

AMIR NEEMAN
CONSULTING

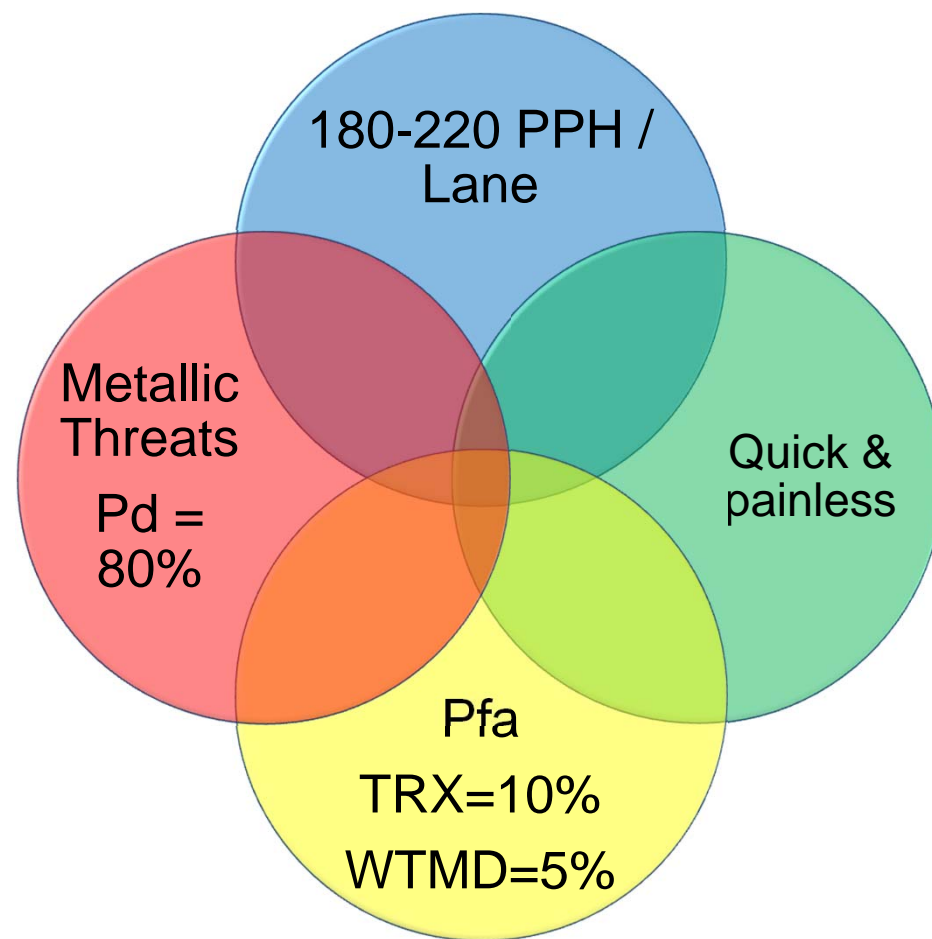
CHECKPOINT SECURITY SCREENING TRADE-OFFS

The Links between Throughput, Detection, False Alarms
and Passenger Experience

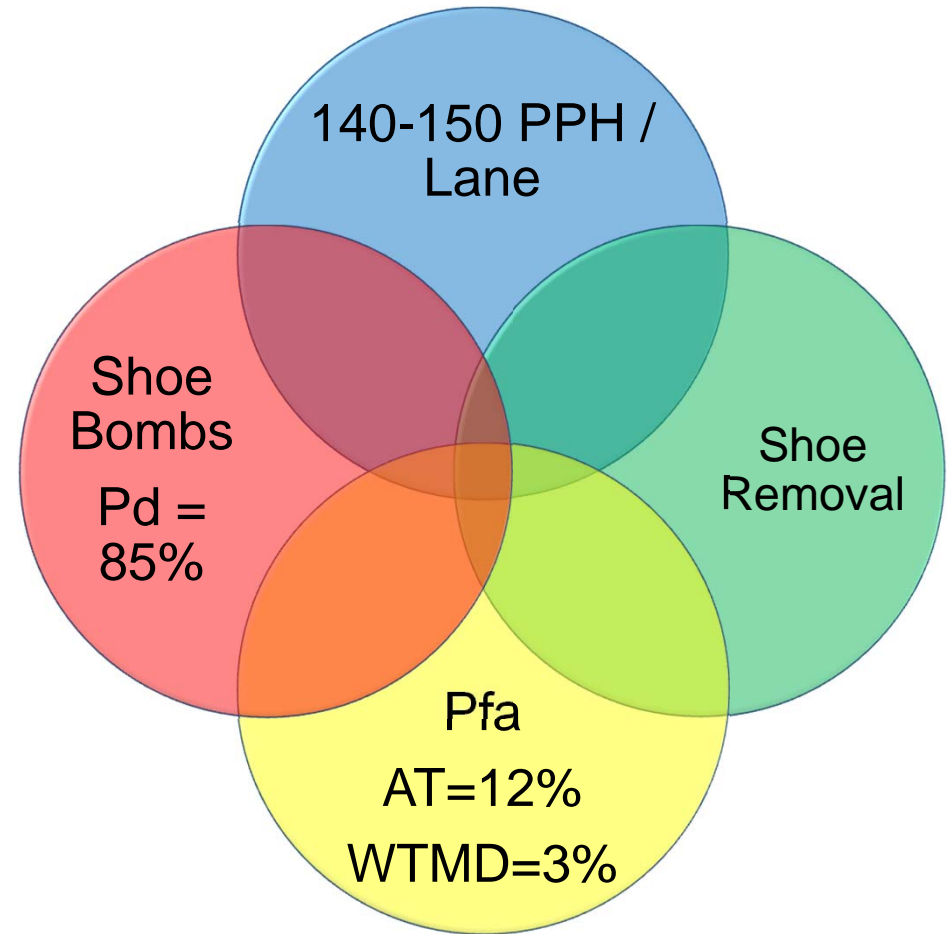
