



# **DIVISION OF INFORMATION SYSTEMS**

Yessica Jones  
State CTO / Director




**CYBER  
SECURITY**

A 3D word cloud where the words 'CYBER' and 'SECURITY' are prominent in red, while 'INFORMATION' and other related terms are in white. The words are arranged in a circular, overlapping fashion.

**Office 365**

The Office 365 logo is centered within a white cloud. Surrounding the cloud are various Office 365 application icons, including Outlook, Word, Excel, and PowerPoint, all set against a blue background with stylized clouds.

**BACKUP STORAGE**

An illustration of a data center with several server racks. Above the servers, a blue cloud icon contains an upward arrow, with the text 'BACKUP STORAGE' written below it.

**DISASTER  
RECOVERY**

A graphic of a blue, circular button with a metallic, brushed-metal texture. The words 'DISASTER' and 'RECOVERY' are written in white, bold, sans-serif capital letters, stacked vertically on the button.

What are some of our  
services?



# AGENDA



INITIATIVES



PROJECTS  
COMPLETED



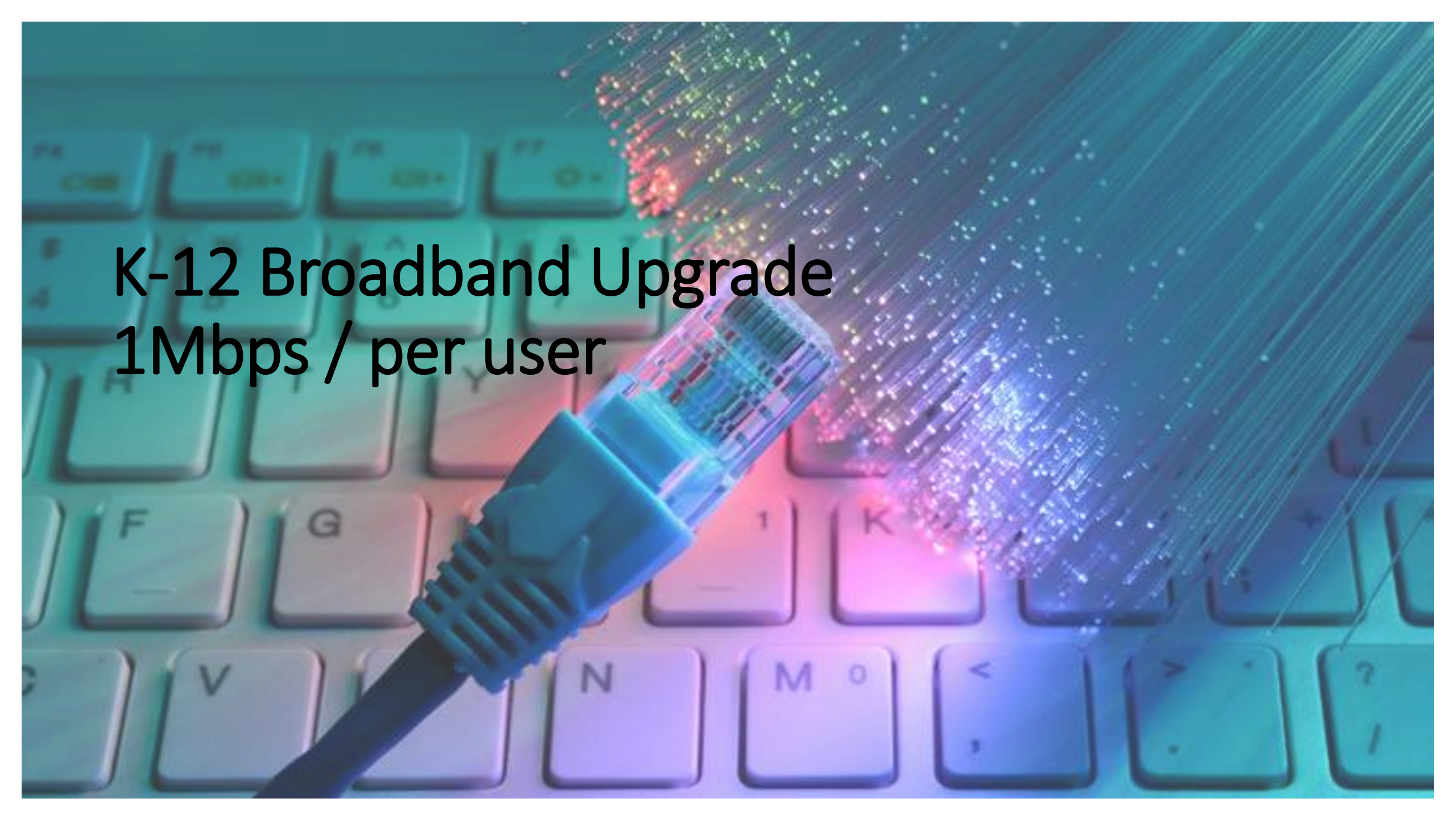
CYBERSECURITY



CDO OFFICE

INITIATIVES





K-12 Broadband Upgrade  
1Mbps / per user

# Data Center Optimization



**20** DEPARTMENTS/DIVISIONS

- ADE
- ADEE
- ADH
- ADLL
- ADOA
- ADOL
- ADPHT
- ADVA
- AETN
- AGO
- APERS
- Commerce
- DFA
- DHS
- DIS
- DOC
- DPS
- DTSS
- IG
- PHARM



**1039**

Business Applications  
Identified



**2932**

Servers mapped to  
business applications

