

# Evolve Weapons Detection Update and Recommendation

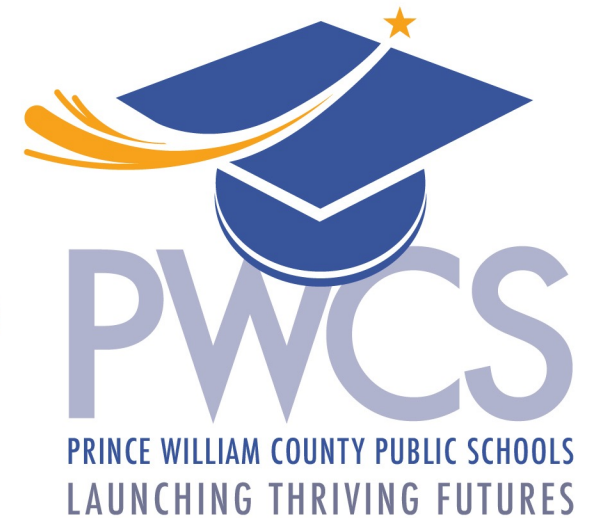
School Board Meeting  
April 19, 2023

**Vernon Bock**

Chief Operating Officer

**Ron Crowe**

Director, Risk Management and Security



# Incorporating the Strategic Plan



## Objective 2.3:

PWCS facilities will be welcoming, safe, and sustainable.



## Why Evolv for Students?

- Adds a layer of safety by deterring possession and detection of weapons before entering a school
- Minimizes negative effects on students' social-emotional well-being by maintaining a positive entry
- Less intrusive scanning, not requiring divestment of normal household and/or personal items
- Able to handle large volumes of students with minimal lines/waiting
- Does not store biometric data. Photos of students are stored locally by PWCS and not shared with Evolv

## Why Evolv for Schools?

- Prioritizes detection of weapons of mass casualty with a high success rate
- Use of Artificial Intelligence Weapons Detection System with the ability to get smarter over time
- Excellent customer service, support, and training
- Demonstrations of traditional metal detectors and artificial intelligence weapons detection systems
  - Charlotte-Mecklenburg Schools
  - Hampton City Schools
- Overwhelming Support by Chief of Police, SROs and SSOs
- State Contract does not require an RFP and it is a sole source item.

# Why Evolv?

- Evolv Technology Awarded U.S. Department of Homeland Security (DHS) SAFETY Act Designation for Evolv Express
- Entrusted to detect weapons at the following secure locations:
  - Pentagon
  - Over 30 professional sports venues – NFL, MLB, NHL, and MLB
  - INOVA hospitals
  - Amazon
  - Disney & Six Flag Theme Parks
  - Smithsonian Museums
- Implemented in over 500+ schools in the U.S.
- Manassas City, Alexandria, Colonial Beach, Portsmouth, Roanoke City, Franklin County, Nelson County, Hopewell City

# Community/Stakeholder Engagement

- **Prominent notification on PWCS Website with QR code for feedback/questions**
- **Solicited family/student feedback in the Superintendent's end-of-week letters**
  - February 3, 10, 24, and March 3, 10, 17, and 30
  - Distribution to approximately 150K
- **Presentations/Forums**
  - Joint Board Meeting with the Board of County Supervisors – January 25
  - Level Meetings with division principals – February 6 and 9
  - Student Senate and Safe Schools Advisory Council – February 13
  - Student Human Rights Council – March 16



## Community Forums

- ✓ **Gainesville High School**  
February 22
- ✓ **Freedom High School**  
February 27
- ✓ **Woodbridge High School**  
February 28
- ✓ **Virtual**  
March 2

- **600+ participants**
- **550+ responses submitted through the QR code**
- **240+ unsolicited statements of support for Evolv**



# Community Feedback





# Community Feedback

## Benefits

- Added layer of Safety and Security in our schools which contributes to a peace of mind for our students, staff, and families
- Discourages individuals from entering schools with a prohibited item
- Quick and efficient entry into school
- Less invasive than other systems
- Maintains the privacy of student information which is owned locally

*"I'm in favor of any practice to reduce the capability of any person(s) with ill intentions of entering schools."*

*"I fully support this safety measure to ensure the safety of our children and teachers."*

