



## **Brownwood ISD Technology Board Report**

**1 November, 2024**

### **Introduction**

The purpose of this report is to provide an update on projects the Technology Department has completed recently and an insight into others we are implementing.

### **District Computing Devices**

BISD Technology Department currently supports more than 6,000 computing devices in addition to approximately 1,000 other devices, including Promethean boards, printers, document cameras, network, keyless access, intercom, and surveillance systems. We have seen a reduction in classroom PC needs as more are adopting iPad and Chromebooks in the Pre-K/2nd grade and 3rd-8th respectively.

2<sup>nd</sup> grade core tested subjects have been transitioned to Chromebooks. Pre-K & 1st grade will eventually adopt touch screen versions of Chromebooks in place of iPads as those devices age out.

An approximate overview of available computing devices is as follows:

HS Student Chromebooks - 1200	All other Campus Chromebooks 3600
Teacher MacBook Airs - 450	Student Laptop Cart Computers - 400
Student Classroom Desktops - 150	Computer Lab Desktops - 200
Library Desktops - 24	Food Service Desktops - 16
Office/Nurse Desktops - 35	Student and Teacher iPads – 1100
Promethean ActivBoards - 75	Promethean ActivPanels – 60

As we continue to see a reduction in the number of supported Mac OS and iOS(iPad) devices used in the district, we determined there was less need for many of the device management capabilities afforded through our existing MDM (Mobile Device Management) System, which has historically come with a hefty price tag via yearly licensing.

In our search for a cost effective alternative, we found a replacement MDM , which still allows us to perform necessary tasks, delivering apps, device lock and recovery, and integration with our Apple School Manager. This transition resulted in cost savings of approximately \$27,000 in licensing fees this year alone and eliminates that budget item for the near future.

As stated in last year's report, we transitioned 2<sup>nd</sup> grade from iPad to Chromebooks, and budget permitting we will expand that transition to Pre-K & 1<sup>st</sup> grade through the 2024/2025 school years.

## **2024-2025 School Year Technology Update**

E-RATE: With the continued increase in network switch powered security-related devices, cameras, phones, door controls and Intercom/PA we realized an increased need for reliable emergency battery back ups for the switches powering this equipment.

The E-rate funding received has purchased UPS (battery backup) equipment to replace our current 15+ year old UPS', which at best provides 1-2 minutes of uptime in the event of power outage. Then new units use Lithium ion batteries, which apart from increased uptime (approx. 10-30 min), also provide for 8-10 year battery life cycle compared to 3 yrs on the current units. (Roughly 36 units x4 batteries each replaced every 3 years.)

Along with this proposal, we will be expanding Wifi coverage where needed at the campus level and for the Student Activities Center and Snodgrass facilities and provided licensing of 152 Access Points for 5 years. A savings in licensing alone: roughly \$53,000

Project Total: \$212,930.00 | 80% paid by ERATE/USAC/FCC for Category 1

Technology budget matching: \$12,104.00

Considering the Safety/Security necessity for UPS, a portion will be covered under the current bond. \$30,481.00 matching funds.

We began filing in December 2023 and have since conducted a district walkthrough with 8 vendors, evaluated and finished our bid selection process.

Based on USAC bid selection matrix, **Flexile Systems** has been awarded the project. See attached statement of work and proposal.

Installation of new, IP based Intercom/PA systems were completed in January of this year. We are also working with Raptor Alerts and Wahsega to allow integration of these 2 systems. This will allow emergency and other alerts triggered from the Raptor mobile apps to be broadcast over the new PA systems accordingly.

### **District Safety and Security**

We have identified several locations where additional cameras will be installed pending the completion of our campus maps. Final walkthrough with vendor has been completed and awaiting quotes.

### **Cyber-Security**

As of February 2024, we are participating in the state sponsored Region Security Operations Center (RSOC) program in partnership with San Angelo State University. The program provides real time, 24/7 monitoring and EDR (Endpoint Detection and Response) protection against malware and ransomware

attacks. Currently all BISD servers, staff Windows and Mac OS computers are protected via CrowdStrike. The next phase will implement NDR (Network Detection and Response) at the network hardware layer.

