

# TSA Air Cargo Screening



ALERT ADSA11  
Cargo Inspection Workshop  
4 November 2014



# TSA Air Cargo Screening

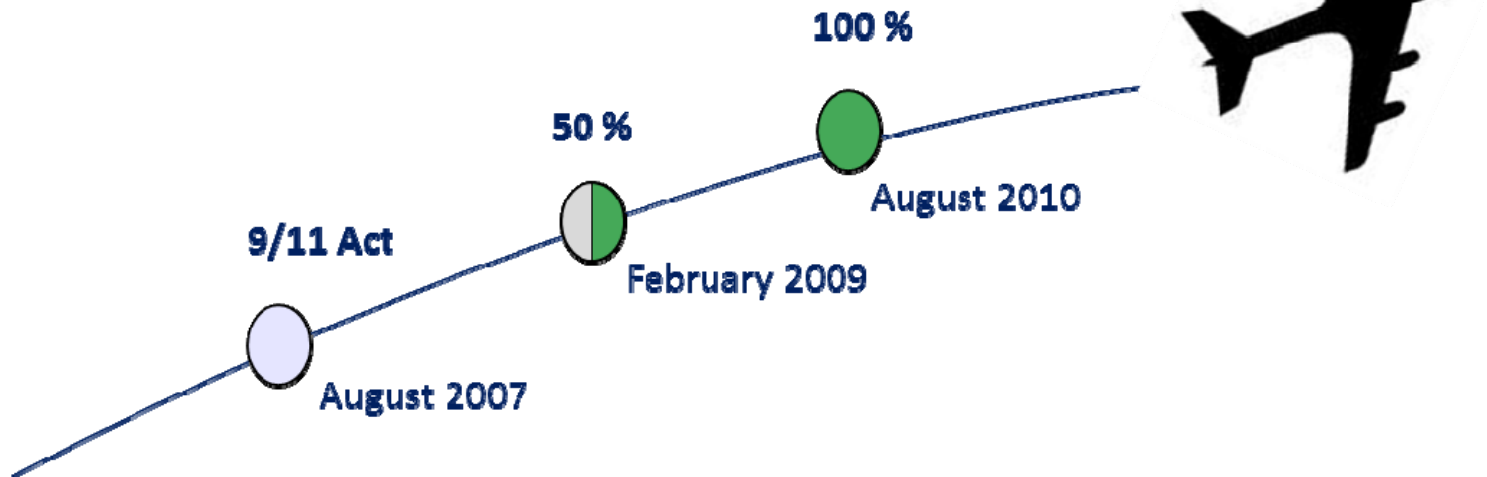
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What benefit could TSA obtain from this workshop?

- Prevent or deter a terrorist attack
- Do not impede commerce
- Provide industry with variety of technologies
- Address challenges
- Facilitate Regulatory/Compliance
- Collaboration/Open dialog
- Expand the Marketplace
- Good Ideas

# Law – 100% Screening Legislation

- The Implementing Recommendations of the 9/11 Commission Act of 2007 were signed into law on August 3, 2007
- The law required 100% screened for domestic flights by August 3, 2010 at the piece level
- Further guidance required 100% screened for international inbound flights to the United States by December 3, 2012
- Prevent or deter the carriage of any unauthorized persons, and any unauthorized explosives, incendiaries, and other destructive substances or items in cargo onboard an aircraft.
- Commensurate with baggage (piece level)
- No Congressional funding
- TSA required to establish program to accomplish mandate





# Definitions and Sources

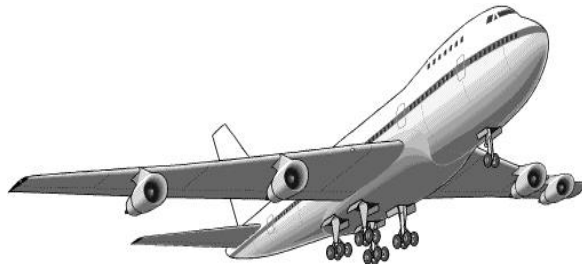
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- “Piece” The number of pieces generally is determined by the number of pieces identified by the documentation such as the airway bill
- “Screening” as defined in the 9/11 Act, Section 1602:  
A physical examination or non-intrusive methods of assessing whether cargo poses a threat to transportation security.
- “Commensurate” The level of security to be provided for the system for screening cargo must correspond to the level of security for screened checked baggage.