*"I'm strongly FOR installing security technology. This EVOLV technology helps keep guns out of our schools and keeps students and staff safe from any potential threats."*

*"I think this is a necessary tool given all the uncertainty of people and their intentions. Maximized security should be the priority and as long as it's non-invasive and secondary procedures are respectful, I think it's a good thing."*



# Community Feedback

## Concerns

- Will not prevent someone with intent on causing harm from gaining access to the interior of the building
- Possible false alerts from permitted items
- Though a deterrent, this system is not perfect, and will not eliminate the risk of weapons entering our schools
- Requires school staff to operate
- Increased upfront cost

*“I think this is an ineffective overreaction. Do most school shooters enter through the front door?”*

*“I do not believe these devices are a necessary expense.”*

*“We do NOT want surveillance. No and no! This is not a prison.”*

*“These machines are ineffective and expensive. Plus, there is no way that we can put one at every door, some schools have 30+ exterior doors.”*



## Community Questions and Responses



## Anticipated Schools with Evolv

### **“Will these be installed in elementary, middle and high schools?”**

- ✓ PWCS will implement weapons detection systems in all secondary schools, traditional and nontraditional schools
- ✓ Elementary school implementation is not planned at this time

### **“How soon will the EVOLV system be installed in our schools?”**

- ✓ Schools will begin receiving Evolv systems during the last week in August through the end of September, with seven schools each week until completion
- ✓ The order has not been determined at this time; however, each week will include schools in the eastern, central, and western areas of the division



## Usage Times

**“I’ve heard the EVOLV system would only be used first thing in the morning.”**

- ✓ High schools will have three entrances and middle schools will have two entrances, monitored during arrival
- ✓ Entrances will be used by bus riders, student drivers, walkers, and student drop-off
- ✓ After arrival, lanes will be monitored at only the main entrance throughout the instructional day

**“Will PWCS also have Evolv systems at football and basketball games? Extra-curricular activities in the evening and on weekends?”**

- ✓ PWCS anticipates using the outdoor units for football games and is considering expanding use to other activities



## Health Considerations

### **“Is there any radiation or RF exposure from Evolv?”**

- ✓ Evolv uses extremely low-frequency radio waves (ELF) to induce the magnetization of metallic objects, this same range is used in retail settings for loss prevention

### **What if someone has an implanted electronic medical device or hearing aids?**

- ✓ The FDA recognizes a low likelihood of ELF interfering with implanted electronic medical devices, including cochlear implants
- ✓ We encourage individuals with concerns to consult with their medical provider
- ✓ As Evolv is focused on detecting weapons of mass casualty, hearing aids are unlikely to cause an alert

### **Can I pass through Evolv if I am pregnant?**

- ✓ Common exposures to ELF are not considered hazardous to individuals or their unborn babies. Individuals are encouraged to consult with their medical provider



## Health Considerations

### **"How do I raise a health concern for my medically fragile student?"**

- ✓ If you have a health concern with your child passing through the Evolv system, please consult with your medical provider
- ✓ If your child receives special education services, you can consult with your child's special education case manager to schedule an IEP meeting to discuss alternative screening measures

### **"Are there any studies regarding the long-term health impacts of the Evolv system?"**

- ✓ Evolv is new technology and there are no long-term health studies with Evolv specifically. The magnetic field bands in which Evolv Express operates are so low they are not federally enforced. Evolv has been certified against Institute of Electronics and Electrical Engineers (IEEE) safety standards.



## Data Considerations

### What kind of data is generated by Evolv?

- ✓ The system generates metadata indicating potential threats, camera data to match sensor results and the general area of concern, statistical data to provide analytics for alarm rates and threat types, and self-diagnostics for system health and calibration
- ✓ Data collected from the system will be managed centrally and will only be used for planning purposes. This includes the number of students screened, number of alerts, and the duration of screening. For security reasons this information will not be shared publicly

### Where is the data stored, is it in the cloud, and how long is it stored?

- ✓ Data is stored locally in the system itself and is deleted on a first-in-first-out basis, with all images able to be removed with a tablet power cycle. Only the system administrator (PWCS) controls if the system actively stores screening results.

### Who can see the data?

- ✓ Data can be seen on the tablet by operators for resolution purposes.