# Data Validation



- Ensured all applications are accounted for.
- Reviewed Criticality, Compliance, Contact information, DR info.
- Ensured all servers are accounted for and complete missing data (Compute, OS)
- Implemented process to maintain data updated throughout the project

# VoIP

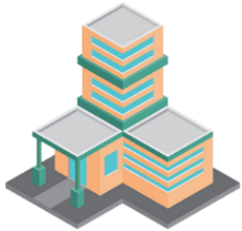
- As of today DIS has deployed 16,000
- \$118,000 annual savings of identified stations not in use.
- 21 DHS County Office legacy phone systems converted to VoIP.
- \$272,200 annual savings in contract negotiation to reduce rate for 150 analog lines.





# Microsoft Office 365

## AGENCY A



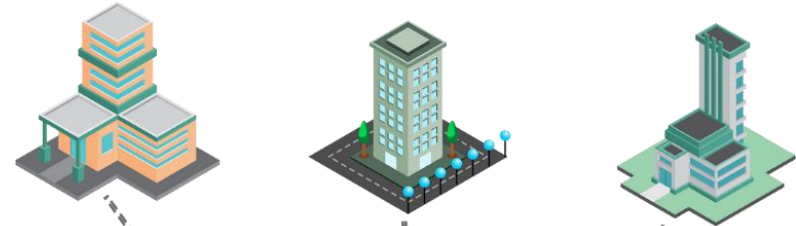
## AGENCY B



## AGENCY C



## ALL EXECUTIVE BRANCH AGENCIES



**PROJECTS COMPLETED**



## Agencies Broadband Upgrade

- **\$4.8M savings per year**
- **Some agencies received 10x the bandwidth for the same price they were paying**
- **Total of 542 sites upgraded**



**Production**  
**DIS Data Center**  
West Little Rock

**zBC12 right sized to**  
**130 MIPS 2828-A03**

DIS  
LAN / WAN



**New TS7760**



**New**  
**TS7760**



**DR**  
**Ensono Data Center**  
DR, Downers Grove



**Shared**  
**Mainframe**

# Mainframe as a Service





# Endpoint protection and monitoring solution

- **Endpoint protection software and 24/7 monitoring rollout to all Departments.**
- **Over 29,000 endpoints are being monitored from 24 departments, boards, and commissions.**
- **In the month 966 events of possible malware were investigated.**

