



State  
**Texas**

Agency  
**Texas Department of Information Resources**

Award Category  
**Cross-Boundary Collaboration and Partnerships**

Project Title  
**Boots on the Ground: Texas Regional Security Operations  
Center (RSOC) Pilot Project**

Project Dates  
**February 2022 – January 2023**

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## Executive Summary

In 2021, the Texas Legislature passed Senate Bill 475, which created regional security operation centers (RSOCs) to provide “boots on the ground” support close to local governments that need assistance with major cybersecurity incidents.

In 2022, the Texas Department of Information Resources (DIR) partnered with Texas’ Angelo State University (ASU) to operate the pilot RSOC and provide regional cybersecurity support to local governments and other eligible government entities, including K-12.

The first of its kind in the nation, the RSOC officially opened in January of 2023 to offer security monitoring, alerting, guidance, training, and protection and to help local governments prevent and recover rapidly from cybersecurity incidents. University students can work at the RSOC and receive hands-on experience, strengthening the cybersecurity workforce of tomorrow.

“We are excited to partner with ASU as we expand cybersecurity services to local entities in the West Texas region. ASU’s proposal convinced us that they will hit the ground running and lay the foundation for this program’s future success for all of Texas.”

– Amanda Crawford  
DIR Executive Director  
State of Texas Chief Information Officer



Idea

What problem or opportunity does the project address?

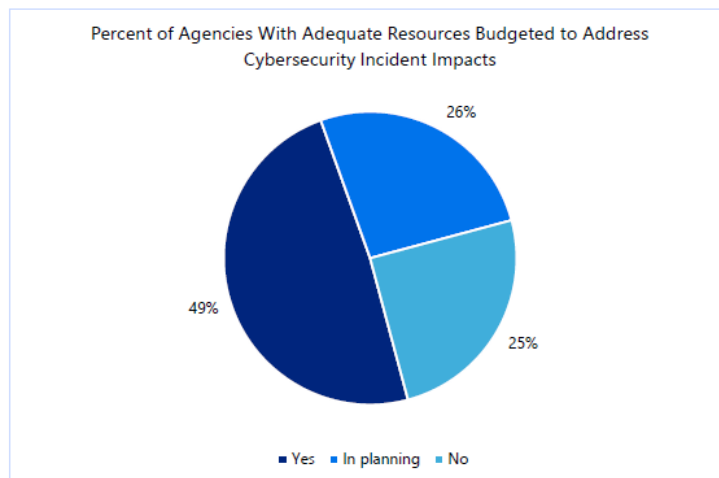
**Increasing Sophistication of Cyber Threats**

As cyberthreats to public entities continually increase, government entities in all regions need to be protected against attacks that can disrupt the delivery of services or compromise Texan’s information. Since 2019, DIR has been aware of over 150 ransomware incidents that impacted Texas government organizations — 90 percent of which occurred at the local level. The number of ransomware incidents targeting counties, cities, and school districts indicates that cybersecurity programs at the local level need strengthening.

**Limited Cybersecurity Resources**

Additionally, cybersecurity workforce challenges continue to impact the cybersecurity risk landscape. At Texas state agencies, the number of agency cybersecurity personnel has not been keeping pace with the growing demand for cybersecurity expertise or resources and organizations often must do more with fewer resources.

In 2022, agencies in Texas reported an increased focus on IT security operations, but most agencies report that they do not have adequate resources budgeted to respond effectively to a major cybersecurity incident.



Source: Texas Department of Information Resources, 2022 Cybersecurity Report

**Why does it matter?**

The State of Texas is an intriguing target for malicious actors due to the large number of public sector information assets that house sensitive and confidential information. Over 200 state organizations and thousands of local governments organizations make Texas a target-rich environment. To compound the issue, government entities must balance competing priorities and resources, which can create challenges in sufficiently preparing to address the impacts of cybersecurity incidents.

Over the last two years, Texas has faced its own cyber challenges affecting both the public and private sector, such as ransomware attacks and recent nation-state cyber threats. During this time when new vulnerabilities are becoming more complex and frequent, security and risk management leaders have had to focus on balancing adequate protection and business growth.