# Challenges to Meeting 100% Screening

## Screening Capability/Volume

- ✓ Airlines at screening capacity
- ✓ 600k-700k pieces each day



## Screening Cargo

- ✓ Screen an individual piece within a shipment
- ✓ Cargo could be any size
- ✓ Cargo could contain time-sensitive commodities



## 4 Key Challenges

## Screening Technology

TSA Approved technologies:

- ✓ Physical Search
- ✓ X-Ray
- ✓ Explosives Trace Detection (ETD)
- ✓ Explosives Detection System (EDS)
- ✓ Electronic Metal Detection (EMD)
- ✓ K9 (secondary)

## Funding

- ✓ No Congressional funding for screening



# Overview of the Air Cargo Supply Chain

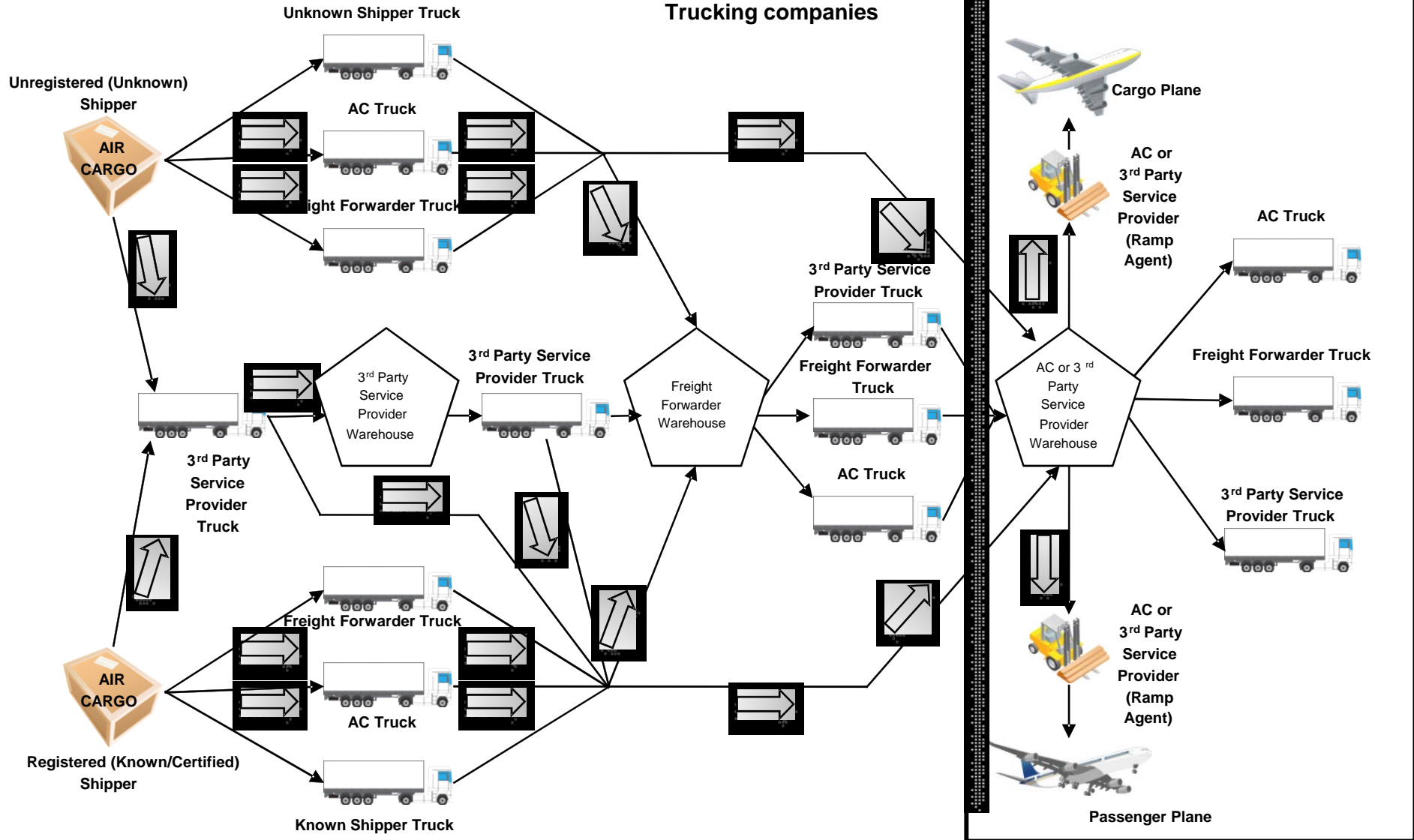


Millions of Shippers

Over 4000 IACs

Over 700,000  
Trucking companies

300 Air Carriers at 450 Airports





# TSA Domestic Approach for 100% Screening

- TSA established the Certified Cargo Screening Program (CCSP)

## CCSP

- Enables all entities in the supply chain who meet stringent security standards to screen cargo
- Businesses may choose the best and most effective screening model for their needs
- Supported and implemented by industry
- Leverages best practices from global supply chain security programs

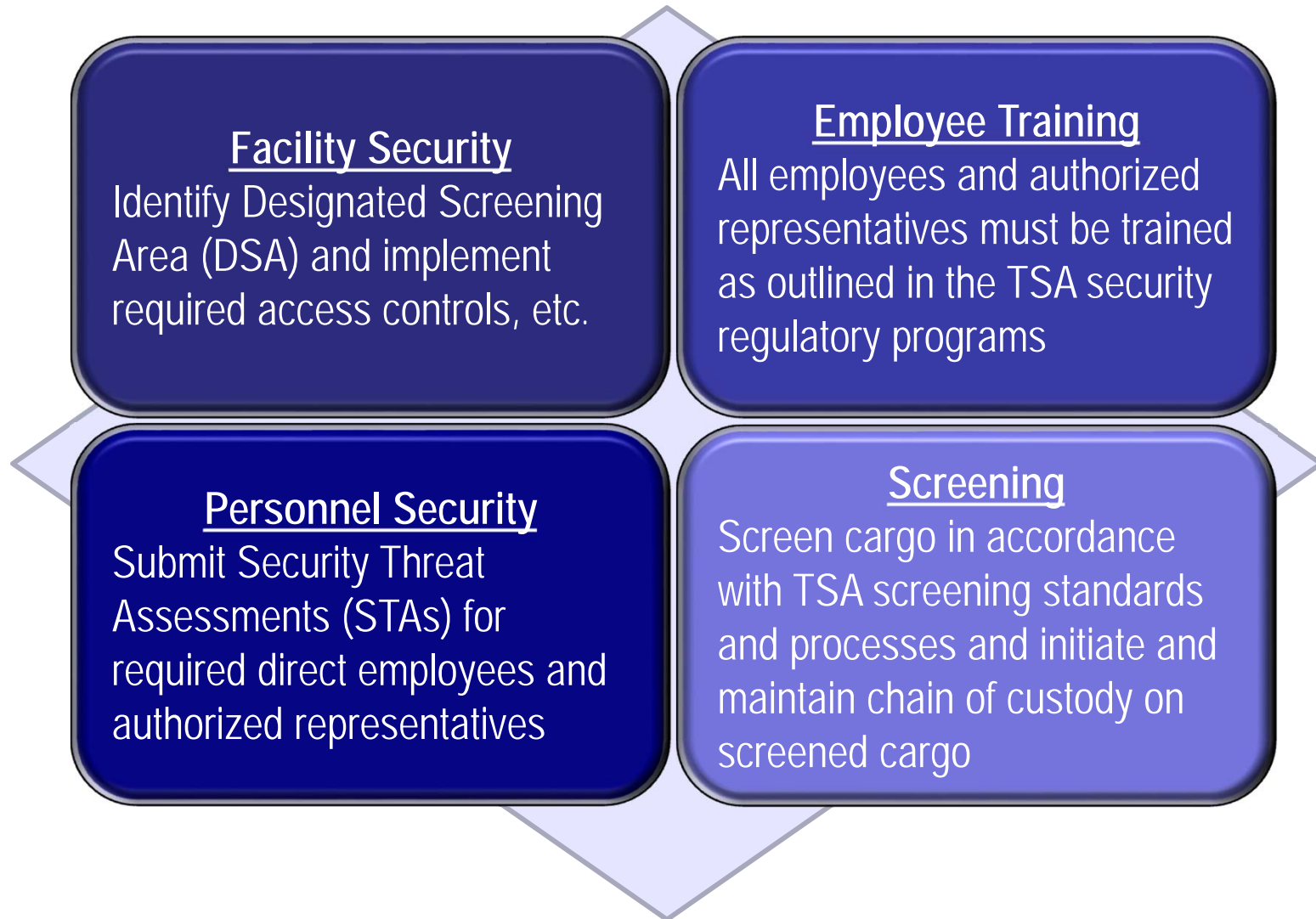
### Approach Includes:

