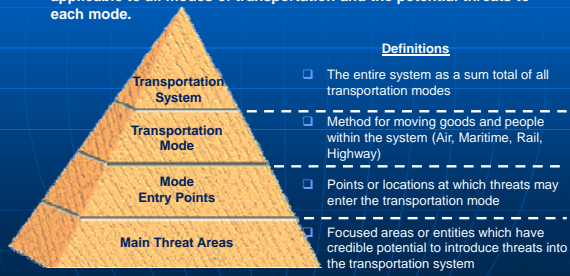# Introduction to Homeland Security

Chapter 7

Transportation Safety & Security

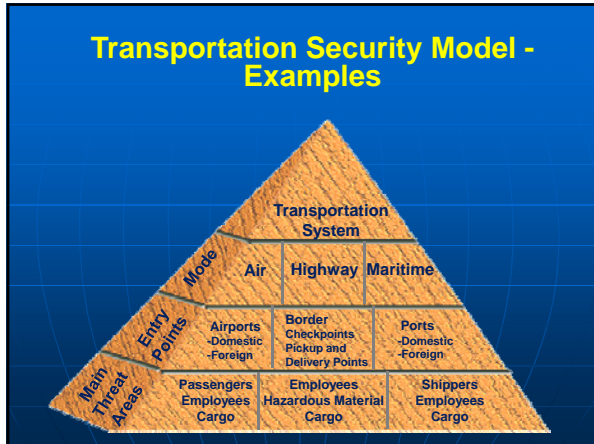
Transportation Safety & Security

- Transportation: the movement of things or people from one location to another
- Historically, the US has relied on the private sector for both the transportation network and the network's safety and security
- The 9/11 events illustrated the vulnerabilities of our systems and required a change to past approaches

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Transportation Security Model

The model was designed around a basic transportation process applicable to all modes of transportation and the potential threats to each mode.

Transportation System

Transportation Mode

Mode Entry Points

Main Threat Areas

Definitions

- ❑ The entire system as a sum total of all transportation modes
- ❑ Method for moving goods and people within the system (Air, Maritime, Rail, Highway)
- ❑ Points or locations at which threats may enter the transportation mode
- ❑ Focused areas or entities which have credible potential to introduce threats into the transportation system

Transportation Security Model - Examples

- Transportation System
- Mode: Air, Highway, Maritime
- Entry Points: Airports -Domestic -Foreign; Border Checkpoints Pickup and Delivery Points; Ports -Domestic -Foreign
- Main Threat Areas: Passengers Employees Cargo; Employees Hazardous Material Cargo; Shippers Employees Cargo

Transportation Network

- Freight Rail
- Highways, Roadways, and Motor Carrier Networks
- Ports and Intermodal Freight Transport
- Mass Transit
- Pipeline Security
- Air Freight
- Commercial and General Aviation

Transportation Security Administration (TSA)

- Created as a result of the Aviation and Transportation Security Act, 2001
  - TSA operated w/in the Dept. of Transportation (DOT) until 2003, when it moved to DHS
  - Made aviation security a direct Federal responsibility for the first time
  - Consolidated all transportation security activities under the umbrella of one agency

TSA (cont.)

- Primary security focus is on:
  - Identifying risks
  - Prioritizing them
  - Managing them to acceptable risk levels
  - Mitigating the impact of potential incidents that may arise as a result of these risks

TSA Responsibilities

1) Provide security to the nation's transportation security systems, with a primary focus on aviation security
   - Screening of all aviation passengers and baggage
     - 45,000 screeners (federalized and privatized) at 448 commercial airports
     - Utilizes a wide array of technology
       - Metal detectors
       - X-ray machines
       - Explosives trace detection machines
       - Explosives detection systems

TSA Responsibilities (cont.)