# IT Service Management

by Company

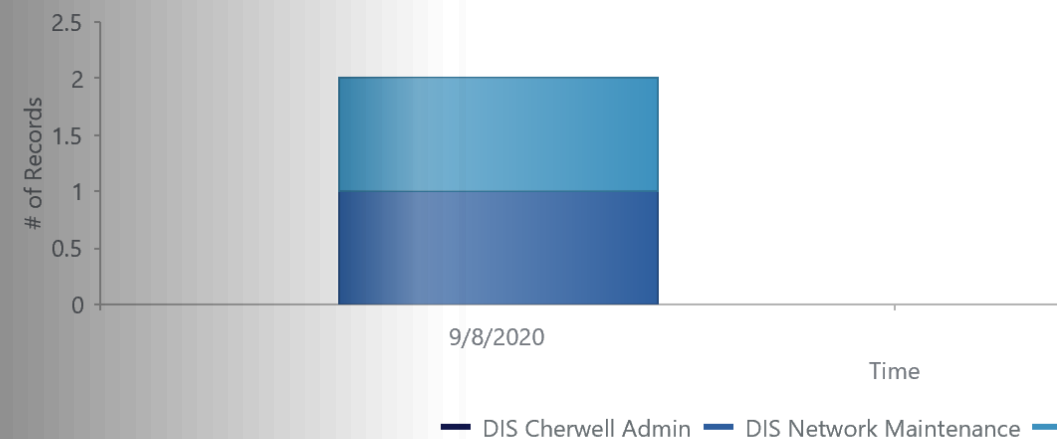
September 9, 2020

View: Any time ▼

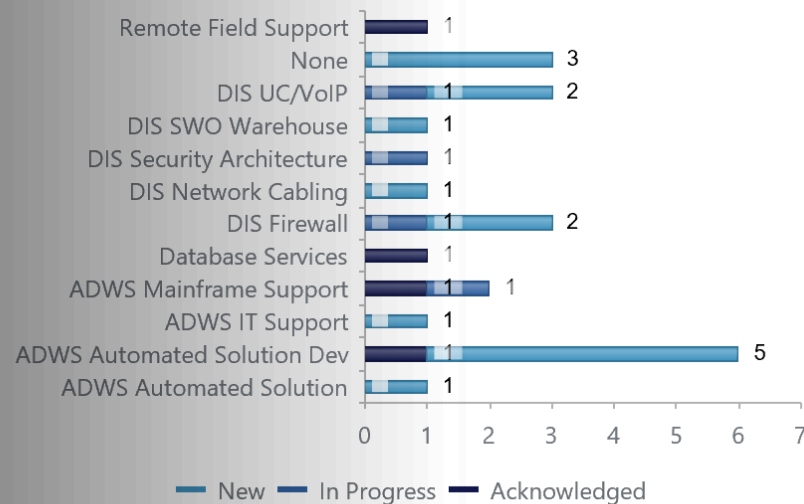
Company: DEPARTMENT OF AGRICULTURE

Resolved SLAs			Closed on 1st Call
On Time	96		
Warning	0		10 %
Breach	0		
Open Requests			Open VIP Issues
	1		0
Open Problems			Open Changes
	0		0
Requests Today			VIP Issues Today
	0		0
Unread Request Journals			Unread VIP Journals
	46		0

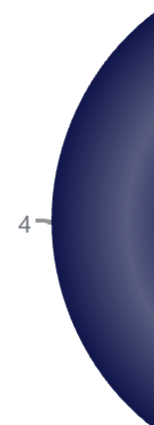
Daily Workload



Team Workload by Status (24)



