Weapon Detection Systems

Board Presentation - April 25th, 2023

The ASK:

At the Board's request, we prepared a presentation and estimated cost for the implementation of Weapon Detection Systems in our middle and high schools.

During this presentation, we will share:

- **Differences between Weapon Detection & Metal Detection**
- **Briefing on the design of the Artificial Intelligence(AI) used in modern systems**
- **How these systems attempt to mitigate human error and profiling**
- **What systems look like and basic functions**
- **Reporting, data, and dashboards**
- **Staffing options**
- **Proposed implementation timeline**
- **Estimated investment**
- **Proof of concept opportunity**
- **Opportunities and challenges**

Where have we been?

Center for the Arts, Louisville, KY

Churchill Downs, Louisville, KY

Fayette County Public Schools, Lexington, KY

Charlotte Mecklenburg Public Schools, Charlotte, SC

Duval County Public Schools, Jacksonville FL

How is a Weapon Detection System different than a Metal Detector?

AI - looks for concealed threats like firearms and explosive devices

Metal Detection - identifies metal objects

AI - the individual walks through without removing pocket contents, belts, jewelry, cell phones

Metal detection - individual has to remove items listed above prior to walking through

AI - can process at over 10x (1800 person per hour) the rate of a single file metal detection system

Metal Detection - typically requires single file processing with all pocket contents, bags, coats, and purses, being removed and searched.

How does the AI work?

What will it detect and not detect?

Equity -

- Clear onboarding - transparency
- AI technology is designed to be an objective scanning process, no human intervention
- Any secondary screens should be limited to the location of the identified item (i.e. purse, backpack, hood, cargo pant pocket, etc.), reducing unnecessary or selective searches
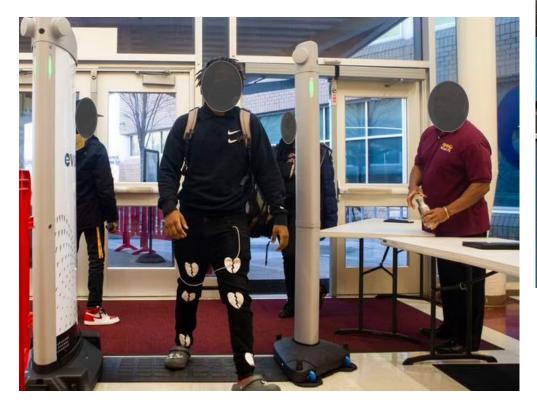- Alternative screening options for students with medical implants/devices or disabilities

AI Weapon Detectors in action

What do they look like?
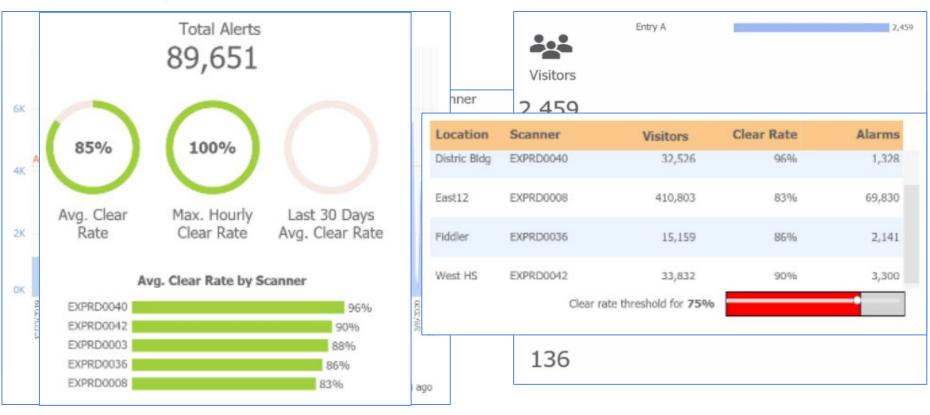
How do the tablets work?

System Capacity

Monitoring & Processing Speed

What is included with the system?