### **Current and Upcoming Projects**

- Continued expansion of the 1:1 classroom sets for Chromebook/iPad beyond the Core subjects and Promethean Active Panel platform throughout PreK-3rd grades.
- ERATE year 27 (24-25) Networking Switch upgrades
- Expansion of camera coverage at the Elementary campuses.
- Converting all fire monitoring connectivity to a 4G based system to eliminate expensive, recurring analog phone charges.
- Upon completion of the district external door re-core project, we will be installing more keyless access where required.
- Begin preparations for replacing many frontline staff computers over the next 18 months as Windows 10 reaches termination and is replaced by Windows 11. Much of the PC hardware will no longer be supported on Windows 11.

### **Closing**

The Brownwood ISD Technology Department is dedicated to helping the district become the best it can be while providing state-of-the-art resources and services. We will continue to improve the equipment and services offered to the staff and students of Brownwood ISD.

Please do not hesitate to reach out with any questions, concerns, comments, or suggestions.

Thank you.

Jimmy Fisher Sr.

Director of Technology

## **Flexile Systems Scope of Work for E-Rate yr 27 fiscal year 2024-25**

### **Scope of Work.**

Flexile Systems will perform physical Installations of new UPS's per RFP and BOM as set forth in ERATE project and removal of existing UPS's in existing MDF/IDF locations. Installation also includes Network Configuration of UPS's per BISD's technology teams' guidance.

# Overview of Texas Regional Security Operations Center (RSOC) Pilot

*ESC Region 15 School Districts*

*January 25, 2022*

Dr. Kurt Hoffmaster  
Brian Braden



A N G E L O . E D U



# What We Will Cover

- Who We Are?
- Overview of the Texas Regional Security Operations Center (RSOC)
- How This Opportunity Might Help Your School District
- Potential Next Steps...
- Table Top Exercise...

# Who We Are?



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# Who We Are?



## RSOC Staff

- Dr. Kurt Hoffmaster
- Russell Ezzell
- Jason Watson
- Jaquien Palacios

## ASU IT Staff

- Jason Brake
- Brian Jackson
- Brian Braden

## Vendor Partners

- Bharane Balasubramanian **Deloitte.**

- Andy Bennett 

- Eddie Block 



- Andrew Campbell
- Jonathan King
- Jeremy Wilson

# Overview of the Texas Regional Security Operations Center (RSOC)







# Cybersecurity Highlights

83% of organizations have had more than one breach

Phishing emails are responsible for about 91% of cyber attacks

Average cost of a data breach in education: \$3.86 million

It is predicted that there will be 3.5 million unfilled cybersecurity jobs by 2025

Average Time to Identify and Contain a Data Breach: 277 Days

Average Cost of a Ransomware attack: \$4.54 million

Ransomware Breaches: Take 49 days longer than average to identify and contain versus other attacks