**What change it will make for the agency/state/citizenry?**

The RSOC aims to meet these challenges across the state through collaboration between the state and public universities. In the operation of the RSOC, DIR relies on its partnership with ASU to give university students hands-on experience right here in Texas and strengthen the cybersecurity workforce of tomorrow. The RSOC

offers network security infrastructure that local governments can utilize and provide real-time network security monitoring; network security alerts; incident response; and cybersecurity educational services.

The RSOC plays a crucial role in responding effectively and quickly to geographically distant or dispersed incidents. The RSOC offers participating entities the following security services:

#### Real-Time Network Security Monitoring

to detect and respond to network security events that may jeopardize participating organizations and the residents of this state.

#### Alerts and Guidance

for defeating security threats.

#### Immediate Response

to detect and respond to network security events that may jeopardize participating organizations and the residents of this state.

#### Policy and Planning

to provide guidance on cybersecurity policies and plans to improve the cybersecurity posture of RSOC participants.

#### Cybersecurity Educational and Awareness Services

to assist participating organizations in establishing and strengthening sound security practices, including developing model policies, and planning to assist participating organizations in maturing their cybersecurity posture.

The RSOC enables organizations to respond effectively and quickly to geographically distant or dispersed incidents by centralizing incident management, leveraging remote investigation and analysis capabilities, coordinating response efforts, optimizing resources, standardizing processes, leveraging technology, and fostering continuous improvement. These capabilities collectively enhance incident response efficiency and minimize the impact of incidents across multiple locations.

#### What makes it different?

The vision driving the RSOC pilot aligns with a whole-of-state approach to cybersecurity that increases the threat protection and cyber maturity of all of Texas through collaboration and partnerships.

The 87th Texas Legislative Session passed Senate Bill 475 and created a pilot RSOC to provide “boots on the ground” support close to local governments that need assistance with major cybersecurity incidents. DIR is partnering with public universities to establish RSOCs throughout the state to serve local entities and assist in protecting the state from cyber threats.

In operating the pilot RSOC, Angelo State University is leveraging existing cybersecurity academic programs in the Kay Bailey Hutchison Center for Security Studies, Department of Computer Science, and other departments, as well as existing staff and infrastructure, to grow local expertise, expand ASU facilities, and increase infrastructure and resources to expedite the establishment of the RSOC. ASU is also providing a continuous pipeline of quality interns to augment the RSOC while the students gain real-world experience in offensive and defensive cyber operations and cyber intel support.

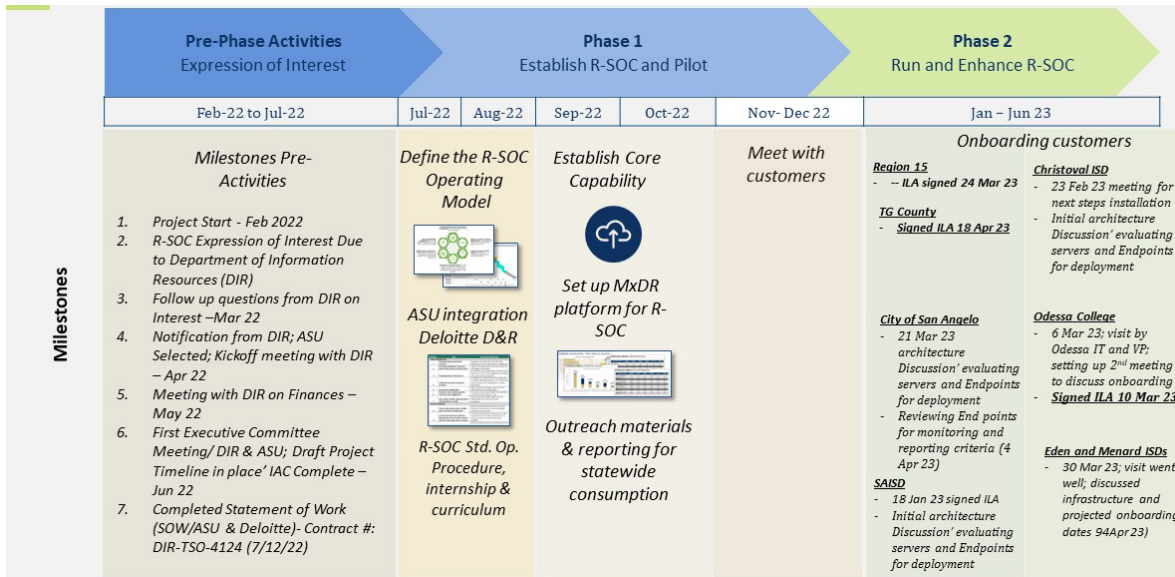
## What makes it universal?

