

# 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



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)**





## GOAL

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

### 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



- 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

