

### CHALLENGE: COUNTERING SYNTHETIC OPIOID CRIMINAL NETWORKS

Overdoses caused by potent illicit synthetic opioids have been on the rise across the United States in recent years. The Department of Homeland Security (DHS) seeks to disrupt opioid supply chains by interdicting these illicit substances at U.S. borders and other ports of entry, in addition to identifying and dismantling criminal opioid trafficking networks. These networks have evolved their operations and organization to use digital encryption tactics that challenge DHS investigators' traditional approaches to identifying and prosecuting network members. DHS's Immigration & Customs Enforcement (ICE) Homeland Security Investigations (HSI) has identified a need for advanced analytics tools that can assist analysts and agents with the correlation of complex digital data. These tools will support investigators in conducting rapid and accurate analysis of massive datasets and help prosecutors to build strong cases against network members, in order to continue dismantling trafficking networks and preventing further overdose-related deaths.

### SOLUTION: ADVANCED INVESTIGATIVE ANALYTICS

The DHS Science and Technology Directorate's (S&T) Opioid Program is working with HSI and Sandia National Laboratories (SNL) to develop novel software applications that can be integrated with HSI's Repository for Analytics in a Virtualized Environment (RAVEN) platform. This cloud-based platform enables users to perform analytics across datasets using a suite of search, analytical, and reporting tools. RAVEN serves as a central point to gather and conduct analyses across seemingly disparate datasets, replacing a largely manual process. This collaborative effort will apply advanced analytical approaches, like artificial intelligence and machine learning, to better recognize patterns in data and enhance investigators' effectiveness.

### STRONGER EVIDENCE, STRONGER CASES

This work will focus on the development of two specific analytics software capabilities: Quality of Evidence (QoE) and Value of Target (VoT). QoE analytics will help HSI agents and analysts to assess if the evidence they have collected on a suspect is sufficient for prosecution. This assessment will allow HSI to better determine where to focus their resources to build



The VoT and QE (QoE) capabilities will assist HSI agents in the prosecution of suspects.

stronger cases. VoT analytics will use data within the RAVEN database to identify highly linked entities within a criminal network. In addition to identifying these entities, VoT analytics will give a measure of the impact that removing and prosecuting that entity would have on the overall operation of the distribution network. These capabilities will help support stronger cases for prosecution and more effective dismantling of distribution networks.

### ACTIVITY MILESTONES

- Held a kickoff meeting with performers and DHS Components supporting the activity. (Fiscal Year 2022 Quarter 1)

### UPCOMING MILESTONES

- Determine types of data to be used and best practices for ingesting, cleaning, and normalizing the data to work with the analytics tools. (FY22 Q2)
- Demonstrate and assess the capability of a QoE prototype tool. (FY22 Q4)
- Demonstrate and assess the capability of a VoT prototype tool. (FY23 Q3)
- Integrate QoE algorithm prototype within the RAVEN platform. (FY24 Q1)
- Integrate VoT algorithm prototype within the RAVEN platform. (FY24 Q4)

### PARTNERS

- SNL, Albuquerque, NM
- ICE HSI, Washington, DC