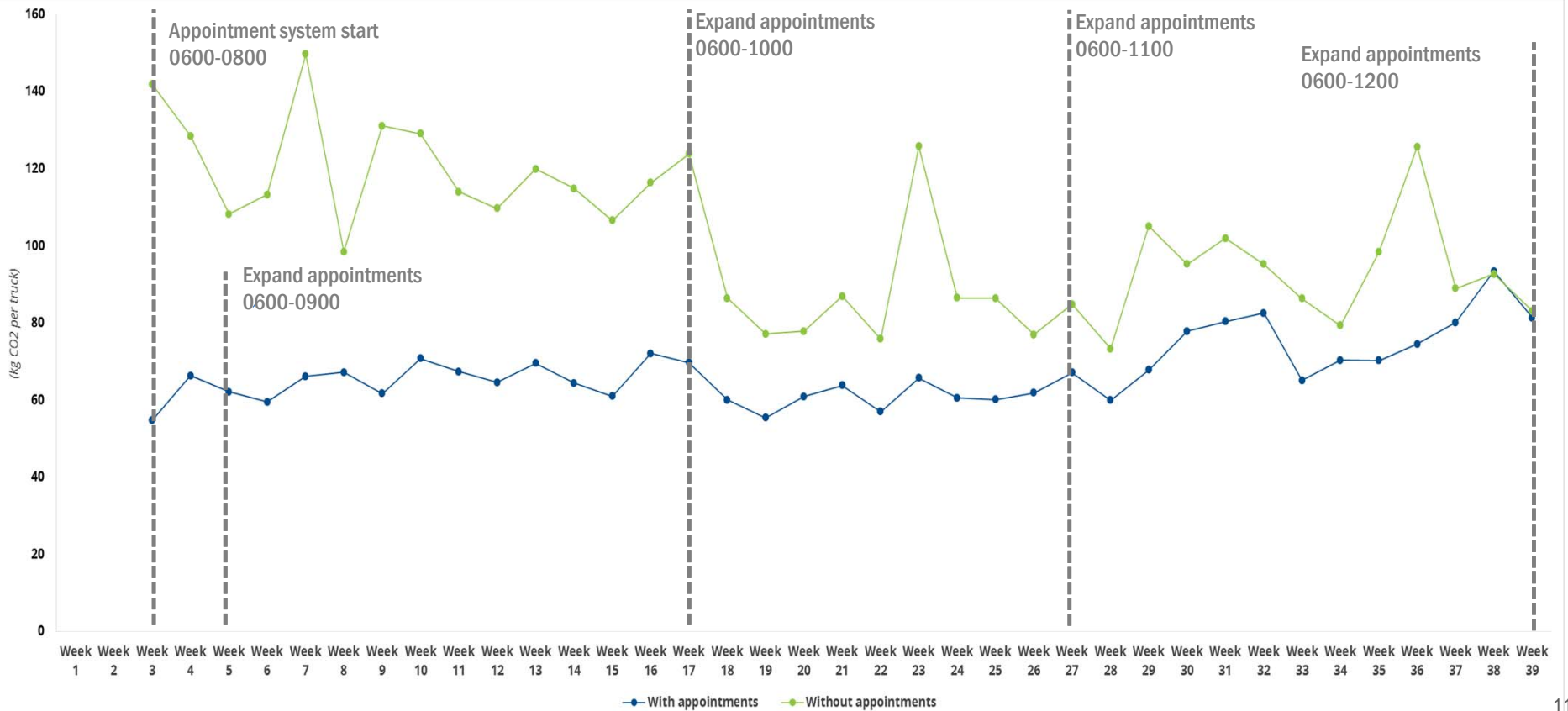
“Turn time” refers to the amount of time drayage trucks spend at a container terminal in minutes and is impacted by:

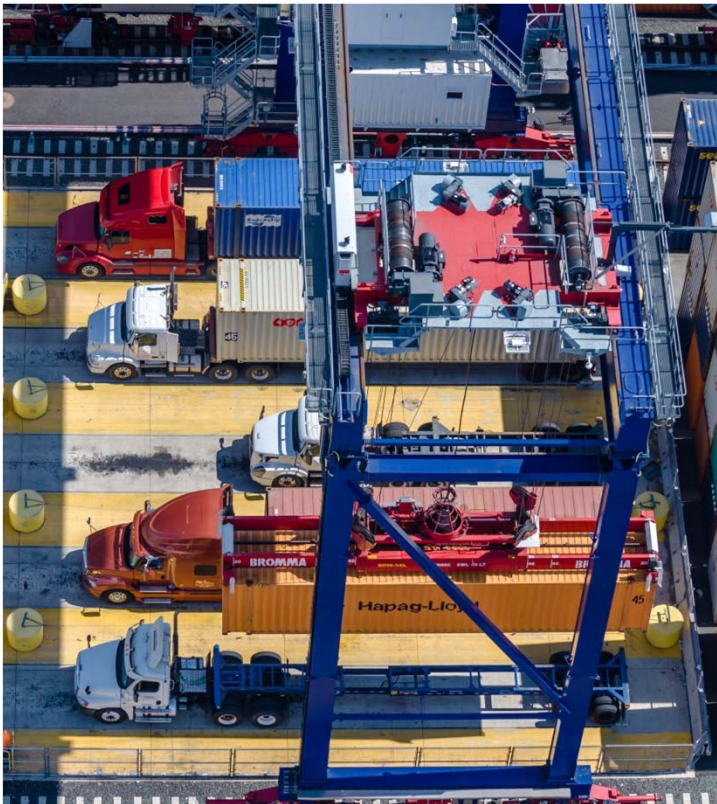
- Terminal design
- Resources deployed
- Technology & processes
- Appointment systems





# GCT USA GCT Bayonne Total Idle Truck CO<sub>2</sub> Emissions/wk





## 46% turn time reduction equals:

Truck Reservations	YTD Impact (Week 39)	Annualized Impact 2017
CO <sub>2</sub> Emissions Reduction	12,737 tonnes/year	19,671 tonnes/year
Air Pollutant Reduction	36,488 kg/year	56,351 kg/year
Fuel Cost Savings	USD \$3.2mm/year	USD \$4.95mm/year
Passenger Cars Off the Road	2,710	4,185
5-gallon buckets of Soot Removed	3,637	5,618

## Where do we go from here?

1. Continued expansion of reservation system.
2. Development of ExpressRail Port Jersey.



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