# How this Began?



Texas Legislature

&



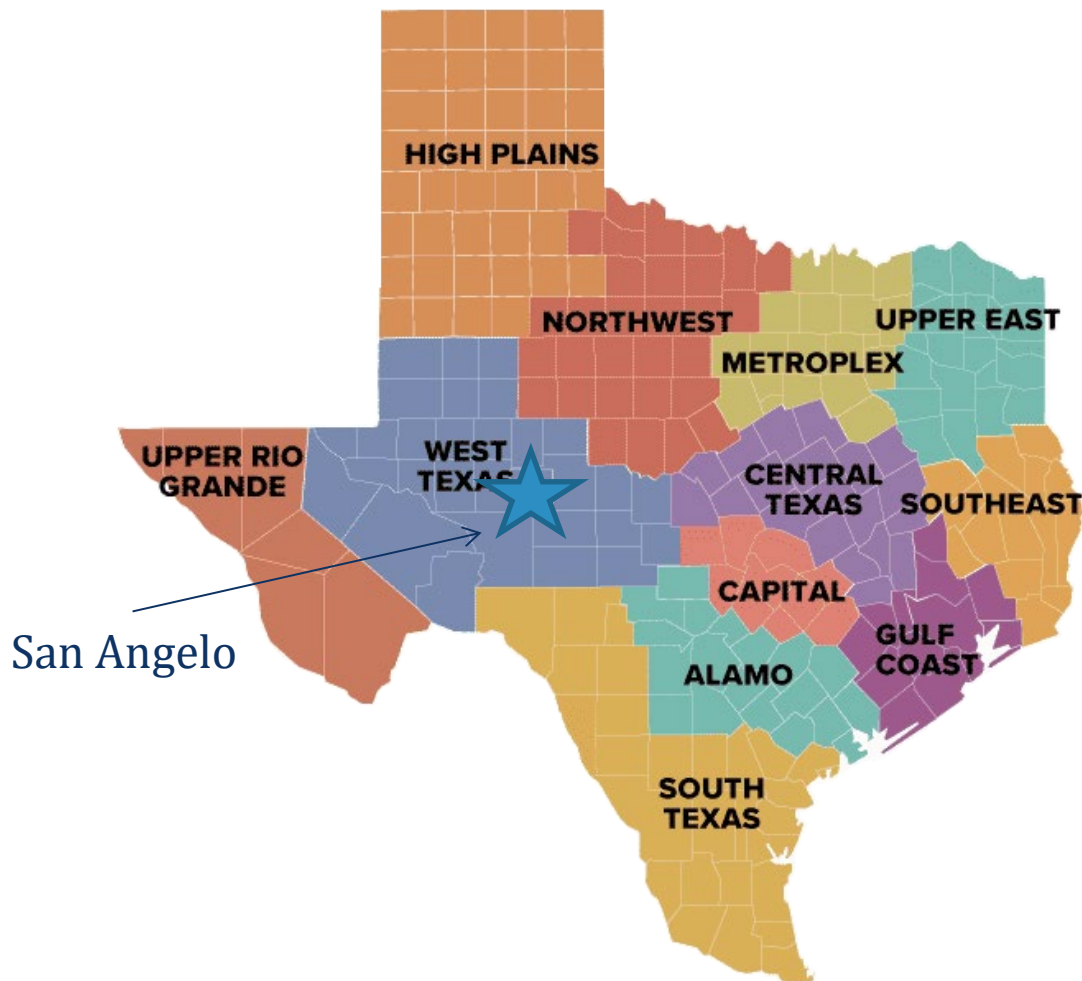
Texas Department of  
Information Resources

Worked Together To  
Create

Senate Bill 475

- **Establish a Pilot Regional Security Operations Center (RSOC) for Texas**
- *Assuming success, this would be a model for future RSOC's around the State of Texas.*
- **The Potential Service Outlined in SB 475:**
  - Real-Time Network Security Monitoring
  - Alerts and Guidance
  - Immediate Response
  - Development, Coordination, and Execution of Statewide Cybersecurity Operations
  - Cybersecurity Educational Services