ADSA 13, Boston, MA

October 28, 2015

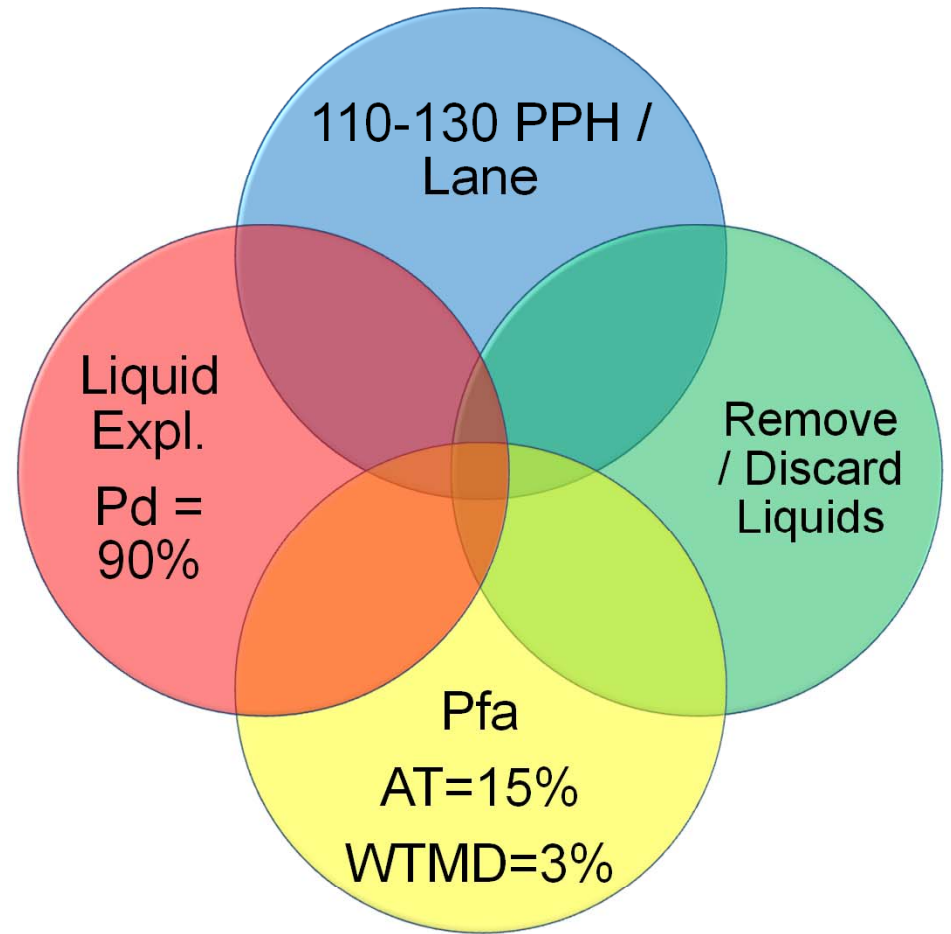




Pre 9/11 SSCPs were focused on higher throughput, low Pfa and improved passenger experience but with lower detection capabilities