- Standard Security Program updates
- Compliance Inspections/Audits
- TSA Proprietary Canine Teams
- Risk-Based Strategies

# Facility Requirements: 4 Cornerstones of Participation



- Participation is *voluntary*, but requires facilities to adhere to the following requirements:





## Over 2300 CCSP Facilities Across Supply Chain Enrolled

### **Air Carriers**

~1200 sites

### **IACs**

~520 sites

### **Shippers**

~500 sites

### **Independents (ICSFs)**

~80 sites

# Current Approved Methods of Screening



- The following screening methods are approved for passenger air cargo:
  - Physical Search
  - X-Ray
  - Explosives Trace Detection (ETD)
  - Electronic Metal Detection (EMD)
  - Explosives Detection System (EDS)
  - TSA-Certified Canines
  - CO2 Monitors
- Additionally, Sec. 1602 of the 9/11 Act states, “The Administrator may approve additional methods to ensure that the cargo does not pose a threat to transportation security and to assist in meeting the [screening] requirements...”
- Manifest Verification
- Alarm Resolution
- Shield/Opaque

## Strategic Objectives

<b>Near Term</b>	Qualify viable air cargo screening technology that is currently in the marketplace and/or can be quickly modified to support the requirements of the 100% cargo screening mandate.
<b>Medium Term</b>	Evaluate emerging air cargo screening technologies and provide feedback to vendors to enhance products for qualification and the development of refined technology standards.
<b>Long Term</b>	Collaborate through the DHS Capstone IPT with S&T to identify current technology gaps/opportunities and support R&D efforts for future sophisticated air cargo screening technology requirements.



# Air Cargo Screening Qualification Process

## Overview

The Transportation Security Administration (TSA) has initiated Air Cargo Screening Qualification Test (ACSQT) activities to qualify air cargo screening devices. TSA will publicize the devices that successfully pass the qualification process within the TSA Air Cargo Screening Technology List. Regulated parties will reference this document when procuring air cargo screening equipment to meet the 100% screening mandate in Public Law 110-53.

## Qualification Groups (QGs)

TSA has identified three categories of unique and mature screening technology for near term qualification.