2) Manage the security risk to the US surface transportation systems
   - Mass transit
     - Over 9 billion trips per year
   - More than 160,000 miles of interstate and national highways
   - ~800,000 shipments of hazardous material

TSA Areas of Responsibility

- Air Transportation Safety and Security
- Trucking Safety
- Ports and Shipping Security
- Bus Transportation Security
- Railway Transportation Security

TSA Components

- Transportation Security Grants
- Law Enforcement Program
- Security Programs
- Security Screening

Transportation Security Grants

- Freight Rail Security Grant Program
- Intercity Bus Security Grant Program
- Transit Security Grant Program

TSA Law Enforcement

- Federal Air Marshal Service (FAMS)
  - Detect, deter, and defeat hostile acts targeting US air carriers, airports, passengers, and crews
- National Explosives Detection Canine Team
- Crew Member Self Defense Training Program
- Armed Security Officer Program
- Federal Flight Deck Officer Program
- Law Enforcement Officers Flying Armed Program

TSA Security Programs

- Air Cargo Security
- Flight School Security Awareness Training Program
- I-STEP Program

TSA Security Screening

- Passenger Screening
- Baggage Screening
- Covert Testing

Trucking Security

- 90% of all hazardous materials (HAZMAT) are transported by trucks
  - In 2004 there were a total of 14,740 HAZMAT incidents
    - 12,977 occurred on the highway
- Threat exists that terrorists will use a truck carrying some dangerous chemical or other material
- Releases involving the volumes or weights of materials contained in these vehicles can have catastrophic potentials

Trucking Security Initiatives

- TSA began conducting background checks on HAZMAT drivers in 2005
- TSA provides grants under the "Highway Watch" program for the following:
  - Participant Identification and Recruitment
  - Training
  - Communications
    - Highway Watch Call Center
  - Information Analysis and Distribution
    - Highway Information Sharing and Analysis Center (ISAC)
- WMD Detection Technology Program

Port & Shipping Security

- Securing maritime imported and exported goods a critical task
- 77 US ports are open to international trade
  - 30 account for almost 99% of all international maritime trade activity in the U.S.
- An attack on any major US port could result in:
  - Significant loss of life
  - Tremendous physical damage
  - Serious disruption to the economy and commerce of the US and its trading partners

Port & Shipping Security (cont.)

- SAFE Port Act of October 2006
  - Tasked DHS with the responsibility of assuring maritime transport security and protecting the nation's ports
  - The USCG is the lead Federal agency
- 9 of 16 container security steps occur outside of U S jurisdiction

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Port & Shipping Security (cont.)

- DHS and DOT share responsibilities for securing maritime transportation systems and the ports
- DHS and USCG have a layered security approach
  - Aims to minimize potential threats while:
    - US-bound ships/vessels are overseas
    - They are in transit
    - They are within US waterways

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Port & Shipping Security –
Initiatives for Overseas Vulnerability Reduction

- **24-Hour Advanced Manifest Rule**
  - All sea carriers required to provide proper cargo descriptions and valid consignee addresses 24 hrs before cargo is loaded at a foreign port
  - Failure to do so will result in a "no load" message and other penalties

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Port & Shipping Security –
Initiatives for Overseas Vulnerability Reduction

- **Container Security Initiative (CSI)**
  - CBP teams screen containers in foreign ports
  - Currently 56 international ports participate
    - Accounts for 90% of all sea containers shipped to US
  - Potential suspect containers are targeted and identified before being loaded onto vessels

Port & Shipping Security –
Initiatives for Overseas Vulnerability Reduction

- **Customs-Trade Partnership Against Terrorism (C-TPAT)**
  - Importers, carriers, brokers, forwarders, port and terminals, and foreign manufacturers take steps to secure their supply lines
  - Participants receive special benefits
  - Allows DHS to devote more resources to high risk shipments

Port & Shipping Security –
Initiatives for Overseas Vulnerability Reduction

- **International Ship and Port Facility Security (ISPS) Code**
  - First multilateral ship and port security standard ever created
  - Requires vessels and port facilities to:
    - Conduct security assessments
    - Develop security plans
    - Hire security officers
  - Compliance ensured by the USCG under the International Port Security Program

Port & Shipping Security –
**Initiatives for Overseas Vulnerability
Reduction**

- **Operation Safe Commerce (OSC)**
  - Pilot program to analyze security in the commercial supply chain and testing solutions to close security gaps
  - Technologies tested will:
    - Enhance maritime cargo security
    - Protect global supply chain
    - Facilitate the flow of commerce

Port & Shipping Security –
**Initiatives for "In-Transit" Vulnerability
Reduction**

- **Smart Box Initiative**
  - Development of "tamper evident" containers
  - Works in conjunction with current mechanical seals
  - Device would indicate an attempted intrusion

Port & Shipping Security –
**Initiatives for "In-Transit" Vulnerability
Reduction**