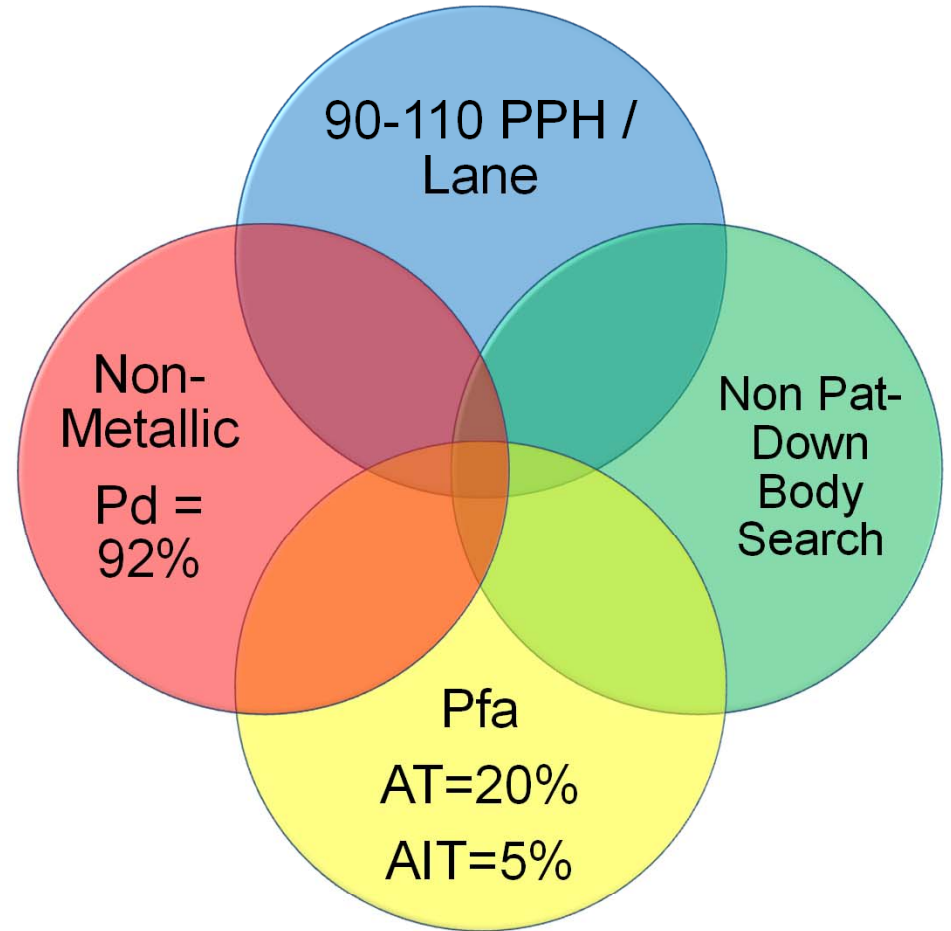


In response to the 2001 Shoe Bomber, shoe removal reduced throughput and passenger experience, increased Pfa but improved detection



The 2006 Liquid Explosives plot further reduced throughput, increased Pfa and worsened passenger experience but improved detection capability

