Examples of practical results developed by CBTS to address real world threats at the border.

Multiple Biothreat Projects for DHS Customs and Border Protection Frontline Personnel

- CBTS created a two-course curriculum designed to provide information about animal and plant infectious diseases and disease epidemiology *needed by DHS field personnel in their daily duties* (Epidemiology 101 and 102). The CBP Office of Training and Development has used this curriculum to train *over 30,000 CBP Officers* (CBPOs) and *2,700 CBP Agriculture Specialists* (CBPAS).
- CBTS is developing *equine first aid and basic medical training for Border Patrol* – horse patrol agents. This training is vital for responding to emergencies and maintaining mission readiness and longevity of hundreds of trained working horses and their handlers patrolling inaccessible areas of the U.S. Northern and Southern borders.
- CBTS is focusing on diagnosis, treatment, and prevention of an endemic disease crossing into the U.S. from the Southern border. *Chagas* has high mortality from cardiac failure, stroke, and sudden death, and *is a direct threat for all DHS and law enforcement canines and to the workforce.*

Detecting Hidden Supply Chain Vulnerabilities

CBTS's work with Quantifind, Inc. illustrates how artificial intelligence (AI) can be used to actively identify and mitigate supply chain vulnerabilities. The project fused shipping and trade data with Quantifind's international business and financial data resources to uncover hidden vulnerabilities pharmaceutical supply chains. Since the conclusion of this project Quantifind has contracted with the DHHS - Administration for Strategic Preparedness and Response, the House Select Committee on the Strategic Competition Between the United States and the Chinese Communist Party, and the U.S. Air Force AFWerx procurement to examine foreign malign influence supply chain risks.

Detecting African Swine Fever Virus (ASFv)

CBTS, teamed with Kansas State University to help DHS and the nation in the fight against African Swine Fever virus (ASFv). This highly pathogenic disease which causes extremely high mortality would decimate the U.S. swine herd if introduced. This project developed and validated sampling methods for ASFv for surfaces on which the virus could cross our borders, such as shipping containers, vehicles, trailers, and even personnel. This work will help prevent the spread of ASFv because it provides techniques that can be used to rapidly detect the virus and more rapid implementation of additional biosecurity control measures to stop the spread. This work provides needed tools to Federal and State Animal Health Officials, veterinarians, and producers for the prevention and response to an ASFv outbreak.