Open Issues



# IT Financial Management System

Sources

IT Towers

Labor Review

Labor Analysis

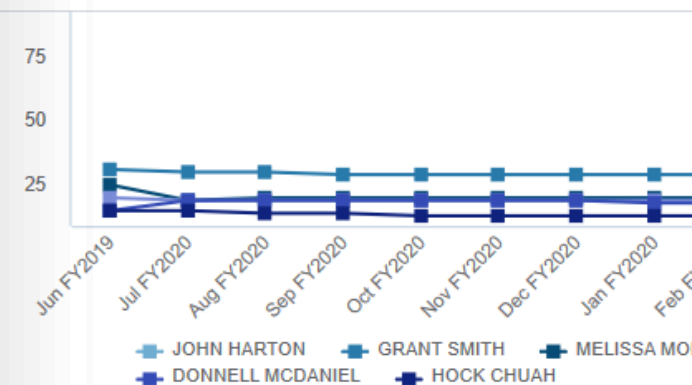
ITP - Labor Review

Fixed Assets

ITP - Asset Review

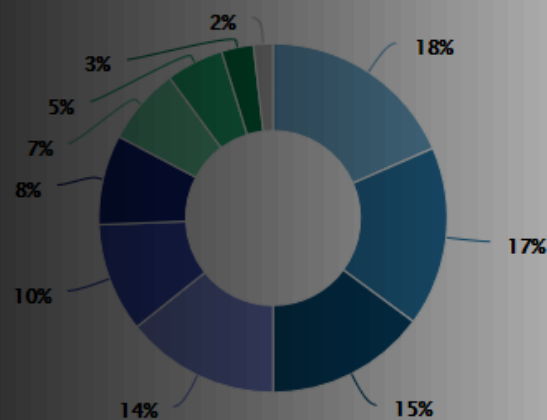


JOHN HARTON GRANT SMITH MELISSA MOREHART THURL SMITH  
DONNELL MCDANIEL HOCK CHUAH ALI YAVUZER



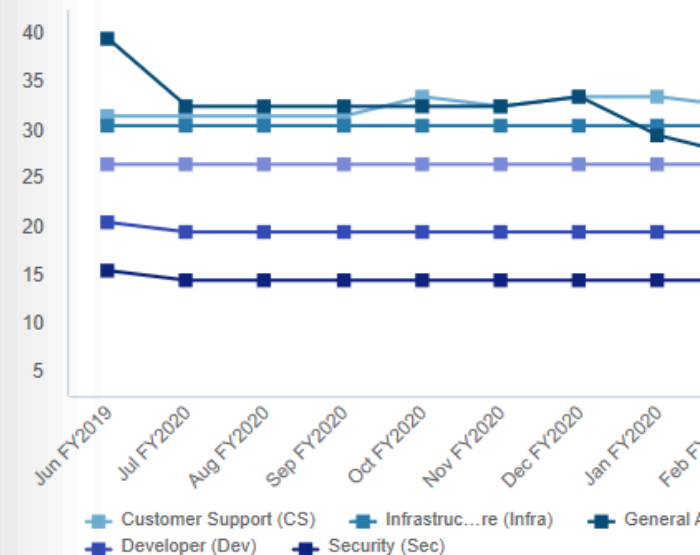
Headcount by Role

Headcount by Role



Customer Support (CS) Infrastruc...re (Infra) General Admin (GA) Telecom Operations  
Developer (Dev) Security (Sec) (Blank) Telecom Support Project Mgmt (PM)  
(Other)

Headcount Trend



Headcount by Location

Headcount by Location

Headcount Trend

**CYBERSECURITY**



## Cybersecurity

- Nolan Leatherwood named Chief Information Security Officer.
- Central role in the coordination between departments and cyber insurance to respond to cyber incidents.
- Manage over 1000 firewalls for state agencies and K-12 schools
- Cyber strike team consisting of staff from all Departments.
- Over 4 billion logs from systems and devices are collected in a central system for analysis and alerting.
- Online security awareness training provided to all executive branch staff

# Cybersecurity

## Daily averages

- Content filtering blocks nearly a half a million requests for malware sites
- Firewalls block nearly 1 quarter billion internal and external network connections
- Email spam filtering blocks over 300,000 emails.

