Homeland Security
Science and Technology

Center for Risk and Economic Analysis of Terrorism Events (CREATE)

A DHS Emeritus Center of Excellence*

CREATE's mission is to improve the Nation's security through the development of advanced models and tools for the evaluation of the risks, costs, and consequences of terrorism and to guide economically viable investments in homeland security.

LAUNCH	2004
PARTNERS	More than 18 university, government, and industry partners
EXPERTISE	Risk analysis, economic consequence analysis, decision analysis, threat analysis, vulnerability analysis, multi-objective evaluation, game theory, risk perception and communication
DHS ALIGNMENT	U.S. Customs and Board Protection, Transportation Security Administration, Federal Emergency Management Agency, U.S. Coast Guard, Cybersecurity and Infrastructure Security Agency

Feedback from Our Partners

*"**CREATE is an exceptional academic partner with the U.S. Coast Guard Research and Development Center.** CREATE, and their team of world class researchers, explored the use of Bayesian Game Theory within components of the Ports, Waterways and Coastal Security (PWCS) mission. The jointly developed game theory application, PROTECT [Port Resilience Operational Tactical Enforcement to Combat Terrorism], significantly influenced current and future maritime security policy."*

Dr. Joe DiRenzo III, Director of Research Partnerships
U.S. Coast Guard Research and Development Center, 2018

*"TSA greatly values our partnership with the Center for Risk and Economic Analysis of Terrorism Events (CREATE) and its team of experts. **This partnership provides TSA with access to world-class academic resources to better manage risk, improve the security of the Transportation Sector, and to proactively address operational challenges.**"*

Jerry Booker, Director, Risk Management Division
Transportation Security Administration, 2018

Research and Education Capabilities

- Risk and decision analysis tools development
- Economic consequence analyses
- Policy and regulatory analysis
- Education and training for the current and future homeland security workforce

CREATE
National Center for Risk and Economic Analysis of Terrorism Events
A U.S. Department of Homeland Security Center of Excellence

A nationwide consortium led by:

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**DHS Emeritus Centers of Excellence no longer receive base grant funding. DHS and its operational components can access Emeritus Centers through DHS Basic Ordering Agreements (BOAs).*

University Partners

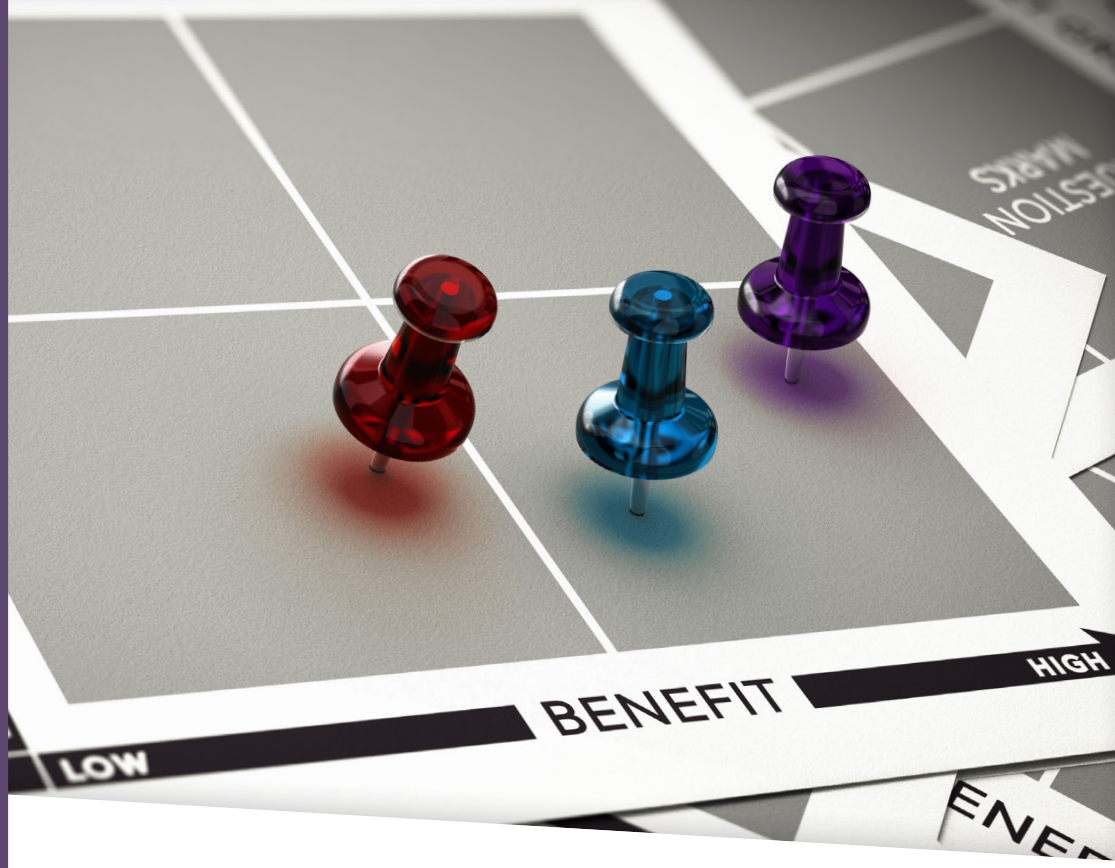
Georgetown University, D.C.
University of Buffalo, NY
University of Central Florida, FL
University of Maryland, Baltimore County, MD
University of Newcastle, Australia
University of Oregon, OR
University of Wisconsin-Madison, WI

Enterprise Partners

California Department of Corrections
California Energy Commission
California Emergency Management Agency
Decision Research
Econometrica, Inc.
Joint Regional Intelligence Center
Los Angeles International Airport
Ohio Highway Patrol
Ports of Los Angeles and Long Beach, California
RAND Corporation
U.S. Department of Justice

For a complete list of partners and more information, please visit **create.usc.edu**

For more information on DHS Centers of Excellence, please visit **www.dhs.gov/science-and-technology/centers-excellence**



Impacts

Thwarting adversaries with security randomization software

The Los Angeles Airport (LAX) police, Federal Air Marshal Service and U.S. Coast Guard all use versions of the CREATE-developed Assistant for Randomized Monitoring Over Routes (ARMOR) tool, which randomizes security schedules and plans, making it difficult for adversaries to avoid security forces when plotting illegal activities. Due to optimizing staffing and reducing overtime costs, ARMOR efficiency gains have been calculated to be about $3 million per year.

Providing rapid estimates of the economic consequences of homeland security threats

The CREATE-developed Economic Consequences Analysis Tool (E-CAT) enables analysts to evaluate the potential economic impacts of terrorist attacks, natural disasters, and technological accidents on U.S. gross domestic product and employment. The tool enables policymakers and analysts using the Homeland Security National Risk Characterization register to make objective resource allocation comparisons.

Developing innovative decision tools to improve security

CREATE provided the U.S Customs and Border Protection (CBP) with an independent peer-reviewed economic analysis. It showed that increasing staffing by one CBP officer at each of 33 land, sea, and air ports of entry for primary screening adds $65.8 million in U.S. Gross Domestic Product, $21.2 million in time value savings, and 1,094 annual jobs to the U.S. economy.