

# **Role of Risk and Economic Impact in Homeland Security Decisionmaking**

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## Boeing as a Stakeholder in Global Security

- 2004 sales were \$52.5 billion from customers in 145 countries
  - International sales were more than 30 percent
- Largest US Exporter
- Eighth largest US importer
- More than 151,000 employees in 48 US states and 67 countries
- Nearly 5,200 suppliers in nearly 100 countries
- Research, design and technology development centers and programs in US, Europe, and Asia
- Manufacturing, services, and technology partnerships with companies around the world

***Stakes are large – a balanced approach is needed to deliver rational security solutions***

# Homeland Security Challenge

- There are an essentially unlimited set of targets and vulnerabilities in an open society
- Achieving complete invulnerability against all conceivable threats is unrealistic goal

## *Required Approach:*

- Identify which threats/vulnerabilities are most critical
- Maximize the value of deterring threats (vs reacting)
- Risk-based prioritization of threats & countermeasures
- Identify and capture synergies – countermeasures that span more than a single threat
- Understand that responses must not be worse than the problems they are solving

# 9/11 Commission Recommendation

**“Hard choices must be made in allocating limited resources. The U.S. government should identify and evaluate the transportation assets that need to be protected, set risk-based priorities for defending them, select the most practical and cost-effective ways of doing so, and then develop a plan, budget, and funding to implement the effort. The plan should assign roles and missions to the relevant authorities (federal, state, regional, and local) and to private stakeholders. In measuring effectiveness, perfection is unattainable. But terrorists should perceive that potential targets are defended. They may be deterred by a significant chance of failure.”**

# Threat Deterrence View

**Threat is Incentivized**

High

Threat Payoff

Symbolic  
+  
Economic  
+  
Coercive  
Value  
Factors

Reduce Impact:  
*Detect*  
*Prevent*  
*Localize*  
*Mitigate*  
*Contain*  
*Reassure*

Create Uncertainty: *Intelligence, Sensors, Interdiction, Forensics, Attribution, Retribution*

Low

Low

High

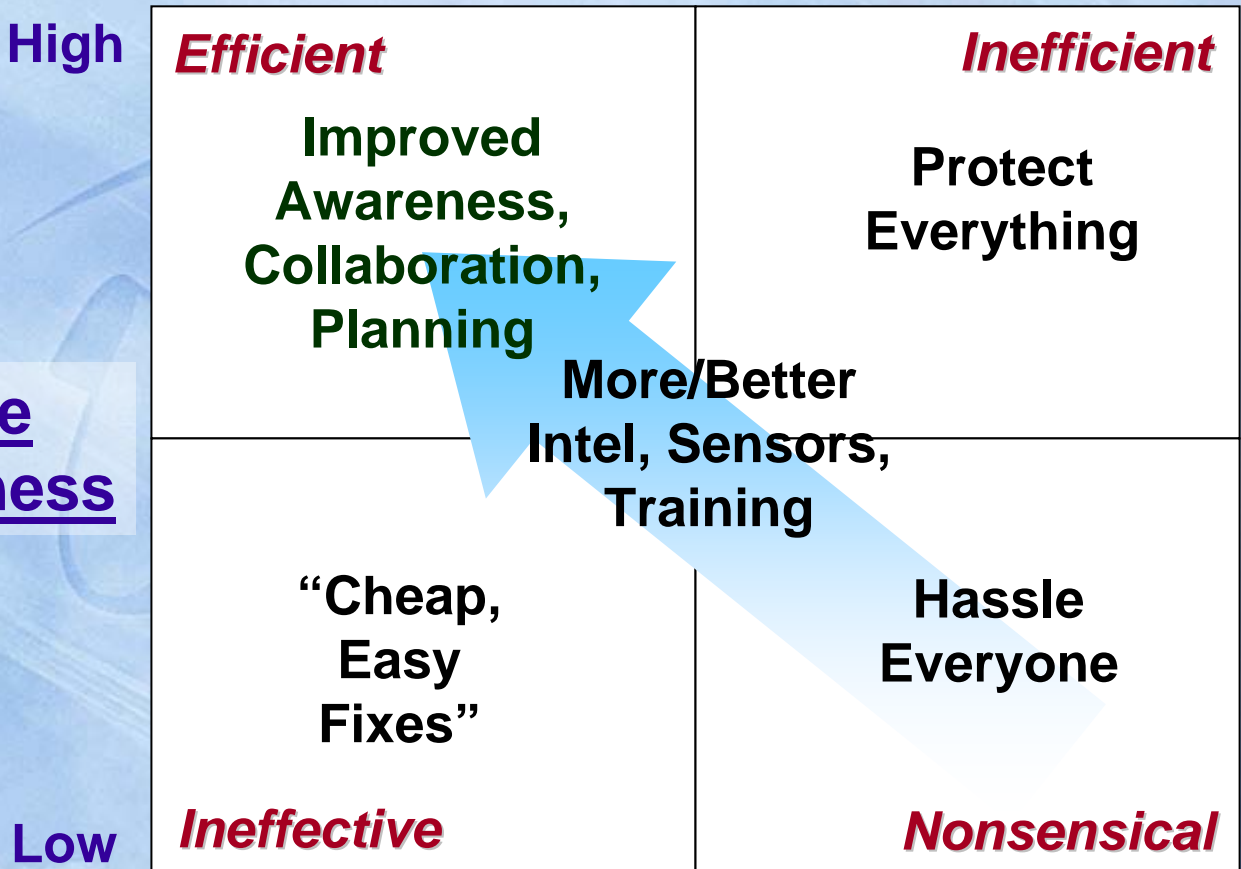
Threat "Downside"

