# Validating Deterrence Models for Scanning Technologies

BTI Institute
Borders • Trade • Immigration
A Department of Homeland Security Center of Excellence

## DETECT AND DETER

The Department of Homeland Security Countering Weapons of Mass Destruction Office works to prevent attacks against the United States using through timely, responsive support to operational partners. U.S. Customs and Border Protection has the priority mission of keeping terrorists and their weapons out of the U.S. as well as enforcing hundreds of U.S. regulations, including immigration and drug laws. A critical element in effective enforcement is the ability to detect, and consequently deter, smuggling of illegal material and contraband.

Large-scale scanning systems are important tools in combating the smuggling of dangerous materials. Operators and port managers must make decisions every day on how and where and when to deploy their scanning technology. In order to make the most informed decisions, operators need to know the deterrence effect of the technology they are deploying.

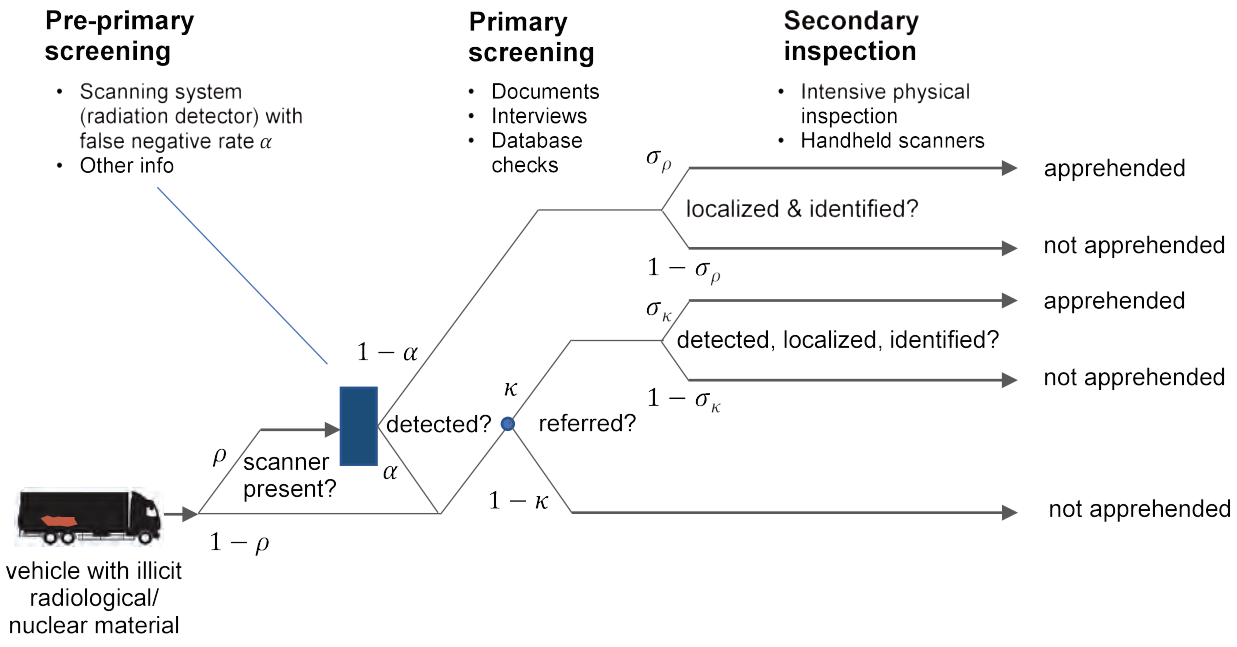
## ELEMENTS OF THE MODEL

As nuclear/radiological smuggling and drug smuggling are two very different type of activities, and those that would consider or carryout said activity are typically very different types of actors, this project looked at each separately to determine a deterrence model. The team used models that reflect the different motivations, perceptions, and behaviors of different smuggling populations.

The basic elements of the model:

- Screening and Scanning
- Deterrence Thresholds
- Definitions of "Success" and "Failure"
- Perceptions
- Potential Gains and Losses
- Risk Tolerance

Full analysis, mathematical models, and conclusions are available in the Project Final Report.




This Fact Sheet is based on Project Final Report available https://uh.edu/bti/research/deterrence-models/
Credit to author George Thompson, ANSER