<b>QG</b>	<b>Description</b>
<b>QG-1</b>	Non-Computed Tomography (Non-CT) Transmission X-ray Devices
<b>QG-2</b>	Explosive Trace Detection (ETD) Devices
<b>QG-3</b>	Electronic Metal Detection (EMD) Devices



# Air Cargo Screening Qualification Process

- Air cargo screening devices will pass through a qualification process
- Devices that successfully pass the qualification process will be publicized within the TSA Air Cargo Qualified Technology List
- Regulated parties will reference this document when procuring air cargo screening equipment (published SSI and non-SSI)

Each screening technology model undergoes an 8-step qualification process

## Screening Technology Qualification Process

1	Submit White Papers	Manufacturers
2	Assess White Papers	TSA
3	Conduct/Participate in Industry Day	TSA / Manufacturers
4	Submit Qualification Data Packets	Manufacturers
5	Assess Qualification Data Packets	TSA
6	Coordinate Logistics / Bailment Agreements	TSA / Manufacturers
7	Conduct Qualification Test	TSA
8	Assess Final Reports	TSA



# ACSQT Redesign Overview

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## Rolling Submission Process

- Manufacturers may submit white papers for all technology categories throughout the calendar year
- Manufacturers may resubmit devices 90 days from the date of non-approval notification from TSA (formerly, manufacturers would have to wait till a new submission window opened)

TSA issued this Request for Information (RFI) to announce a redesigned Air Cargo Screening Qualification Test (ACSQT) on FedBizOpps.Gov

[https://www.fbo.gov/index?s=opportunity&mode=form&id=d94e62f9e1d0d864d3f15d4456026516&tab=core&\\_cview=0](https://www.fbo.gov/index?s=opportunity&mode=form&id=d94e62f9e1d0d864d3f15d4456026516&tab=core&_cview=0)

# TSA Air Cargo Screening Technology List (ACSTL)

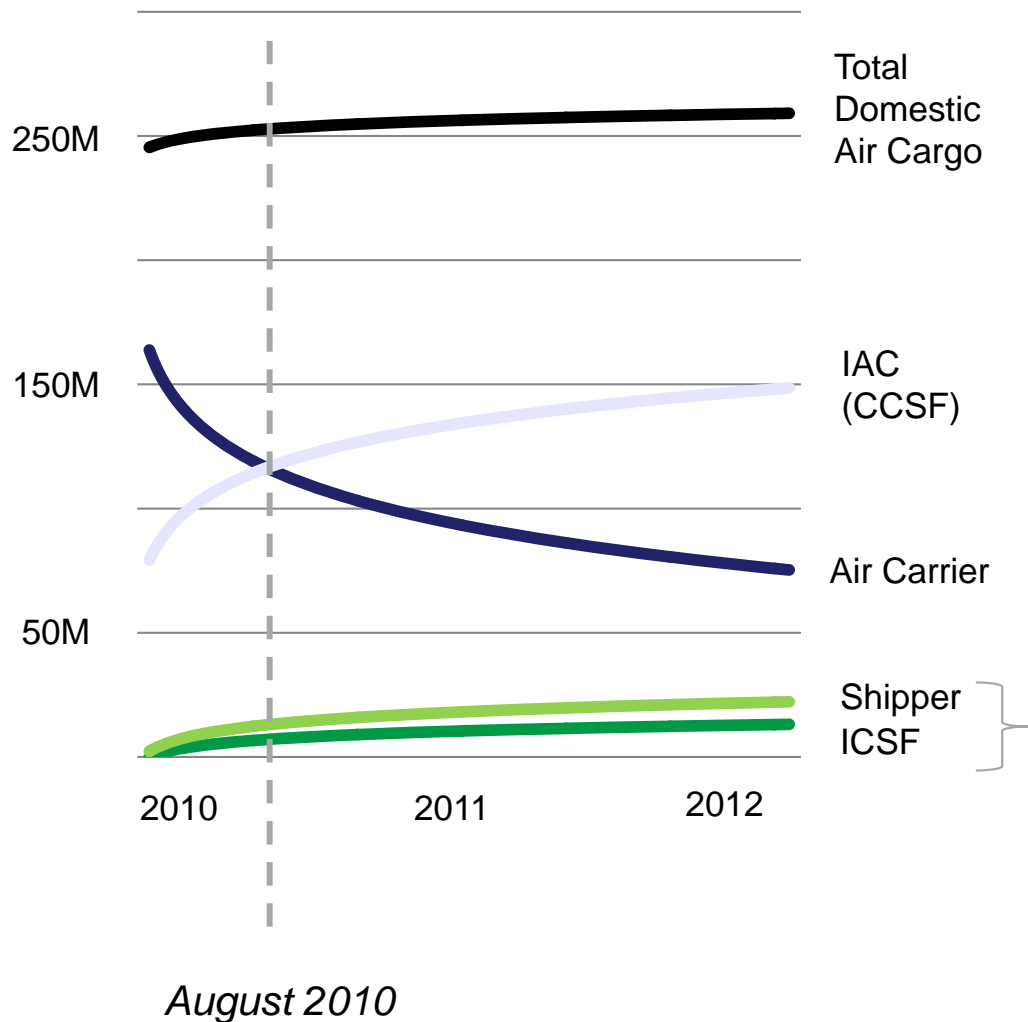
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Currently, there are 113 pieces of technology on the list, version 9.1 dated 06/25/2014.