Cost + Difficulty + Backlash

**Threat Is Self Deterred**

# Terrorism Response Options

Relative Effectiveness



Low

Relative Cost Impact

High

# Movement Toward Risk-based Prioritization

Industry-government-academia partnerships emerging:

- ***US Commercial Aviation Partnership (USCAP)*** – industry-government consortium to identify economic and operational impact of proposed aviation security measures
- ***Risk Management Analysis Partnership*** – industry-government-academia partnership to develop risk-based prioritization of aviation security threats & countermeasures

# Risk-based Approach to HLS Investment

Identify threats, CLP ranking, vulnerability, countermeasures, and effectiveness

Determine threat categories, and CLP ranking

Identify scenarios, vulnerabilities and PA of each

Identify countermeasures, effectiveness, feasibility, economic impact

*Agree on highly effective countermeasures for each threat category*

Determine high leverage countermeasures

Evaluate effectiveness across threat categories

Determine "score" across threats

Identify resource requirements

*Agree on high "score" options across threat categories*

Select and Implement Enhancements

Rank & select options

Approve projects

Develop detailed plans

Approve and implement  
*(Adjustments as required)*

*Industry and Government execute the plans*

# Aviation Security Risk Management

## (RMAP Partnership)

Government and industry have begun working together to adapt processes for prioritization of aviation security countermeasures from cooperative risk management processes in use by the previously-established Commercial Aviation Safety Team (CAST)

### Industry

### Government & Academia



\* also members of CAST

\*\* in process

# Needed Focus

- **Emphasize Deterrence vs Response**
  - Deter threat rather than wait for it
  - Understand what influences and deters the enemy
- **Proactive vs Reactive**
  - Detect early – leverage information management
  - Quick, decisive action
  - Contain the threat as far away as possible
- **Balanced, Sensible Risk & Economic Impact-based Approach**
  - You can't do everything or build a "perfect net"
  - Engage industry-government-academia stakeholders & experts
  - Focus on low-hanging fruit balancing effectiveness, affordability, and economic impact considerations
  - Responses shouldn't be worse than the problem

***Requires collaboration and integration  
of organizations, information and resources***