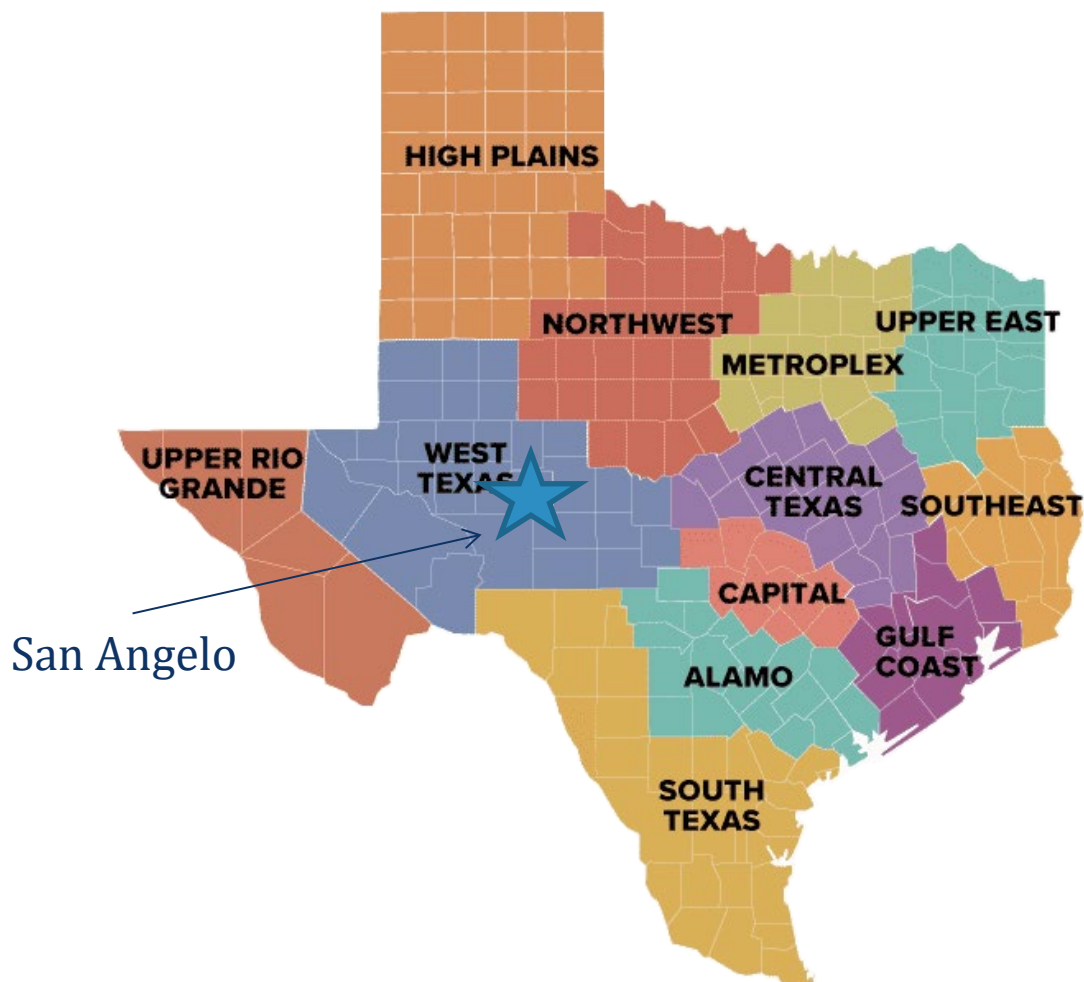
## Texas Economic Regions



## Timeline Summary

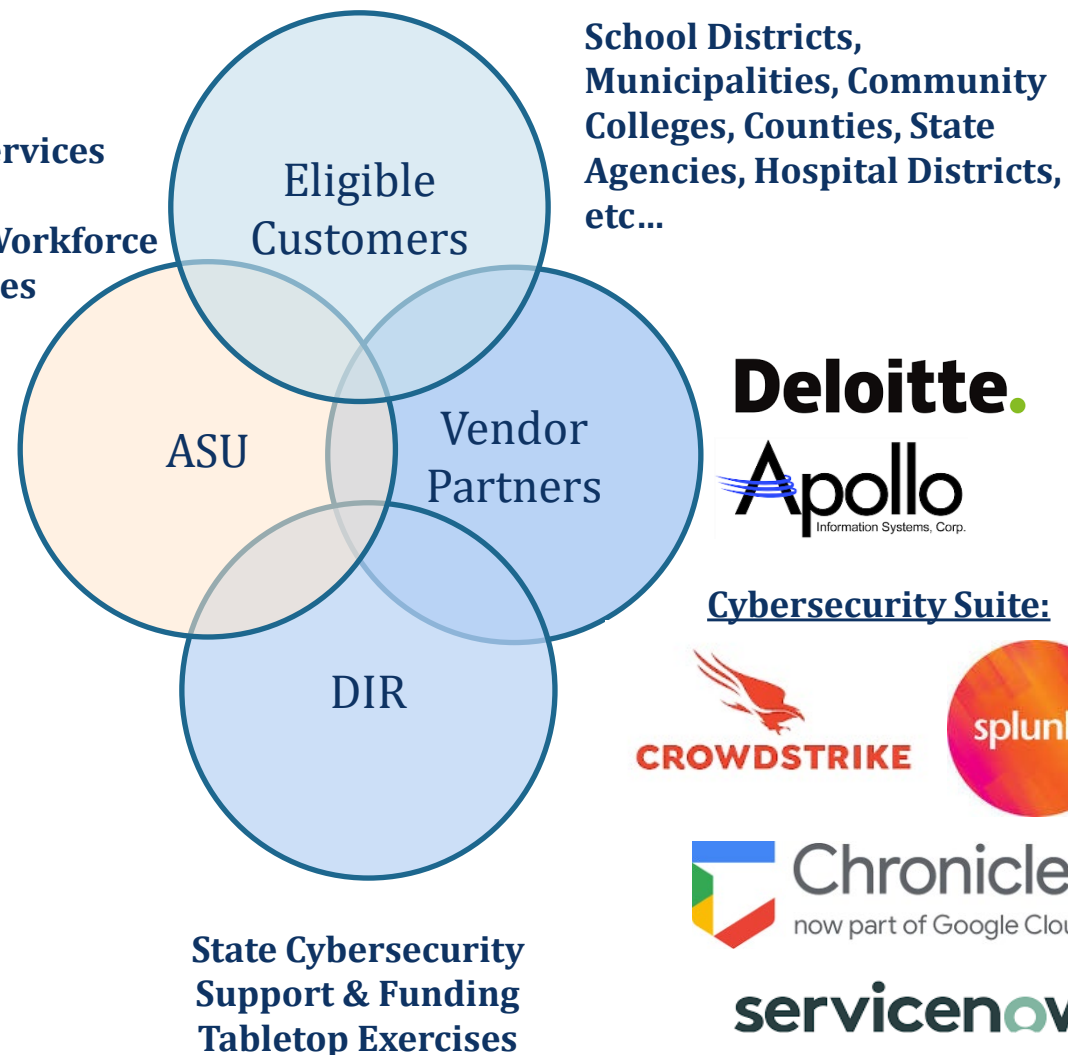
- **January - April of 2022,**
  - DIR went through an Expression of Interest Process to Identify and Select the First Pilot RSOC
  - Eligible entities for applying were focused on universities.
- **April of 2022,**
  - Angelo State University was selected as the initial pilot RSOC for the State of Texas.
- **April - July 2022,**
  - Established agreements and contracts for implementation
- **July - December 2022 Selection:**
  - *Set up RSOC and had gone to first set of customers:*
  - *Our pilot San Angelo independent School District timeline.*
  - *Ongoing the City of San Angelo*
- **January 2023**
  - Begin to expand to other eligible customers

## Texas Economic Regions



Cybersecurity Services  
 Cyber Education  
 Growing Cyber Workforce  
 Tabletop Exercises

## Partnerships





# R-SOC Room Visualization @ ASU



# Where are we Today?

- In December, the City of San Angelo signed the Interlocal Contract to be the first RSOC customer
  - Beginning technical onboarding activities with them.
- San Angelo Independent School District signed the Interlocal Contract to be the second RSOC customer
  - Will begin technical onboarding activities in the next few weeks.
- ESC Region 15 staff have met with the ASU RSOC team a couple of times to understand what is being offered.
  - Information was shared with the ESC Region 15 Superintendents on potential service offerings.
  - ESC Region 15 staff and the RSOC team are discussing the best approach and options on how this might work within Region 15 and its school districts.
  - We would like feedback from this group on whether this sounds interesting from your perspective.
- In parallel, the RSOC team is having conversations with Tom Green County and Howard College.
- Continuing to staff up in the RSOC both with fulltime employees and student workers.

