Up in Smoke!
How to Combat the Epidemic of Vaping and Bullying in Schools

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A Video Introduction
What is Vaping?

- Inhaling and exhaling the aerosol (often called vapor) produced by an e-cigarette or similar battery-powered device

- Called e-cigs, vape pens, e-hookahs, e-pipes, tanks, mods, vapes, electronic nicotine delivery systems, or ENDS, and more

- Sometimes referred to by brand names such as JUUL (Juuling), BO, Blue, and others
Texas and National Numbers of Vaping Usage

- According to the 2018 Texas Youth Tobacco Survey, 13% of youth used e-cigarettes in the past 30 days. This means that, 18.9% of high school students and 6.0% of middle school students used e-cigarettes in the past 30 days.

- Nationally: In 2018, 20.8% of U.S. high school students reported using e-cigarettes in the past 30 days. This is a 9.1% increase compared to 2017. From 2017-2018, U.S. middle school students who used e-cigarettes in the past 30 days increased from 3.3% to 4.9%.
Venus ISD Feedback on Vaping

Daniel Domain
Director of Technology
Vapor vs Aerosol

- Produces an aerosol, **NOT** water vapor

- Aerosol can contain harmful substances:
  - Nicotine
  - Ultrafine particles that can be inhaled deep into the lungs
  - Flavoring such as diacetyl, a chemical linked to a serious lung disease
  - Volatile organic compounds
  - Cancer-causing chemicals
  - Heavy metals such as nickel, tin, and lead
Nicotine

- Nicotine damages the developing adolescent brain
- Nicotine can prime the adolescent brain for addiction to other substances
- Youth who use e-cigarettes are more likely to become traditional cigarette smokers¹
- People who start smoking or using tobacco products in adolescence, smoke more and have a harder time quitting than people who start as adults²

The New Look of Nicotine Addiction
Types of products

Rechargeable E-cigarettes
(JUUL, myblu, and Bo)

Disposable E-cigarettes
E-liquids and E-Juices

Pods
New and emerging products
How it works

- **Battery**: Powers the device.
- **Mouthpiece**: Allows user to inhale the aerosol.
- **Atomizer**: Heats the e-liquid into an aerosol.
- **Cartridge**: Stores the e-liquid.
Can e-cigarettes be used to vape other substances?

- Yes!

- Open systems require the user to add the e-juice, which can be a substance other than nicotine.

- Closed systems (those that use pre-filled pods) can also be altered to vape substances other than nicotine.
Are e-cigarettes safe?

- E-cigarettes are not safe for youth, young adults, pregnant women, or adults who do not currently use tobacco products (CDC)
  - Contains nicotine and other chemicals

- Secondhand vape is also unsafe

- More research is needed to understand the long-term health effects
How do we know if our students are vaping?

- **Unexplained Sweet Scent** – might be a flavored e-juice for a vaping device

- **Unfamiliar Products** – If you come across unusual pens or USB drives or an unfamiliar battery or battery charging device, they could be associated with vaping
Tobacco and Vaping Industries are Targeting Youth
Industry tactics

The tobacco and vaping industries target young people by making their products:

- Sweet
- Cheap
- Easy to Get
Sweet

- E-liquids and juices contain flavorings
- Thousands of sweet and fruity flavors to pick from (chocolate, cotton candy, fruit punch, mango...)
- Flavors appeal to youth
- Flavors may make vaping seem harmless
Sweet – Do flavors appeal to adults?

Younger people are more likely to use flavored products than older adults.

Cheap

- Products are often inexpensive—special offers and coupon codes make them cheap

- Low prices create impulse buys
Easy to get

- Vaping products are everywhere—corner stores, gas stations, vape shops, online
- Availability sends the message that these products are normal and fine
- The more youth see them, the more likely they are to buy and use
Resources to Combat Vaping/Bullying
Resources for Educators

- CDC presentation design to educate youth.

- CDC parent discussion PDF.

- American Academy of Pediatrics toolkit.

- Campaign for Tobacco Free Kids.
  - [https://www.tobaccofreekids.org/](https://www.tobaccofreekids.org/)

- Texas Department of State Health Services
  - [https://www.dshs.texas.gov/vaping/](https://www.dshs.texas.gov/vaping/)
Commscope/Ruckus Solution with Soter Technologies

- Sensor Powered by Ruckus ICX switch, detecting:
  - Smoke
  - Vaping
  - Noise

- User-Friendly Portal
- Mobile App for School Personnel
- Analytics

- Results from actual Deployments:
  - Full detection coverage for vaping hotspots with an average of 70% reduction in vaping incidents where installed
  - Reduction in Staff Burden
  - Increased apprehension and elimination of repeated offenders
### Turnkey Solution

**Complete Turnkey Bundles**
- FlySense Sensors
- Ruckus PoE switch
- 3 Years FlySense Cloud Service
  - Management, Reporting & Alerts
- 3 Years Remote Support (ICX)
- First Time Buyer Account Creation and Installation Consult

#### Expandable
Add sensors, ICX PoE switches and FlySense licenses as needed for customized deployments.

<table>
<thead>
<tr>
<th>Package</th>
<th>Sensors</th>
<th>Switches</th>
<th>Cloud Services</th>
<th>Support</th>
<th>Consult</th>
</tr>
</thead>
<tbody>
<tr>
<td>FlySense</td>
<td>4 x Sensors (Ruckus ICX7150-C12P)</td>
<td>1</td>
<td>3 Years</td>
<td>3 Years</td>
<td>First Time Buyer Account Creation and Installation Consult</td>
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<td></td>
<td>10 x Sensors (Ruckus ICX7150-24P)</td>
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<td>3 Years</td>
<td>3 Years</td>
<td>First Time Buyer Account Creation and Installation Consult</td>
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- **Sample deployment**
  - 4 small bathrooms w/ 1 stall each
    - 2 boys / 2 girls
  - Cabling back to same IDF / closet

- **Sample deployment**
  - 2-4 small bathrooms w/ 1 stall each
    - 2 boys / 2 girls
  - Locker Room / Library / Cafeteria
  - Cabling back to same IDF / closet
Why Ruckus?

Unified Management

RUCKUS IOT SUITE