*Note: Pfa and Pd are notional



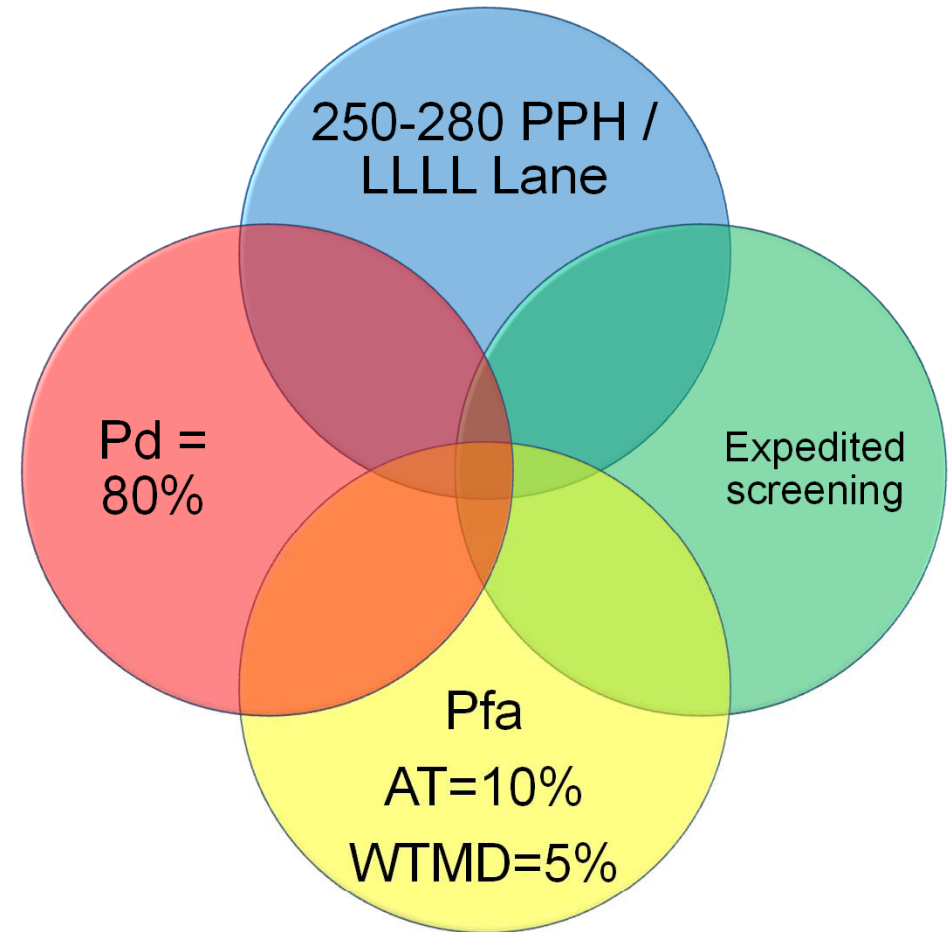
The 2009 Underwear bomber led to throughput reduction, Pfa increase and worse passenger experience (until AIT deployment) but greatly improved detection capability

*Note: Pfa and Pd are notional

TSA Pre✓



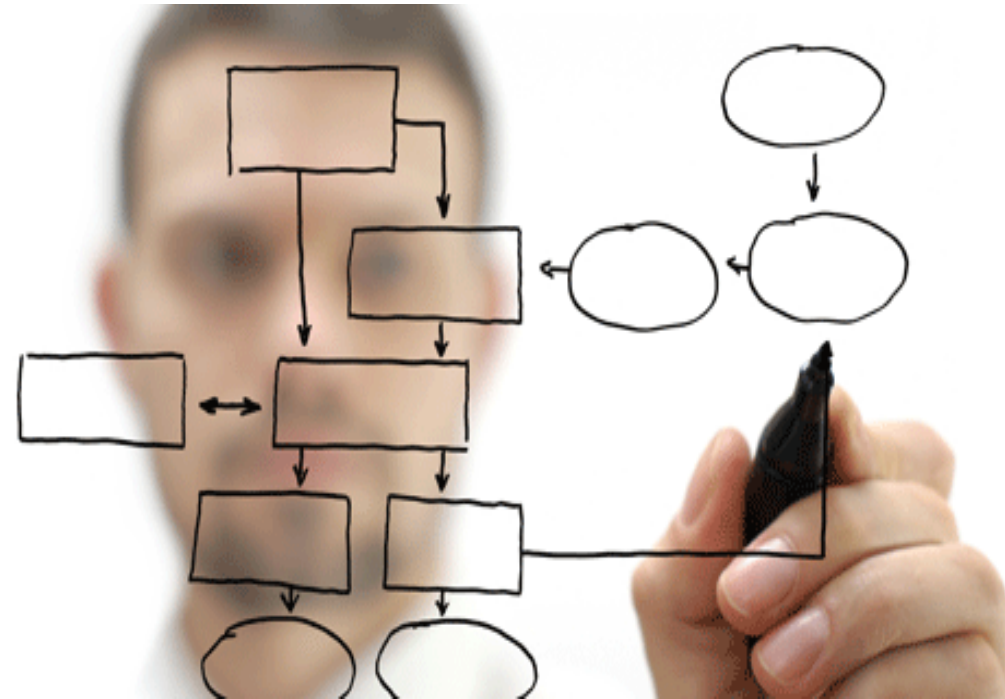
Transportation Security Administration



Pre✓ in 2011 greatly increased throughput, reduced Pfa and improved passenger experience (for Pre✓ base) but lowered detection (mitigated by pre-screening)



- SSCPs are an integrated and complex system of systems
- Multi-factorial trade-space analysis (part of a systems analysis approach) is critical
 - Stochastic and realistic simulation modeling
 - Operational Utility Evaluations
 - Human factors analysis
 - Trade-space analytical tools (e.g. TSCAP)
- Design, develop and deploy SSCP elements as part of an integrated system



SSCP Trade-Space Analysis