Texas' strategy with the RSOC pilot exemplifies the 2023 National Association of State Chief Information Officers State CIO Top Ten Priorities of **Cybersecurity and Risk Management** and **Workforce**. Cybersecurity risks are complex and may occur during other disruptions. As a result, there is an increasing need for regional responses and integrated continuity planning. Additionally, a nationwide shortage of skilled cybersecurity professionals continues to hinder the public sector's ability to recruit and retain people with specialized skills. RSOC addresses those challenges with sustainable cybersecurity resources to meet security needs, including long-term investment in cybersecurity tools, talent, and training.

## Implementation

### What was the roadmap?

In December of 2021, DIR asked for proposals from Texas public universities interested in partnering with DIR to meet SB 475's objectives by operating the pilot RSOC and providing security services and incident response to eligible regional entities.



Universities interested in partnering with DIR to establish the pilot RSOC were asked to provide thorough responses to the series of questions that helped inform DIR of a potential partner's capabilities and resources that could be used for this initiative. Questions included whether the university had an existing security operations center, the people, technologies, and processes that could be used to establish the RSOC stakeholder base, and their overall vision for including university students that may be able to support and or train at the RSOC to provide more qualified and trained workers in the cybersecurity field in Texas. Interested universities were also asked to provide their vision for supporting local governments, school districts, and other entities via the RSOC and leveraging existing community engagement and/or partners relating to cybersecurity.

In April 2022, DIR notified Angelo State University that it was selected as the pilot RSOC. From July 2022 through December 2022, DIR and Angelo State defined the operating model for the RSOC, establishing core capabilities, and developed student and internship curriculum. The official ribbon cutting ceremony for the Angelo RSOC occurred on January 19, 2023.

## Who was involved?

In 2020, DIR leveraged input from Texas state agencies and institutions of higher education to produce the 2020 Cybersecurity Report. That report recommended that the Texas Legislature create RSOCs located at universities around the state close to local governments that need assistance with major cybersecurity incidents, as well as network security infrastructure that regional governments can utilize.

In 2021, the Texas Legislature passed SB 475, which created the RSOC to provide support close to local governments that need assistance with major cybersecurity incidents. In addition to the passage of SB 475, the legislature affirmed its support of this project by appropriating to DIR several full-time employees and general revenue funding to establish the first RSOC with the university partner.

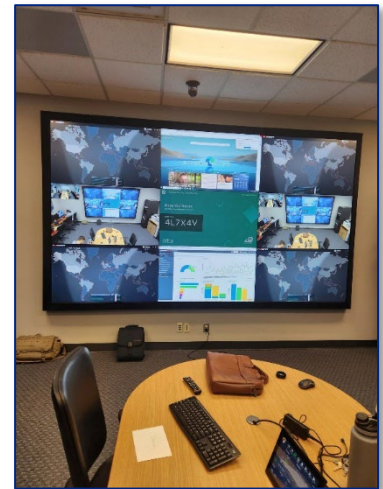
## How did you do it?

### Collaboration

A crucial and innovative element of the RSOC is engaging students to participate in providing these RSOC services, providing them valuable hands-on work experience while also offsetting staffing costs.

### Technology and Innovation

Angelo State University uses a fully managed, Software as a Service (SaaS)-based modular cybersecurity platform that brings together leading third-party technologies detect, respond to, and remediate cybersecurity threats. The platform tracks alerts by priority level and type. Several customizable dashboards and reports are available for real world security monitoring and for student analysts to train and become proficient in Security Operations Center services.



