



**GLOBAL
CONTAINER
TERMINALS**

USA



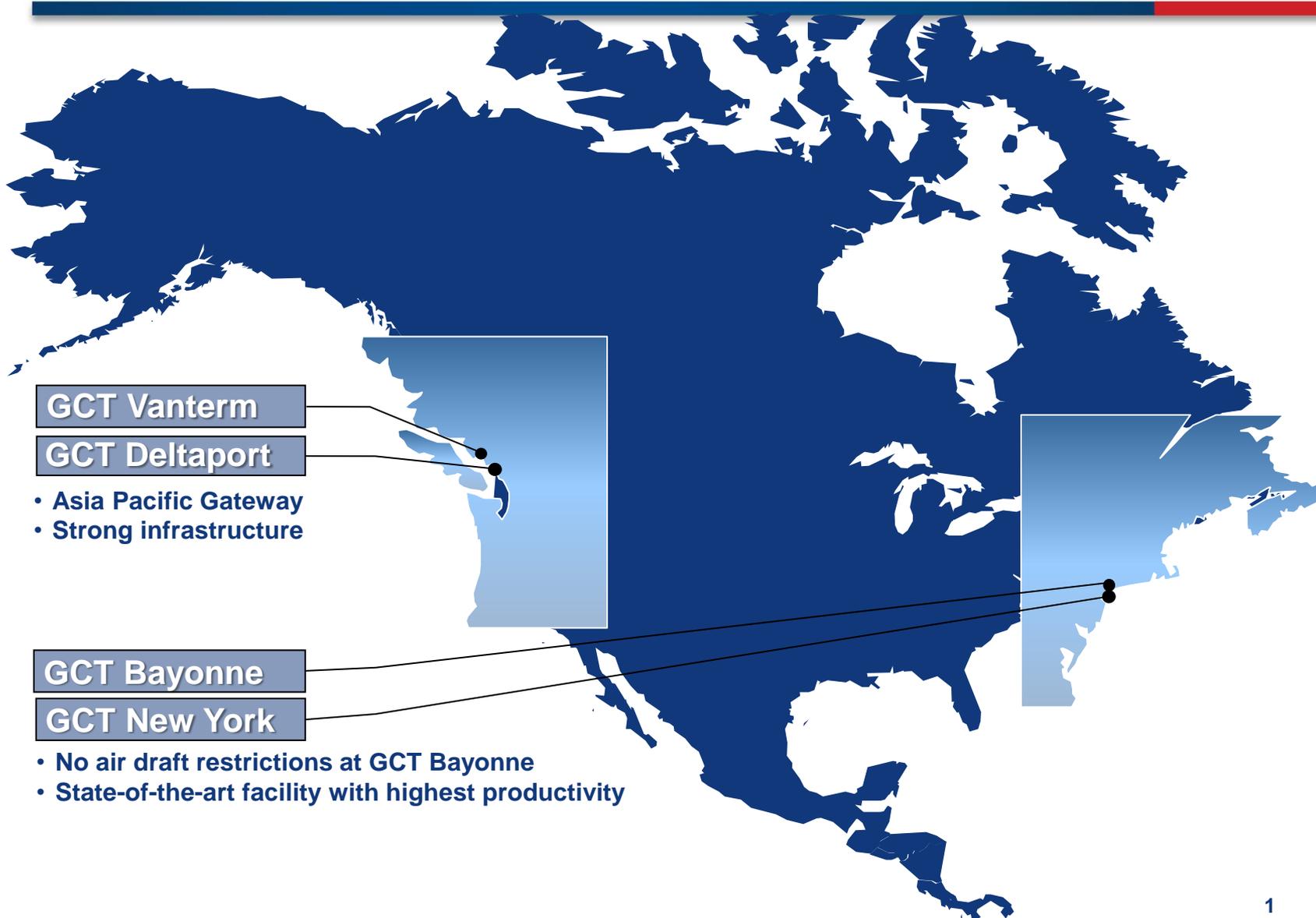
AAPA

Marine Terminal Management Training Program

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GCT USA, VP IT**

Introduction

GCT Terminal Locations



GCT Vanterm

GCT Deltaport

- Asia Pacific Gateway
- Strong infrastructure

GCT Bayonne

GCT New York

- No air draft restrictions at GCT Bayonne
- State-of-the-art facility with highest productivity



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My Background



August 10, 2007

My Background



IT People on Marine Terminals

- Formal Training?
- Part-Time ?
- Skill Set?
- Experience?
- Critical Mass / Backup Staffing?
- Retention challenges

How Are IT Positions Filled?

- In-house – best choice available at the time
- Outside – selected by NON IT management
- How Many – one or two?
- Specialist vs Generalist
- Central Staff vs Local Staff – HOT TOPIC

Interactions

- Operations - CRITICAL
- Equipment - TENSE
- Maintenance – Necessary Evil
- Finance – As required
- All Other – low priority

Scare Tactics

“If we don’t do xxxxx, the whole terminal may crash tomorrow!!”

- Improper training
- Budgets too low to replace worn parts
- New technology is fun – but hard to justify

Threat Topics

- Security – HUGE concern
- Software Patching – most abused
- Upgrades (hardware)
- Updates (software)
- Staffing – “hit by a bus worries”
- Licensing – illegal software

Threat Topics – SECURITY!!