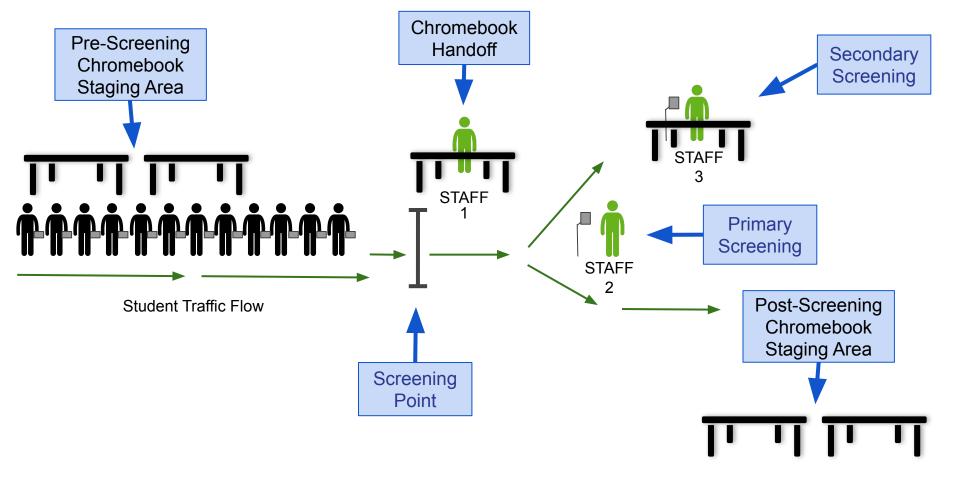# Reporting Mechanisms and Data Dashboards

Staffing options

Option A:

- Fayette County Model: RFP to contract services
- Building level administrator at each system
- School personnel will conduct secondary screening
- District protocol will be followed for suspected weapon, and the onsite armed officer would assist

Option B:

- Building level staff will be responsible for all aspects of implementation
- Principal will have flexibility to adjust morning/afternoon duties
- Building level administrator at each system
- School personnel will conduct secondary screening
- District protocol will be followed for suspected weapon, and the onsite armed officer would assist
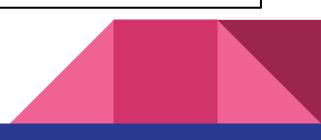
Pre-Screening Chromebook Staging Area

Chromebook Handoff

Secondary Screening

STAFF 3

STAFF 1

Primary Screening

STAFF 2

Student Traffic Flow

Screening Point

Post-Screening Chromebook Staging Area

Staffing plans (cont.)

Staffing considerations for both options:

- Armed officer available at each site
- Start Smart benefits
- Backup plans for staff absences

Challenges for either option:

- Availability of staff
- Right staff at the right spot
- Funding considerations
- Back up plan for absent staff
- Extra staff for rollout
- Schools with multiple buildings
- One lane would operate all day to screen visitors and students late to school

Implementation Timeline

Schools:

Fall 2023 - First half of High Schools

Spring 2024 - Remaining High Schools

Fall 2024 - All Middle Schools

Other considerations:

Campus walkthroughs/evaluations

Bidding & ordering equipment

District and school based communications and on-boarding for all relevant role groups

Estimated cost for a 5 year leasing option that includes the equipment, software, and one time installation:

$17,000,000

Cost considerations beyond equipment:

- Campus safety allocations
- Staffing Plan A
- Armed officer supplement

Proof of Concept

Where: Butler High School

When: May 8th -19th

Who: Stakeholder opportunities to engage with the equipment:

Board Members, Students, Parents, Community Stakeholders, Administrators, Safety Administrators

Weapon Detection systems would add another layer to our existing safety plan and programming

Weapon Detection systems can be a major deterrent

Weapon Detection systems are not a guarantee

Adult & student relationships will continue to be paramount in maintaining safety in our schools and in implementing these systems

Effective building supervision and adherence to current safety protocols would continue to support a successful and holistic approach to campus safety

Questions?