### Can the data be used for processing and prosecution if a weapon is found?

- ✓ If a weapon is found and the police department becomes involved, a subpoena must be submitted for stored data to be shared.





## Detection Capabilities

### What kind of things does Evolv detect?

- ✓ Detection of potential threat items such as knives, guns, and explosives based on sensitivity settings
- ✓ Evolv can detect ghost, 3-D printed, and simulated guns

### Vapes are a significant concern in our schools now, will Evolv detect them?

- ✓ Evolv may detect vapes depending on the construction and materials in combination with the sensitivity settings
- ✓ PWCS will use Evolv with the primary focus on weapons detection, which does not specifically include vapes and vape paraphernalia



## Detection Efficacy

### **How sensitive will the settings be on the system?**

- ✓ PWCS, in consultation with Evolv, determines the sensitivity setting and may decide to increase/decrease the level to add an additional layer of safety, or prevent excessive false alerts, if necessary

### **Can a group of more than three students pass through Evolv lanes at one time, and will it detect if one or more of the students has a weapon?**

- ✓ Evolv is able to detect potential threats even with more than one person passing through at one time, showing alerts for each student detected with a potential threat

### **What if a weapon is in someone's backpack, bag, or case?**

- ✓ Evolv's AI technology places a red box around the area indicating a potential threat that may be hidden in an enclosed space

### **Has Evolv efficacy been independently reviewed?**

- ✓ Evolv has been awarded the U.S. Department of Homeland Security (DHS) SAFETY Act Designation as a Qualified Anti-Terrorism Technology (QATT)



## False Alerts

### **What is the data on false alerts?**

- ✓ The false alert percentage is approximately 9%
- ✓ Operators and Evolv staff will work with students early in the implementation process to identify items causing a false alert and make adjustments as necessary

### **My student carries an instrument back and forth to school, will it cause a false alert, and what are other items that cause a false alert?**

- ✓ Large three-ring binders, metal eyeglass cases, umbrellas, and some laptops may cause a false alert
- ✓ Over the summer, families will receive a list describing permitted items that may cause a false alert



## Implementation Considerations

**How is Evolv going to be implemented in schools? Specifically, how will traffic flow be impacted and will staff be required to use Evolv? What about students who access trailers and access school after morning arrivals? Will visitors be required to use Evolv? How will school supplies be impacted?**

- ✓ PWCS will establish an Implementation Committee to develop comprehensive communication, training and implementation plans for Evolv which will address these questions. More information on the Implementation Committee is available later in this presentation



## Monitoring

### **Who will monitor Evolv lanes: teachers, security, administrators?**

- Administrators, security, and voluntary instructional and non-instructional staff may monitor lanes as students pass through
  - ✓ Instructional and non-instructional staff trained to monitor entry points will be provided a stipend to arrive 60-minutes prior to bell times to assist with screening
- Staff will be trained on how to operate the lanes, resolve alerts, and how to handle if a weapon or other threat is found
- Training will be held over the summer, and staff will be supervised by central office and Evolv staff during the initial two-day implementation



## Secondary Screening Process

### What is secondary screening?

- A secondary screening is an additional screening that occurs when the Evolv system detects an item that is not permitted at the school
- A secondary screening will be conducted for the impacted student, staff, and visitor in the event the system detects an item not permitted at the school



## Secondary Screening Process

### How will a secondary screening be conducted?

- The student will be discretely directed to a resolution table where they will be greeted by a trained operator who also has an image of where the system indicated, with a red box, where the student possesses a potentially prohibited item
- If the red box indicates the item is in backpack, the trained operator will ask the student to open the backpack and the operator will then examine the contents
- If the red box indicates that the item is on the student, the trained operator will ask the student to divest the item on the table



## Secondary Screening Process

**What happens if an item that is not permitted in the school is identified?**

- Parents will only be contacted if their student is in possession of an item not permitted in school
- If a student refuses to participate in secondary screening, the student will be denied entry into the school and will be subject to the school code of behavior
- If a weapon has been detected and confirmed by a secondary screening:
  - Following division incident command protocols, the building security posture will be determined, and PWCPD will be contacted
  - Notification will be sent to parents/families regarding the confirmed weapon