- **Ship Security Alert System (SSAS)**

  - Allows a vessel operator to send a covert alert to shore for incidents involving violence or indicating that the security of the ship is under threat or has been compromised
  - All new and existing passenger and cargo ships of at least 500 gross tons must have equipment installed as of July 1, 2006

Port & Shipping Security –
Initiatives for "In-Transit" Vulnerability Reduction

- **Automated Targeting System (ATS)**
  - Uses prearrival info and input from the intelligence community to identify high-risk targets before they arrive in the US
  - Evaluates arrivals via all modes of transportation

Port & Shipping Security –
Initiatives for "In-Transit" Vulnerability Reduction

- **96-Hour Advance Notice of Arrival**
  - Ships must notify USCG 96 hours prior to arriving in US port
  - Must provide detailed info on:
    - Crew
    - Passengers
    - Cargo
    - Voyage history
  - Info then analyzed using databases and intelligence information
  - USCG then determines which vessels require additional attention

Port & Shipping Security –
Initiatives for Vulnerability Reduction "In-US Waters and On US Shores"

- **National Targeting Center (NTC)**
  - Provides tactical targeting and analytical research support for CBP antiterrorism efforts
  - Experts in passenger and cargo targeting
    - Utilize ATS
  - Also supports CSI personnel

Port & Shipping Security –
Initiatives for Vulnerability Reduction "In-US Waters and On US Shores"

- **Maritime Intelligence Fusion Center (MIFC)**
  - Located in:
    - Norfolk, VA
    - Alameda, CA
  - Compile and synthesize intel products from federal, state, and local sources dealing with maritime security
  - Products are then disseminated to homeland security agencies involved in port and waterway security

Port & Shipping Security –
Initiatives for Vulnerability Reduction "In-US Waters and On US Shores"

- **High Interest Vessel Boardings**
  - High-risk vessels are targeted for boarding to address potential security issues prior to entry into port
  - USCG also randomly selects vessels for security boardings

Port & Shipping Security –
Initiatives for Vulnerability Reduction "In-US Waters and On US Shores"

- **Operation Port Shield**
  - USCG boards all vessels (at sea or at the dock) on their first visit to a US port to ensure compliance with US security standards
  - Program officers also visit foreign countries to evaluate antiterrorism measures at foreign ports

Port & Shipping Security –
Initiatives for Vulnerability Reduction "In-US Waters and On US Shores"

- **Automatic Identification System**
  - Allows the near real-time tracking of vessels
  - Currently, only large vessels on international voyages are required to have this

Port & Shipping Security –
Initiatives for Vulnerability Reduction "In-US Waters and On US Shores"

- **Area Maritime Security Committees**
  - USCG has established committees in all of the nation's ports
  - Allows for the coordination of all activities of port stakeholders
    - Collaborative security plans

Port & Shipping Security –
Initiatives for Vulnerability Reduction "In-US Waters and On US Shores"

- **Port Security Assessment Program**
  - Designed to make best practice info available to US port officials
  - Aimed at helping port officials make decisions about how to improve the vulnerability of their ports

Port & Shipping Security –
Initiatives for Vulnerability Reduction "In-US Waters and On US Shores"

- **Port Security Grants**
  - Provides federal resources for projects to enhance security at port facilities
    - Funds assist ports in analyzing vulnerabilities and then closing security gaps
      - Control gates
      - Fencing
      - Lighting
      - Communications
      - Surveillance equipment

Port & Shipping Security –
Initiatives for Vulnerability Reduction "In-US Waters and On US Shores"

- **Non-Intrusive Inspection Technology**
  - Leveraging technology to screen a larger portion of commercial traffic in less time while facilitating legitimate trade
    - Backscatter X-ray machines
    - Handheld radiation meters
    - Density meters
    - Fiber optic scopes

Port & Shipping Security –
Initiatives for Vulnerability Reduction "In-US Waters and On US Shores"

- **Maritime Safety and Security Teams (MSSTs)**
  - USCG rapid response force for threats to vital ports
    - Thirteen 75 man teams located around the country
  - Capable of nation-wide deployment via air, ground, or sea
  - Capabilities:
    - Explosive detection dogs
    - Fast rope capable
    - Antiterrorism/Force Protection Small Boat handling training
    - Underwater port security

13

Port & Shipping Security –
Initiatives for Vulnerability Reduction "In-US Waters and On US Shores"

