

# **BTI** Institute

Borders • Trade • Immigration

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A Department of Homeland Security Center of Excellence

UNIVERSITYof **HOUSTON**

# Mission

The Borders, Trade, and Immigration Institute, led by the University of Houston, conducts and transitions **research**, develops innovative **solutions**, and provides **education** that enhances the Nation's ability to secure the **borders**, facilitate legitimate **trade** and travel, and ensure the integrity of the **immigration** system.

# Method

Through a multi-disciplinary team of national and international experts, we deliver:

- Transformational technology-driven solutions
- Data-informed policies
- Workforce development opportunities for today's Homeland Security Enterprise
- Trans-disciplinary education for the next generation of homeland security experts

# Team

## Academic

American University, Washington, D.C.  
Middlebury Institute of International Studies, CA  
Rutgers University, NJ  
Texas A&M Engineering Experiment Station, TX  
Texas A&M International University, TX  
Texas A&M Transportation Institute, TX  
University of Arizona, AZ  
University of Houston, TX  
University of Minnesota, MN  
University of North Carolina, Charlotte, NC  
The University of Texas at El Paso, TX  
University of Virginia, VA  
West Virginia University, WV

## Corporate

MITRE Corporation, VA\*  
SAS Federal, LLC., VA\*  
Voir Dire International LLC, TX

## Non-profit

Migration Policy Institute, Washington, D.C.

# Research

- Transnational Flows of People
  - Security
    - Data and Models
    - Biometrics / Identity
    - Unmanned Autonomous Systems (UAS)
  - Facilitation
- Transnational Flows of Goods: Trade
  - Security
  - Facilitation
- US Immigration System
  - Integration approaches
  - Data and Models
- Border Management Operations
  - Personnel Safety/Wellbeing
  - Training/Professional Development
  - Education/Outreach



# Expertise

- Biometrics/Identity Science
- Port Security
- Supply Chain
- Migration
- Export Control
- Data/Video Analytics
- Systems Modeling and Simulation



# Impact

## **Developing improved identification technology**

Accurate and timely identification of people crossing the border, whether authorized or unauthorized, is necessary for establishing effective border management. BTI Institute researchers are developing software solutions based on biometric identifiers that remain effective in a variety of distances, aspects and illuminations.

## **Facilitating legitimate flows across U.S. borders through modeling methodology and simulation models**

With over 42 million pedestrian crossings and nearly 105 million vehicle crossings per year, the need to facilitate the flow of traffic without compromising security is paramount. BTI Institute researchers are working with leadership at Ports of Entry to detail “what if” scenarios and reduce congestion leading to shorter wait times and better utilization of inspection personnel.

## **Securing trade into U.S. seaports through operational and risk assessments**

Each year, more than 11 million maritime containers arrive at U.S. seaports. BTI Institute researchers are developing a risk assessment tool and an operational assessment of seaports to evaluate current security risk management and cargo screening processes.

## **Improving resourcing decision for border security through improved forecasting of migration flows**

BTI Institute researchers are collecting data directly related to the push and pull factors impacting migration. The researchers are building forecasting and estimated flow models to allow multiple DHS component agencies to make better informed decisions on how to utilize resources and personnel.

# Value

We are problem solvers that partner experts to end-users to develop and transition solutions that solve our Nation's border, trade, and immigration needs.