## Additional Security Information

## Beyond Evolv other Safety and Security Measures Include

- ✓ Exploration of technology to strengthen doors and windows across the division
- ✓ Monitoring and enforcement of locking interior and exterior doors at the start of, and during the instructional day
- ✓ Dedicated security staff conducting security rounds at schools
- ✓ Perimeter Protection and Surveillance through the use of CCTV technology
- ✓ Actively increase the number of SROs assigned to schools
- ✓ Secure vestibules will be constructed this summer for the remaining schools without secure entrances



## Funding for Evolv



## Funding


- ✓ Central Office will provide funding for the entirety of the Evolv Express systems, including associated costs and the anticipated \$725,000 stipend for staff monitoring
- ✓ PWCS will continue dedicating ARPA funds during the 2023-24 school year to support the well-being of our students and staff, ensuring each school has a team of trained mental health support professionals, as part of the PWCS Heals initiative
- ✓ PWCS has committed to funding additional safety and security positions
  - SY 2022-23 – 97 Security Assistants, 3 Senior School Security Officers, 1 Security Patrol, 1 Community Safety Officer
  - SY 2023-24 – Assistant Director of Risk Management and Security Department, Security Operations Supervisor, Crisis Training Coordinator, Training Specialist, Elementary School, and Senior School Security Officer

# School Site Evaluations

- Conducted in collaboration with building administration, building and division security staff, and Evolv representatives
- Purpose was to determine number of needed systems to facilitate a streamline entry into our secondary schools
- All systems are portable and plug directly into existing electrical outlets
- Proposed purchase includes 81 systems for middle and high schools, including one outdoor unit per high school and one spare unit at no cost to PWCS
- Includes 3 entry points at high schools and 2 entry points at middle schools

# Evolv Express® Costs (Four Years)

Year One	Shipping + Installation + Accessories + Subscription + Maintenance	\$2,985,397.79
Year Two	Subscription + Annual Maintenance	\$2,583,355.02
Year Three	Subscription + Annual Maintenance	\$2,583,355.02
Year Four	Subscription + Annual Maintenance	\$2,583,355.02
TOTAL	\$10,735,462.83	



## Implementation and Next Steps

## Implementation Committee Members

- **Should the School Board approve the purchase of Evolv Express<sup>®</sup>, an Implementation Committee shall be formed with representatives for all stakeholders, including:**
  - ✓ Chief Information Officer, Chief Operating Officer, Associate Superintendents for High Schools and Middle Schools, Division Counsel
  - ✓ Directors of Communication, Facilities, Risk Management and Security, and Transportation Departments
  - ✓ Supervisor of the Secure Operations Center
  - ✓ Senior School Security Officer
  - ✓ Principals and School Security Officers from High Schools and Middle Schools





# Implementation Committee Goals

- Develop comprehensive communication, training, and implementation plans with consideration of:
  - Timing
  - Logistics
  - Employee usage
  - School supplies
  - Traffic flows
- Develop policies and regulations for the use of weapons detection systems to screen students upon entry into school buildings, including secondary screenings



## Measures of System Success

- An increase in students and staff feeling safe at schools
- A reduction of weapon incidents within a school
- A reduction of school lockdowns
- A reduction of student discipline referrals

## Recommendation for Board Approval

Based on the feedback received from the School Safety community engagement sessions and the effectiveness of the Evolv system in detecting mass casualty weapons at high-volume entry points, we are requesting the Board authorize the Superintendent to enter into a subscription agreement to implement the Evolv Express® systems in all secondary schools by the end of September 2023 as a weapons screening technology.

**Overwhelming support has been received from:**

- ✓ **Safe Schools Advisory Council**
- ✓ **School Safety Officers**
- ✓ **Prince William County Police Department**



## Next Steps

Request School Board Approval	➤ May 3
Equipment Procurement	➤ May 4
Implementation Committee	➤ May - June
Staff Training	➤ August 1 - 28
Equipment Installation (7 Schools)	➤ August 28 – September 1
Equipment Installation (7 Schools)	➤ September 4 – 8
Equipment Installation (7 Schools)	➤ September 11 – 15
Equipment Installation (7 Schools)	➤ September 18 – 22
Equipment Installation (7 Schools)	➤ September 25 – 29



PWCS

PRINCE WILLIAM COUNTY PUBLIC SCHOOLS  
LAUNCHING THRIVING FUTURES