# How This Opportunity Might Help Your School District



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# Think of Cybersecurity in Layers

Deadbolt Lock

Fence

Dog

Motion Sensors



Neighborhood  
Watch

Armed Guards

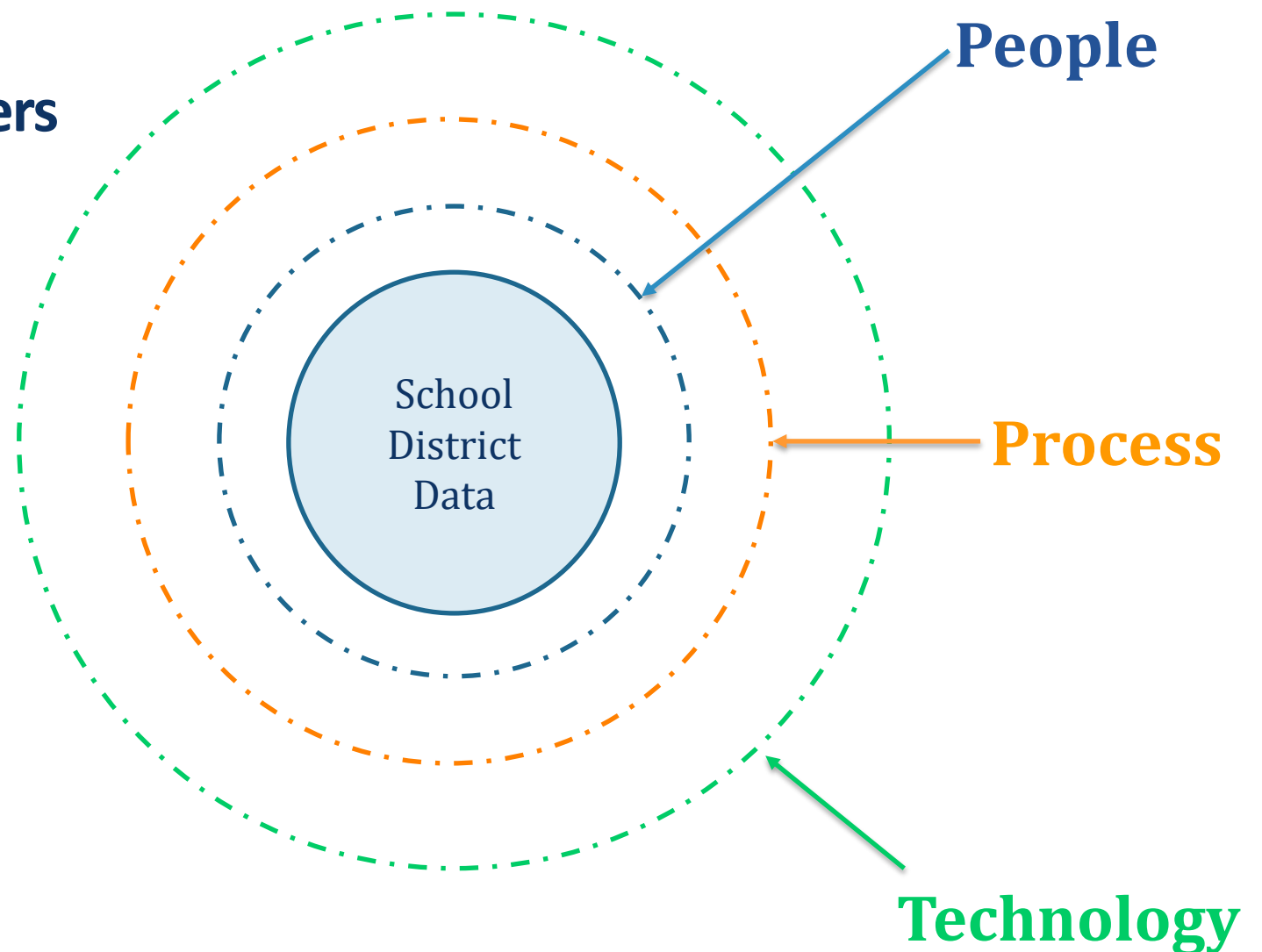
Security Cameras

Locked Windows

Barrier Sensors

## Each School District Has An Investment in Cybersecurity Layers

- Continue to Maintain Your Investment
- Identify Gaps in Your Cybersecurity Layers
- The RSOC Services may be able to assist at each of these layers