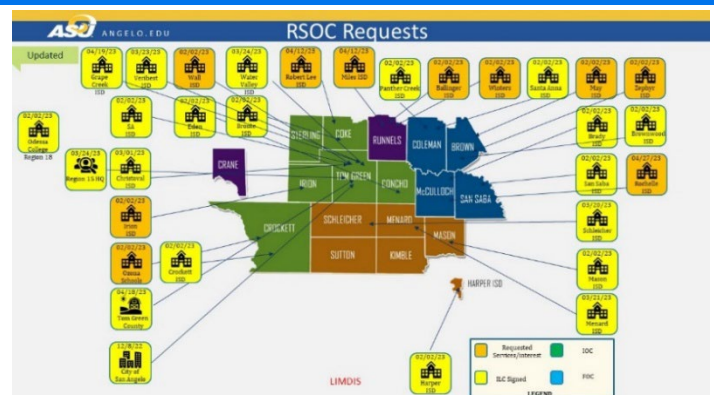
The RSOC leverages advanced security technologies and tools for remote incident monitoring, analysis, and response. These technologies can include security information and event management (SIEM) systems, threat intelligence platforms, endpoint detection and response (EDR) tools, and incident management systems. By utilizing these technologies, the RSOC can efficiently gather, correlate, and analyze security data from multiple sites, facilitating faster response and remediation.

Key features of the RSOC pilot project include endpoint protection, 24x7 threat detection and response, eXtended Detection and Response (XDR), threat intelligence, and expandible and scalable SaaS.

## Impact

### What did the project make better?

With the pilot RSOC in place, eligible organizations in west Texas can optimize the allocation of resources. With geographically dispersed incidents, it may not always be feasible to have on-site security personnel or experts at every location. This resource optimization allows for efficient incident response and ensures that



expertise and knowledge are shared across the organization, benefiting all geographically dispersed locations.

As of May 2023, the ASU RSOC has enlisted 24 student cybersecurity analysts that will progress through various tiers of cybersecurity college courses. The ASU RSOC currently serves three local governments and is processing 35 client service requests from eligible entities across 18 counties in the West Texas area.

### How do you know?

The objective of the RSOCs is to provide real-time network security monitoring to detect and respond to network security events that may jeopardize participating organizations and the residents of this state. It also provides alerts and guidance for defeating security threats. In April 2023, the ASU RSOC processed 102 alerts. In the spirit of IT collaboration, the success of the RSOC relies on the partnerships between DIR, ASU, and additional Texas public universities in the future, to give university students the training and experience to begin careers in cybersecurity.

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Currently, 24 students are participating in the ASU RSOC curriculum, with at least one student being hired into a full-time information security position.

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*"Angelo State is proud to partner with the DIR on this initiative. It fits tightly within our vision of being an innovative leader for the region, state, and globe. This program will enable ASU to become a leader in the region and foster a cyber/technology community of practice with a variety of entities and groups, each with their own unique needs. Our key objective is to develop a cybersecurity center of excellence that not only is a regional hub, but also one for the state of Texas."* - **Ronnie Hawkins Jr., President, Angelo State University**

*"We are thrilled to let you know that as a result of our RSOC briefing and Tabletop exercise, we received 8 separate requests for RSOC services. It is clear that the importance of cybersecurity is top of mind for our schools."* - **Dr. Kurt Hoffmaster, Director, Kay Bailey Hutchison Center for Security Studies, Angelo State University**

### What now?

The RSOC meets the objectives set forth by state leadership through collaboration between the state and public universities. By providing cybersecurity support and services to local entities, the RSOC pilot has now become a model by which additional RSOCs will be modeled across the state.

In 2023, DIR has received additional funding from the 88th Texas Legislature and plans to add two more RSOCs at the University of Texas in Austin and at the University of Texas Rio Grande Valley to achieve the statewide approach to cybersecurity.

### Additional Project Information and Links

More on the Texas RSOC can be found at:

**Angelo State University:** <https://www.angelo.edu/community/kay-bailey-hutchison-center/regional-security-operations-center/>

**Texas Department of Information Resources:** <https://dir.texas.gov/news/dir-partners-angelo-state-university-pilot-regional-security-operations-center>