UNCLASSIFIED



FBI *Cyber Division*

Private Industry Notification



26 March 2014

PIN #: 140326-008

(U) Maritime Supply Chain Vulnerable to Cargo Theft

(U) A Belgium-based criminal group exploited weaknesses in cyber security at the Port of Antwerp in order to carry out drug trafficking activity. While the Antwerp incident, reported in a joint FBI-USCG private industry notification 130903-001, highlights the cyber aspects of the scheme, recent open source information provides insight into cargo theft and diversion aspects that could affect US-based port authorities, maritime container terminal operators, freight forwarders, shipping lines/agents, customs offices, cargo brokers, and intermodal cargo facilities.

(U) Maritime Terminal Operating Systems are Likely to be Exploited by Criminal Actors

(U) In September 2013, the FBI and Coast Guard published a private industry notification¹ assessing that cyber threat actors may exploit vulnerabilities in Terminal Operating System (TOS). This assessment was based on FBI reporting

Teamwork

- IT** *“It worked when I checked it out. I see nothing wrong.”*
- Operations** *“We would have had a great night but we had systems issues.”*
- Operations** *“We are too busy to write any details down.”*

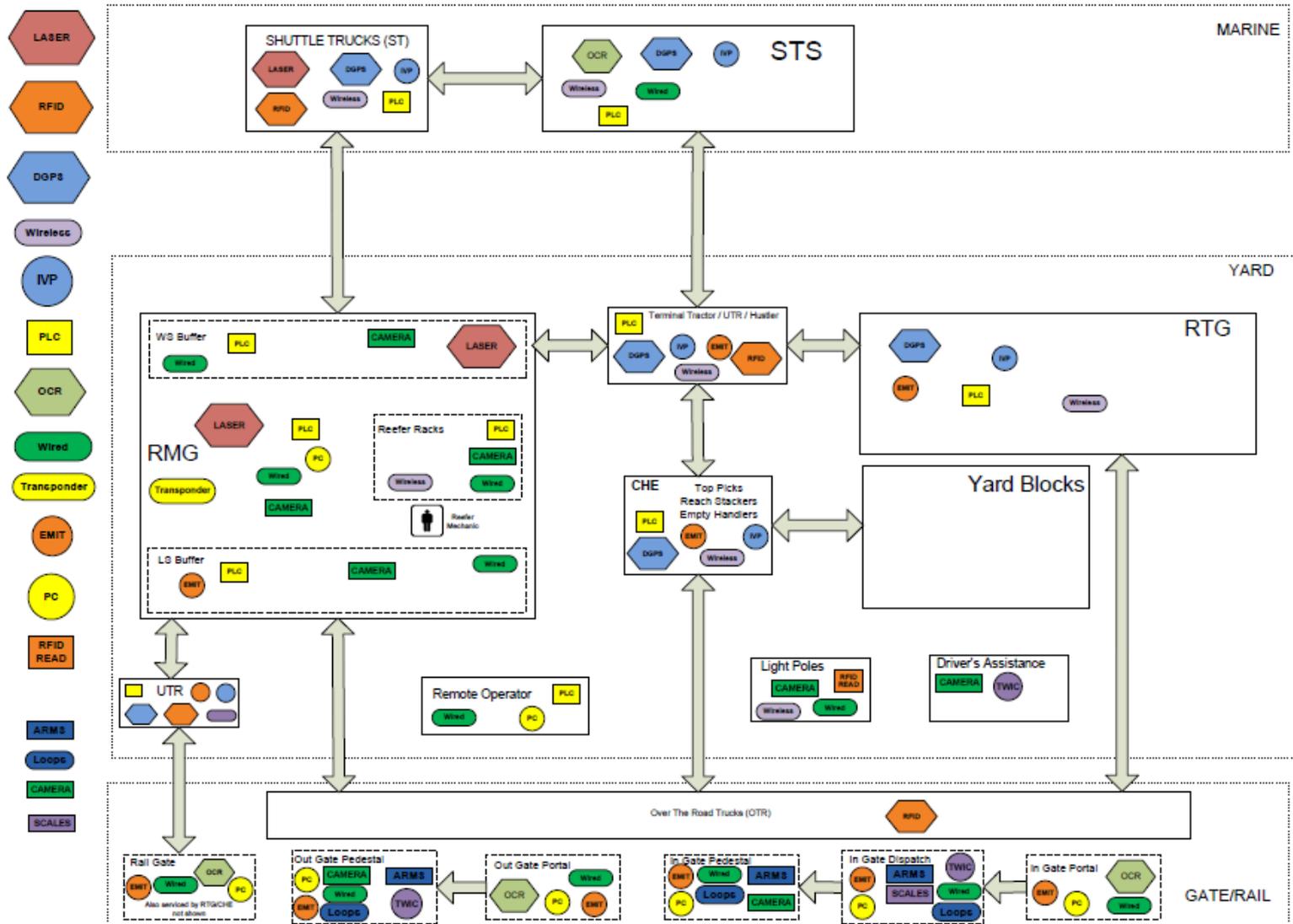
Put IT people at the point of trouble

Technology Demands

- Databases (Oracle + SQL Server)
- MS Windows (servers, desktops, tablets etc.) / Linux
- Networking / Security
- Virtualization
- SAN / NAS
- System Administration – Backup – Disaster Recovery

Special Technology

Global Expansion Project Technology Map



Special Technology

- Wireless Networking!!!!
- DGPS
- OCR
- PLC (equipment controllers)
- TOS
- GOS

Keep it simple!!!



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Questions?