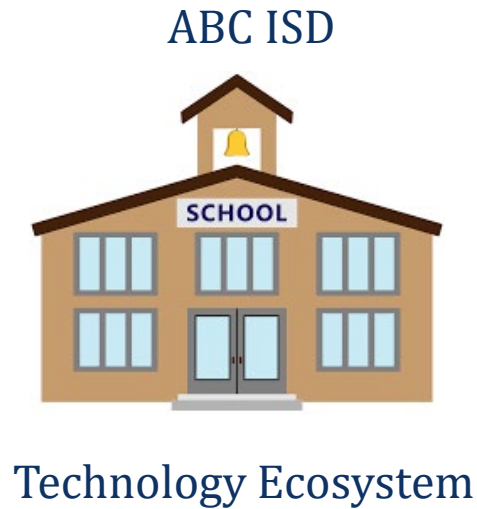


## So How Would This Work?

Each of these endpoints most likely has a traditional anti-virus solution. (i.e. Sophos, Bitdefender, thirtyseven4,...)

There are some limitations with these solutions on preventing, identifying and responding to evolving threats.

The RSOC will offer the **Next Generation Anti-Virus** that addresses these limitations.



There are also other devices on your network that may need to be monitored but a traditional anti-virus solution is not designed for it.

The RSOC will offer a solution for these types of devices as well.