# Cybersecurity

## Monthly averages

- 10 instances of potentially malicious applications are investigated
- 138 malicious IP addresses are added to block lists for access to the state network
- 3.2B attempts from malicious IP addresses are blocked from gaining entry to the state network every month
- 24 malicious phishing attempts are reported and blocked



## — DIS EFFORTS

- Setup call centers for DWS UI and PUA
- Setup COVID and contact tracing hotline for ADH
- Setup additional lines for ADE COVID K-12 resource Hotline
- Deployed softphones for remote workers
- Expanded infrastructure to handle the increased call volumes for DWS
- Expanded infrastructure to allow for remote work
- Provided videoconferencing licenses

**CORONAVIRUS  
(COVID-19)**







# Joshua McGee

## Chief Data Officer



**DIVISION OF  
INFORMATION SYSTEMS**

# Statewide Longitudinal Data System (SLDS)

- [Act 912 of 2017](#) established the Data and Transparency Panel and the Chief Data Officer (CDO) position.
- [Act 936 of 2019](#) requires the Data and Transparency Panel to:
  - (7) Develop a unified longitudinal system that links existing siloed agency information for education and workforce outcomes to continuously conduct a business systems assessment to:
    - (A) Help the leaders of this state and service providers develop an improved understanding of individual outcomes resulting from education and workforce pipelines in Arkansas;
    - (B) Identify opportunities for improvement by using real-time information; and
    - (C) Continuously align programs and resources to the evolving economy of this state.
- SLDS links administrative data across state departments/divisions so that it can be used to improve policy, programs, and practices through evidence-based collaboration.

# Data and Transparency Panel

- Key points of agreement and areas of work:
  - Arkansas needs SLDS capacity to facilitate linkage of data across departments/divisions.
  - The Div. of Info. Systems (DIS) and office of the CDO are leading SLDS development.
  - A federated data integration model will be used where practical, wherein participating agencies maintain control of the data in their source systems but agree through MOUs or DSAs to share data.
  - A data governance framework is being developed by key department stakeholders to manage the security and accessibility of data.
  - The SLDS infrastructure will be implemented in the state data center and managed by DIS.
  - Data integration will be implemented and managed by DIS.
  - A self-service business intelligence data access model will be created for authorized and authenticated access to data for research, decision & policy making, and operational support.

# Economic Security Report (ESR)

- The ESR is an example of how the state can leverage its SLDS capacity to integrate valuable data and better inform policy, practice, and the public.
- The ESR is required by [Act 852 of 2015](#)
- The report uses linked administrative data from the Division of Workforce Services (DWS) and Division of Higher Education (DHE).
- The ESR summarizes workforce outcomes by higher education entity, program, and certificate/degree level, and is:
  - provided to institutions, students, and the public;
  - used by DWS as valuable labor market information; and
  - used by DHE to help evaluate certificate/degree programs.
- DIS has worked with DWS and DHE to enhance the ESR by:
  - Dynamically generating the report, reducing cost and increasing flexibility; and
  - Providing a self-service platform that allows authorized users to perform their own analysis.



# What's next?

- Finalize the DWS-DHE-DIS data sharing agreement
- Develop an enhanced ESR for release in 2021 that includes elements like:
  - Improved analytics and data visualizations and
  - Better interface for higher ed institutions and potentially the public
- Investigate opportunities to use linked administrative data to support COVID-19 response and recovery.
- The CDO's office will continue collaborating with state departments/divisions to:
  - Build the state's SLDS capacity;
  - Bring more datasets into the SLDS;
  - Add the capacity to use federal, other state, and private sector data;
  - Surface pressing needs and important questions; and
  - Build the analytics capacity to use data to help make the state more efficient and effective.

# Questions?

Yessica Jones

[yessica.jones@arkansas.gov](mailto:yessica.jones@arkansas.gov)

Josh McGee

[joshua.McGee@arkansas.gov](mailto:joshua.McGee@arkansas.gov)



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