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Best University
This document, along with everything we do, is dedicated to the men and women of the United States Department of Homeland Security. We thank them for their tireless efforts to secure our Nation and safeguard our economic prosperity by facilitating lawful travel and trade.
The BTI Institute hosted four cadets from the United States Coast Guard Academy from 5 July to 16 August 2020. The cadets were paired with a mentor for their research project and briefing. The cadets stayed on the University of Houston campus and conducted their research either in person or remotely. In addition to their research projects, the cadets toured USCG Sector Houston-Galveston, Space Center Houston and the NASA Johnson Space Center, and other Houston attractions.

For more on the 2020 Internship or previous years, visit [https://uh.edu/bti/education/Internships/](https://uh.edu/bti/education/Internships/)

The cadets visited with staff from USCG Sector Houston-Galveston to gain operational perspectives from current officers within the Coast Guard.

**BTI Summer Homeland Security Internship**

**US Service Academy Cadets**

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Jackson T. Carpenter  
Erin Schultz  
Oliver Simon  
S. June Wenzel
Internship Projects

Jackson T. Carpenter, Cadet 1/c, USCGA

Research Mentor: Kevin Clement, Executive Director of Strategic Partnerships, University of Houston College of Technology

Project: Complex Coordinated Terrorist Attacks and Active Shooter Incidents

Focus: The project focused on after-action review (AAR) recommendations and processes that can be built based on the lessons learned from those reviews. Cadet Carpenter was involved in developing drill cards, a document that walks emergency responders through action steps based on the current emergency and conditions, such as receiving a call about a suspicious package.

“AARs allow the identification of common themes across different incidents that can provide honest, objective, and organized recommendations to improve organizational responses,” said Carpenter during his project brief.

Erin Schultz, Cadet 1/c, USCGA

Research Mentor: Gary Hale, Voir Dire International, LLC

Project: ArcGIS Analysis of Migrant Caravans from the Northern Triangle Countries

Focus: The project studied the impact of U.S. and Mexico immigration policies as related to the caravan phenomenon. Migrant caravans originating in Central American countries south of Mexico were not seen before 2017. The caravans were configured as a collective, simultaneous and organized movement of thousands of people, for which the U.S. and Mexican governments were not prepared to process. The project looked to caravans as a whole, not just as individual migrant trends, and the factors that contribute to the formation of a caravan.

“We were not looking at individual push-pull factors, individual people, or why [the individual] would be immigrating to America. It was much more about the caravan and its formation,” said Schultz during her project brief.
Oliver Simon, Cadet 1/c, USCGA

Research Mentor: Kevin Clement, Executive Director of Strategic Partnerships, University of Houston College of Technology

Project: Maritime Port Resilience

Focus: The project focused on creating a regional maritime disaster resilience action plan. While there is currently a national resilience framework, that framework lacks focus pertaining to the complexity of the maritime port. Cadet Simon conducted sixteen interviews with port directors and leadership to focus on the threats associated with maritime ports. Through those interviews, a threat list was developed that includes natural hazards (climate change, health), technological hazards (cybersecurity), and man-made threats (terrorism, funding).

“Economic competition and the majority of commerce in trade is focused on the maritime sector. With that comes trillions of dollars in trade and even the smallest incidents at a port can have a billion-dollar impact,” said Simon during his project brief.

S. June Wenzel, Cadet 1/c, USCGA

Research Mentor: Skye Cooley, Ph.D., Assistant Professor of Strategic Communications, Oklahoma State University

Project: Intersecting Policy and Narrative: The Migrant Journey

Focus: The project focused on using narrative framework to inform U.S. policymakers of commonalities in the words used by national and international media to describe migration policy. By utilizing media sources from the U.S., Mexico, and Northern Triangle nations, the researchers sought to better understand the migrant narrative and its impact on policy development. Narrative themes were identified and compared across specific time periods based on U.S. immigration policy.

“The narrative policy framework can unite people’s narratives and take the subjective, qualitative data and make it into numeric, scientific information that we can actually analyze,” said Wenzel during her project brief.
Research Project Highlight

Tactical Mapping of Border Security Impacts: El Paso Sector

The Challenge

Along the U.S.-Mexico border, decades of border security deployments have impacted the communities in the El Paso Sector in a variety of ways. Currently, no comprehensive visualization exists to understand the degree and manner of these impacts in areas such as public safety, public health, and economic growth. The goal of the project was to understand fully and comprehensively the impact of border security deployments, i.e., infrastructure and personnel, and the related policy changes, on socio-economic indices in the El Paso Sector. Without such comprehensive mapping, uncertainty and risk would impinge upon future operations, resource deployment, and risk-mitigation strategies.

The Solution

The proposed impact mapping would then have a tactical value. The 2020 Strategic Plan for Customs and Border Protection (CBP) states that in order to optimize the impact of its limited resources, e.g., personnel, technology, and infrastructure, on mission outcomes, CBP, and by extension, USBP, will utilize a risk-management strategy. This risk-management strategy prioritizes areas that pose a high-risk threat while CBP’s strategic resource management framework informs decision makers on the optimal combination of resources to address high-risk areas.

Based on discussions with USBP, current strategic resource management framework would be strengthened by having information related to the impact that border security has had on border communities using historical mapping of resource deployments and regulations against social, demographic, and economic indicators. By leveraging additional data indicators to improve situational awareness, CBP and USBP will be able to build a comprehensive profile of the value and effectiveness of resource deployment.

Furthermore, the data used to build the tactical mapping will also inform the future border security deployments to maximize the return on investment based on estimates of economic impact using the IMPLAN model.

With these two resources at its disposal, i.e. the comprehensive tactical mapping of past border security impacts and the economic impact modeling of future security deployments, CBP and USBP will be able to respond with greater efficiency and certainty and optimize its risk mitigation efforts.

Mapping Tool

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<thead>
<tr>
<th>Historical Baseline and Customs Protection</th>
<th>Migration Indicators</th>
<th>Socio-Economic Indicators</th>
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</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Infrastructure</td>
<td>B. Personnel Deployment</td>
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</table>

Total Illegal Alien Apprehensions by Country of Origin

Mayra Maldonado
Associate Director
Hunt Institute
University of Texas at El Paso
The mapping tool provides visualization of historical social and economic data in the context of past border security deployments. Federal and state data is mapped against the border security deployments to demonstrate how U.S. border communities in the El Paso Sector have been impacted by past border security deployments and regulatory changes concerning immigration and customs enforcement. The Tactical Mapping Tool produced in this project can be replicated and expanded to provide a similar analysis of other Sectors along the US-Mexico border.
BTI Institute's efforts in studying and fighting Human Trafficking have led to the University of Houston being recognized as a “Best University Fighting Human Trafficking” according to SuccessfulStudent.org.

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