### Endpoint Examples



Windows



Macintosh IOS



Linux



### Other Equipment Examples



Network Switches

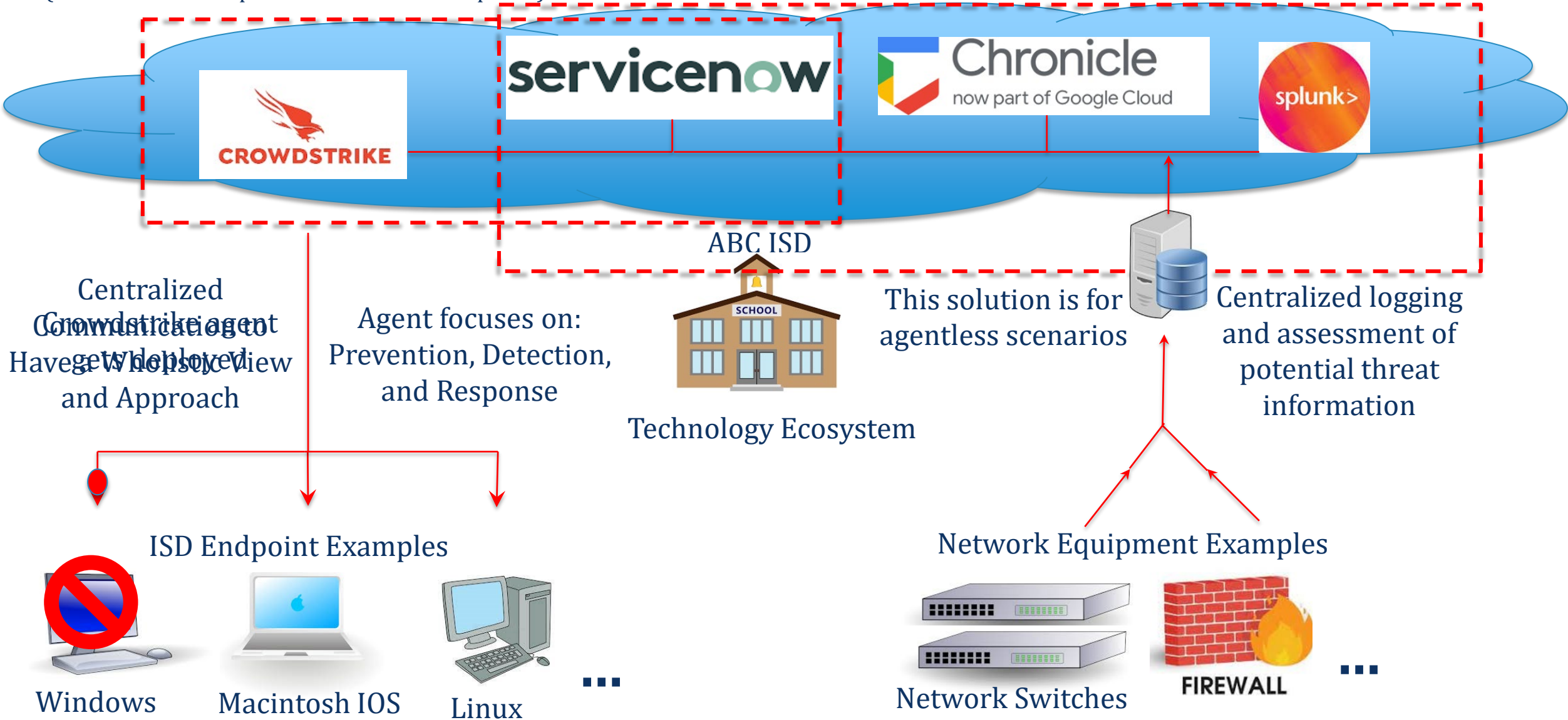


FIREWALL

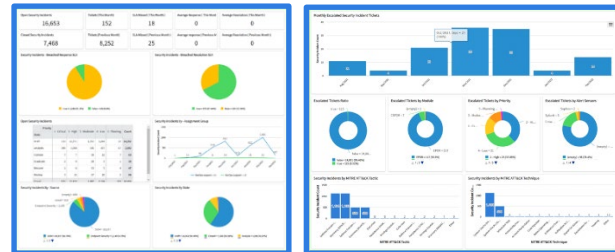


Next Generation Anti-virus  
(also known as Endpoint Detection and Response)

# So How Would This Work?



# What Does the Customer See?





ABC ISD





## RSOC Services – Potential Value to School Districts

- Staffed 24 hours per day, 7 days per week, 365 days per year by both security professionals and student interns. (PEOPLE) 
- Provide monitoring and incident response assistance in the event of an attack or breach; offer regional education on cybersecurity best practices. (PROCESS) 
- Use industry leading endpoint protection, logging, monitoring, and alerting capabilities. (TECHNOLOGY)



## RSOC Services – Potential Value to School Districts

- No financial costs to pilot customers for the RSOC Services and cybersecurity software suite.
- While the services and software are currently free, there will be:
  - A time investment from ESC and/or local district personnel to coordinate with RSOC staff for deploying, setting up and maintaining the cybersecurity monitoring tools.

## RSOC Services – Potential Value to School Districts

- Expansion of monitoring and protection of existing cybersecurity layers
- Sharing of cybersecurity knowledge and best practices
  - Understanding and using Tabletop Exercises to further protect your district
  - Access to forums and trainings
- Increased access to a pool of cybersecurity professionals in the region over time
  - Cyber-enabled workforce in the region
  - Meet the future needs of the region

# Potential Next Steps...



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# Potential Next Steps...

- We are working with the ESC team to identify opportunities on where these services might add value.
  - ESC Region 15 is working through the on-boarding process.
  - The plan is to pilot systems that are part of ESC Region 15's environment. This will help us better understand what a deployment might look like.
- Contact ASU RSOC if you are interested in these services.
  - Email – [rsoc@angelo.edu](mailto:rsoc@angelo.edu)
  - Phone Number for the RSOC: 325-942-6944
  - <https://www.angelo.edu/rsoc>

**Thank you for Your Time -  
Questions?**

# Proposed ASU MXDR Architecture

## ASU Assets

- CrowdStrike Sensors  
Modules: NGAV | EDR
- Windows
  - MacOS
  - Linux
  - Domain Controllers
  - Private Cloud VMs

### Non-Agent cloud Logs

- O365 Logs
- Duo Logs

### Non-Agent Based Log Sources

- Proofpoint
- Rapid7
- Cisco ASA VPN Concentrators
- Palo Alto NGFW