- 83 qualified x-ray
  - 3 qualified ETD
  - 15 qualified EDS
  - 3 approved x-ray
  - 7 approved EMD
  - 2 CO2 monitors
- 
- Non-SSI version posted on TSA.Gov site  
<http://www.tsa.gov/certified-cargo-screening-program>

# Tonnage Screened



### Proportion Screened

	March 2010	July 2012
Air Carrier	66%	34%
IAC (CCSF)	35%	52%
Shipper + ICSF (CCSF)	1%	14%

**Key Point:**  
Today, CCSFs perform 2/3 of domestic screening



# Estimated Tech Count



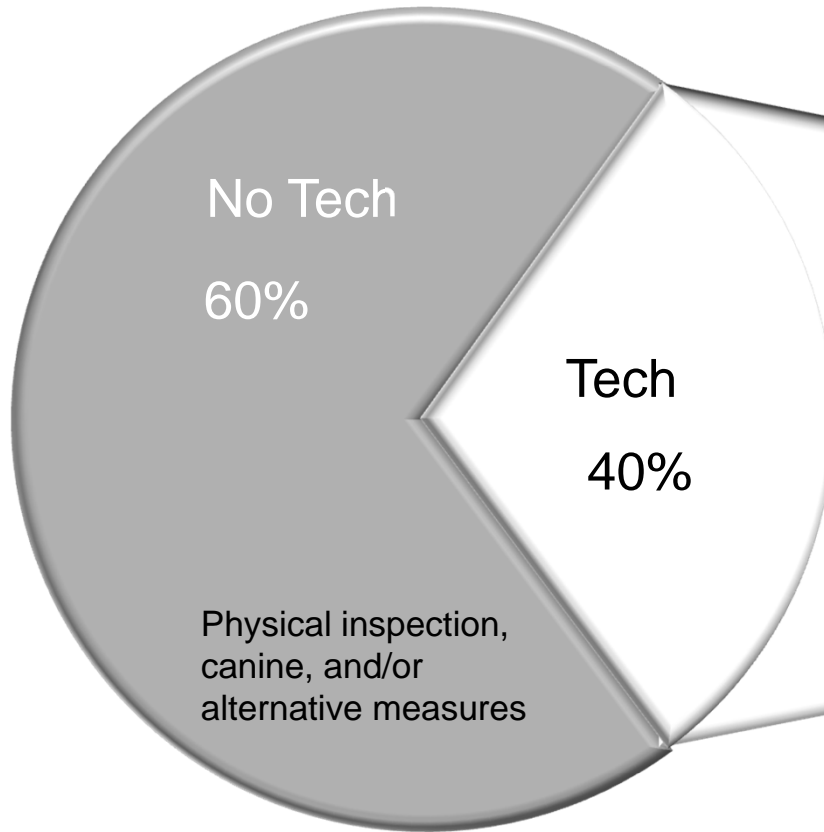
## Equipment Quantities, as of July 2012

Domestic Air Cargo Population			
	CCSF	Air Carrier (a)	Total
ETD	493	482	<b>975</b>
X-Ray	155	110	<b>265</b>
EMD	10	1	<b>11</b>
EDS	2	2	<b>4</b>
Total	<b>660</b>	<b>595</b>	<b>1,255</b>

