



# DHS SCIENCE AND TECHNOLOGY

## Screening at Speed

**November 24, 2020**

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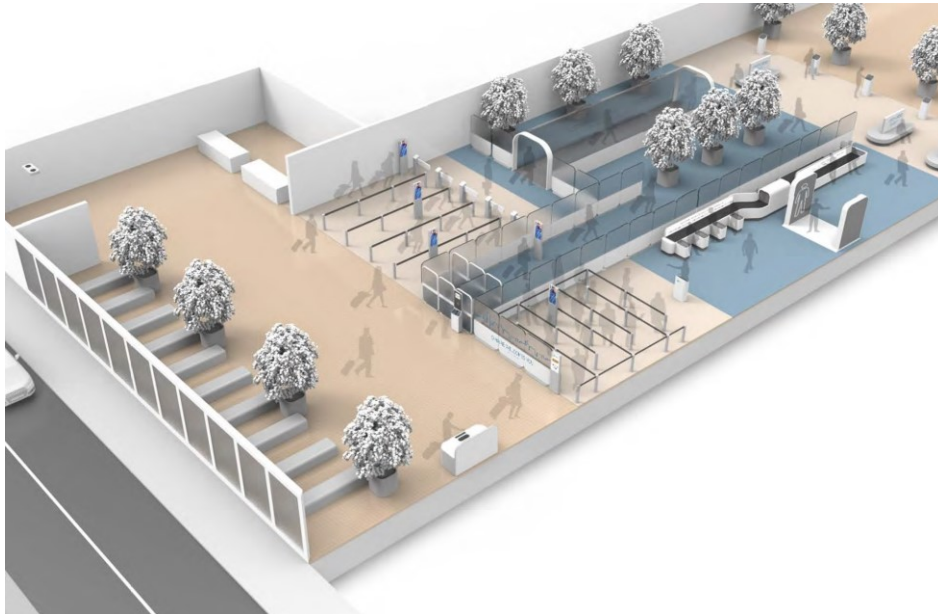
Science and Technology Directorate



**Homeland  
Security**

Science and Technology

# Program Organization



Screening at Speed pursues transformative R&D activities that support a future vision for increasing security effectiveness from curb-to-gate while dramatically reducing wait times and improving the passenger experience.

## Thrust Area

## R&D Areas

### Passenger Analysis

- Risk-Based Security
- Curb-to-Gate Sensing

### Passenger Screening

- High-definition Advanced Imaging Technology (AIT)
- Real-Time AIT
- Shoe Scanner
- Automated Threat Recognition (ATR)
- Material Discrimination

### Carry-On Screening

- Computed Tomography (CT) X-ray
- Augmenting X-ray Technologies
- ATR Algorithms
- CT Human-Systems Interfaces

### Enabling Capabilities

- Augmented Reality Human-Systems Interface
- Synthetic Data
- Low-latency Network Interconnects

### Overarching Architecture

- Open Threat Assessment Platform (OTAP)
- Airport Risk Assessment Model (ARAM)
- Futures Workshop / Systems Architecture Development
- Screening Automation / Self-Screening

# Program Updates



## System Prototypes

Shoe Scanner

High Definition-AIT

Real-Time AIT

CT X-ray

Augmenting X-ray  
Technologies

Video Analytics

Risk Assessment  
Models

Open Platform  
Software Library

Automatic Threat  
Recognition  
Algorithms

Interagency Agreements

Long-Range Broad Agency  
Announcement (BAA)

Screening at Speed Broad Agency  
Announcement (BAA)

Centers of Excellence Ordering  
Agreements

Small Business Innovation Research  
(SBIR)

SBIR Other Agency Technology Solutions

Silicon Valley Innovation Program (OTA)

# Program Areas of Interest

## Spiral Development

- Deploy 90% solutions now, upgrade to 100% in the future

## Passenger Experience

- Enable self-sufficiency, intuitive interfaces, reduced touch rates

## High Performance Edge Computing

- Make faster decisions with more advanced algorithms through “data-center” style computing

## Adaptability

- Balance security and throughput in real-time based on localized requirements, accelerate upgrades to meet evolving threats

## Speed to Decision

- Intelligently allocate decision points to human-machine teams, display information effectively as data quantities continue to rise

# Questions?



# Homeland Security

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**DIVERSE PERSPECTIVES + SHARED GOALS = POWERFUL SOLUTIONS**