Urban Commerce & Security Study

Balancing Commerce and Security – An Urban Study with Maritime Application

Homeland Security University Programs Project
Problem: There is often a perceived conflict between freedom of economic activity and the need for increased security. Nowhere is this more apparent than in urban areas such as Lower Manhattan and Los Angeles.

- Conflicting goals:
  - Enhance economic activity
  - Prevent terrorist attacks

- But, are they always conflicting?

The focus of this problem is core to the mission of DHS and directly supports the needs of the local first responder community.
The Urban Commerce and Security Study (U-CASS) project will develop and implement *operations research decision support tools* to enable local stakeholders to evaluate the *tradeoffs* and *synergies* of *security* measures and *economic activity* in urban areas.

S&T will:

- Leverage University Center of Excellence (COE)-based research and funding mechanisms to uniquely address a strategic security challenge;
- Address high-priority DHS mission requirements; and
- Maintain focus on end-user needs.
S&T will manage this effort by integrating and coordinating a multi-disciplinary research team from three COE’s – CREATE, NTSCOE (MTI) and CCICADA.

- The effort will apply the disciplines of economic modeling, threat analysis, and enhanced data analytics to shape the appropriate solution set.
- Directed outcomes include focused and validated decision support tools that will inform decision makers on the question of security and commerce balance.
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Participants and Stakeholders

1. DHS S&T
   - S&T’s Office of University Programs: Program management, financial management, liaison with local stakeholders, DHS, and other Federal agencies

2. University COEs
   - Rutgers University – Command, Control, and Interoperability Center for Advanced Data Analytics (CCICADA): Subject matter expertise in data analysis, operations research, measurement, law enforcement, risk assessment, data collection, and interviewing/expert elicitation
   - University of Southern California – Center for the Risk and Economic Analysis of Terrorist Events (CREATE): Subject matter expertise in economic modeling, risk assessment, interviewing/expert elicitation, and methods of preference and probability elicitation
   - San Jose State University – Mineta Transportation Institute (MTI): Subject matter expertise in terrorism, mass transportation security, threat analysis, and threat scenario generation; Provide network of high-level contacts with local stakeholder leadership

3. Local Organizations / Policymakers
   - Port Authorities
   - Police Departments
   - Offices of Mayor / Governor
   - Local Economic development bodies
   - Local private sector organizations (e.g., Chambers of Commerce)
Develop and implement operations research decision support tools to enable local stakeholders to evaluate the tradeoffs and synergies of security measures and economic activity surrounding America’s urban areas.

**GOAL**

**Research**
- Stakeholder identification and outreach
- Data gathering: Risk, threat, costs, and countermeasures
- Expert elicitation
- Red teaming
- Threat scenario generation

**Analysis**
- Creation of Operations Research (OR) models
- Model integration
- Incorporation/adaptation of various risk approaches and sensitivity ranges

**Integration**
- Quality Control
- Training and Implementation Plan
- Transition tools to end users
- Generalization of model and tools
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Outcomes & Benefits

- Risk-based economic assessment of tradeoffs between security and commerce
- Generalized model for future analyses
- Tailored benefits for multiple project stakeholders:
  - DHS: Protect America’s iconic landmarks and strategic centers of commerce
  - S&T: Demonstrate the power of University-based COEs
  - Local stakeholders: Ensure commercial potential of urban areas while taking aggressive security posture