A Risk-based Approach to Supply Chain Security: A United States Perspective

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Homeland Security
Creating a Context...

- Risk is a function of the frequency (likelihood) of an undesirable event and its consequence or magnitude of outcome:

  Risk = Frequency \times Consequence

- Frequency, especially for terrorism risk, is often broken down into elements of threat and vulnerability:

  Risk = (Threat \times Vulnerability) \times Consequence
Risk-Based and Layered Security Approach

- Advance Information
- Automation and Technology
- Collaboration with Industry Partners
- Collaboration with Foreign Partners
‘Steady’ container flow times

- (60 seconds/minute) * (60 minutes/hour) * (24 hours/day) = 86,400 seconds per day.

- (86,400 seconds per day) * (365.25 days per year) = 31,557,600 seconds per year.

- (11,500,000 containers at sea ports) + (11,500,000 containers at land ports) = 23,000,000 containers/year.


- (23,000,000 containers/year) / (232 POE) = 99,138 containers/port/year.

- (31,557,600 seconds/year) / (90,138 containers per port) = 350 seconds/container (~5.8 minutes per container).
“We need to have a security strategy [...] that fully take(s) into account the balance that always must be struck between security and trade and relationships that are ongoing.”

Janet Napolitano, Secretary of Homeland Security ~ 2/25/2009
House Homeland Security Testimony
Partnerships with Industry

Customs Trade Partnership Against Terrorism (C-TPAT) Achievements:

- 8,596 Certified Partners
- 9,238 Total Validations Completed
- 464 total suspensions/removals

DHS can provide the highest level of cargo security only through close cooperation with the ultimate owners of the international supply chain such as importers, carriers, consolidators, licensed customs brokers, and manufacturers.
Partnerships with Foreign Governments

The Container Security Initiative (CSI)

- Announced in January 2002
- DHS works with host nation to identify and inspect high-risk containers
- Currently in 58 ports, covering 86% of maritime cargo destined to the U.S.