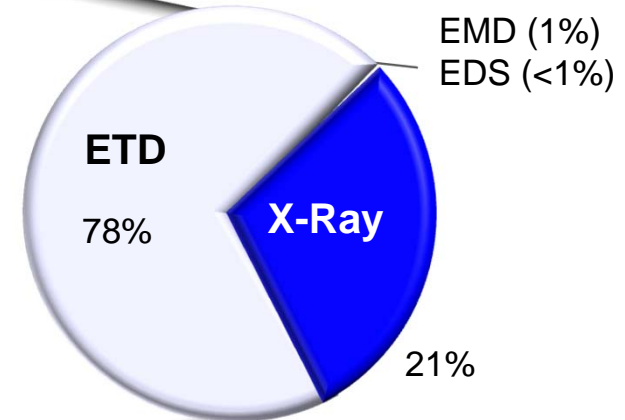
# Technology Usage



By Site:



By Unit:



Total No. of active domestic screening sites: ~2,300  
Total No. of Sites using Technology: ~700

# Commodities pose significant screening challenges

Supply Chain Challenges	Screening Challenges
<ul style="list-style-type: none"> <li>• Requires cold chain handling</li> <li>• FDA sealed</li> </ul>	<ul style="list-style-type: none"> <li>• X-Ray <u>may</u> affect shipments</li> <li>• Compromised package integrity</li> </ul>
<ul style="list-style-type: none"> <li>• Requires cold chain handling</li> <li>• Perishable/limited shelf life</li> <li>• USDA/APHIS requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Too dense for X-Ray</li> <li>• Risk of physical search bruising</li> <li>• Difficult for ETD (wet)</li> </ul>
<ul style="list-style-type: none"> <li>• Sealed drums</li> <li>• Possibly toxic if opened</li> <li>• Liquids/powders</li> </ul>	<ul style="list-style-type: none"> <li>• Too dense for X-Ray</li> <li>• No alarm resolution for ETD</li> <li>• Inability to physically screen</li> </ul>
<ul style="list-style-type: none"> <li>• Compromised package integrity</li> <li>• High value security</li> </ul>	<ul style="list-style-type: none"> <li>• Static discharge</li> <li>• Risk of physical search damage</li> </ul>
<ul style="list-style-type: none"> <li>• Sanctity of the remains</li> </ul>	<ul style="list-style-type: none"> <li>• Inability to physically screen</li> </ul>
<ul style="list-style-type: none"> <li>• Varying sizes</li> <li>• Sophisticated packaging</li> <li>• High value</li> </ul>	<ul style="list-style-type: none"> <li>• X-Ray sensitivity</li> <li>• Inability to physically screen</li> </ul>





# International Inbound

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- TSA has adopted a two-fold approach to implementing 100% screening for international inbound cargo:
  - Increase screening requirements in the airline Standard Security Programs (SSPs)
  - Recognize commensurate foreign air cargo security programs thru the National Cargo Security Program (NCSP) to enable air carriers flying directly into the U.S. to follow only the national cargo security program
- TSA is developing a risk-based strategy based on identifying high-risk cargo for enhanced screening measures
  - Air Cargo Advance Screening (ACAS) pilot is a joint effort between TSA and CBP to test and implement baseline threshold targeting in the pre-departure air cargo environment
  - Applying knowledge gained from on-going risk assessment and mitigation efforts in domestic air cargo



# Additional Information

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- Funding vehicles
  - BAA - Broad Agency Announcement
  - RFI - Request for Information
  - ITRP - Innovative Technology Review Process
    - <https://www.fbo.gov/>
  - SBIR - The Small Business Innovation Research
    - <http://www.sbir.gov/about/about-sbir>
  - CRADA - Cooperative Research and Development Agreement
    - <http://www.dhs.gov/technology-transfer-mechanisms>
  
- ATR
- Screening Times
- Hardening
- Simulants



**Questions?**

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