- **Guarding In-Between the Ports**
  - USCG
  - CBP Border Patrol
  - ICE Air and Maritime Operations Units
    - Responsible for patrolling and securing the nation's borders between ports of entry

Port & Shipping Security –
Initiatives for Vulnerability Reduction "In-US Waters and On US Shores"

- Transportation Worker Identity Card (TWIC)
  - Secure, uniform ID card to prevent potential terrorist threats from entering sensitive areas of the transportation system
  - Biometric based
  - Will allow workers to enter secure areas at multiple facilities
    - Will reduce need for multiple ID cards and background checks

Multi-Layered Maritime Domain Awareness
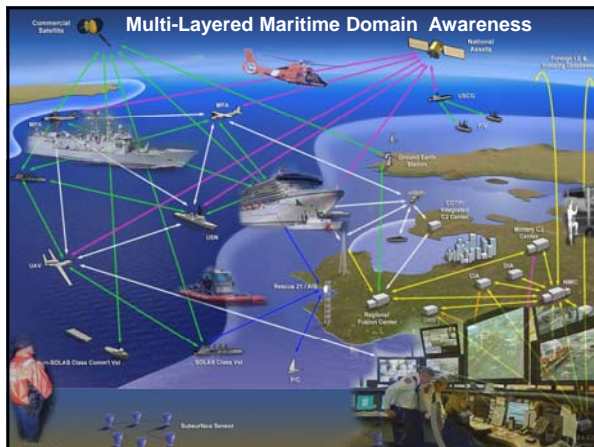
Putting it All Together:
The Container Story

1) Cargo checked at secure Port of Departure
   • 24 hr Advanced Manifest Rule
   • CSI
   • C-TPAT
   • ISPS Code
2) Tracked in Transit
   • Automatic Identification System (AIS)
3) Advanced Notice of Arrival
   • 96 hr Advance Notice

Putting it All Together:
The Container Story

4) Vessel, crew, & cargo assessed prior to port entry
   • ATS
   • NTC
   • MIFC
   • High Interest Vessel Boardings
   • Operation Port Shield

Putting it All Together:
The Container Story

5) Vessel examined at secure Port of Arrival
   • Area Maritime Security Committee
   • Port Security Assessment Program
   • Port Security Grants

Putting it All Together: *The Container Story*

6) **Crew documents checked at arrival**
7) **Cargo screened before delivery**
   - **Non-Intrusive Inspection Technology**

8) **Delivered to proper customer**

Bus Transportation Security

- Carries >774 million passengers per year
  - 28% more than domestic airlines
- Often-neglected link in the nation's transportation infrastructure
- Represents a security vulnerability
- Buses used in terror attacks worldwide
- Securing the bus system is an extremely challenging task because:
  - Multiple stops
  - Frequently changing passengers
  - Short periods of time

Bus Transportation Security (cont.)

- TSA provides grants for intercity bus security projects
  - Protecting/isolating driver
  - Bus tracking
  - Passenger/baggage screening

Railway Transportation Security

- Highly utilized and valuable component of the US transportation infrastructure
- Potential vulnerabilities and areas in need of improvement:
  - Improved decision-making processes regarding shipments of HAZMAT
  - Need for technologies/processes to screen containers/passenger baggage
  - Need to improve security for intermodal transportation
    - Secure containers
    - ID threatening contents
    - ID contents to 1st responders w/o tipping off terrorists
  - Need to clearly delineate roles/responsibilities re: surge requirements in case of catastrophes

Railway Transportation Security (cont.)

- Transportation of HAZMAT greatest vulnerability of the system
- Rail Security Act 2004: Requires DHS to conduct a vulnerability assessment of the nation's rail systems and report back to Congress
  - Identification and evaluation of critical assets and infrastructure
  - Threats to those assets and infrastructure
  - Vulnerabilities that are specific to rail transportation of HAZMAT
  - Security weaknesses

Railway Transportation Security (cont.)

- TSA Initiatives
  - Security screening of passengers and baggage
  - Transportation Worker Identity Credential (TWIC)
  - Explosive detection K9 teams
  - Transit and Rail Inspection Pilot (TRIP)
    - Evaluated the use of technologies to screen rail passengers and their baggage:
      - Prior to boarding
      - Prior to loading
      - While in transit
  - Hired and deployed 100 surface transportation inspectors