



# Data Center Optimization

## Push/Pull Team

## Kickoff Meeting

Tuesday, August 28, 2018

UA Cooperative Extension Service

## Today's Agenda

- Opening – Carder Hawkins (Deputy Director – DIS)
- Collaboration/Responsibilities – Donnie Matthews (Relationship Manager – DIS)
- Customer Feedback-Larry Tate (IT Manager, ADF/AEDC)
- Schedule – Jim Coyne (Enterprise Architecture – DIS)
- Data Gathering – Missy Morehart (Applications Development Manager – DIS)
- Questions & Closing – Donnie Matthews and Team

## Opening-Carder Hawkins



## Transformation & Data Center Optimization



“The data center optimization initiative to consolidate the IT infrastructure into a shared environment can reduce the server and storage spend to **\$5M** per year. DIS is currently working with Gartner on developing an RFP to bring in a systems integrator to help with this effort. The duration of this project is expected to be four years. Your support and cooperation is critical to its success.”

Feb. 8, 2018, memo from Gov. Asa Hutchinson

## Data Center Assessment (Dec. 2017)



*Gartner benchmarked Arkansas agencies against peer groups, identified service gaps and developed a strategy to improve efficiency.*

### Information Gathering Scope

- Benchmarked DIS and 84 agencies
- Interviewed DIS and 17 agencies
- Visited data centers to observe condition of each site

### Strategic Planning Scope

- Formed advisory group
- Identified opportunities for service improvement
- Identified alternatives for IT infrastructure optimization
- Evaluated alternatives based upon business alignment, operational excellence, risk and cost
- Selected best strategy

Why are we doing this?





## Transformation

Inconsistent security

Lack of standards

Obsolete or end-of-life technology

Limited economies of scale

Duplication of effort/redundant systems

License mismanagement/unexpected expenses

Limited or no disaster recovery

## Recommended Target State

*The state should build a shared foundation for next generation digital government that all agencies can use for current and future services*

Optimize agencies into a shared services environment

Establish a colocation data center

Improve DIS service delivery

Direct cloud connectivity to major cloud providers

DIS will improve staff and skill alignment based on project roadmap



### Optimization:

an act, process, or methodology of making something (such as a design, system, or decision) as fully perfect, functional, or effective as possible

“Optimization.” Merriam-Webster’s Dictionary, *Merriam-Webster*.

[www.merriam-webster.com/dictionary/optimization](http://www.merriam-webster.com/dictionary/optimization) . Accessed 21 August 2018

### Infrastructure:

the underlying foundation or basic framework (as of a system or organization)

“Infrastructure.” Merriam-Webster’s Dictionary, *Merriam-Webster*.

[www.merriam-webster.com/dictionary/infrastructure](http://www.merriam-webster.com/dictionary/infrastructure) . Accessed 21 August 2018

### Shared Services:

**Shared services** is the provision of a service by one part of an organization or group, where that service had previously been found, in more than one part of the organization or group. Thus the funding and resourcing of the service is shared, and the providing department effectively becomes an internal service provider. The key here is the idea of 'sharing' within an organization or group. This sharing needs to fundamentally include **shared accountability** of results by the unit from where the work is migrated to the provider. The provider, on the other hand, needs to ensure that the **agreed results** are delivered based on **defined measures**

“Shared Services.” Wikipedia.

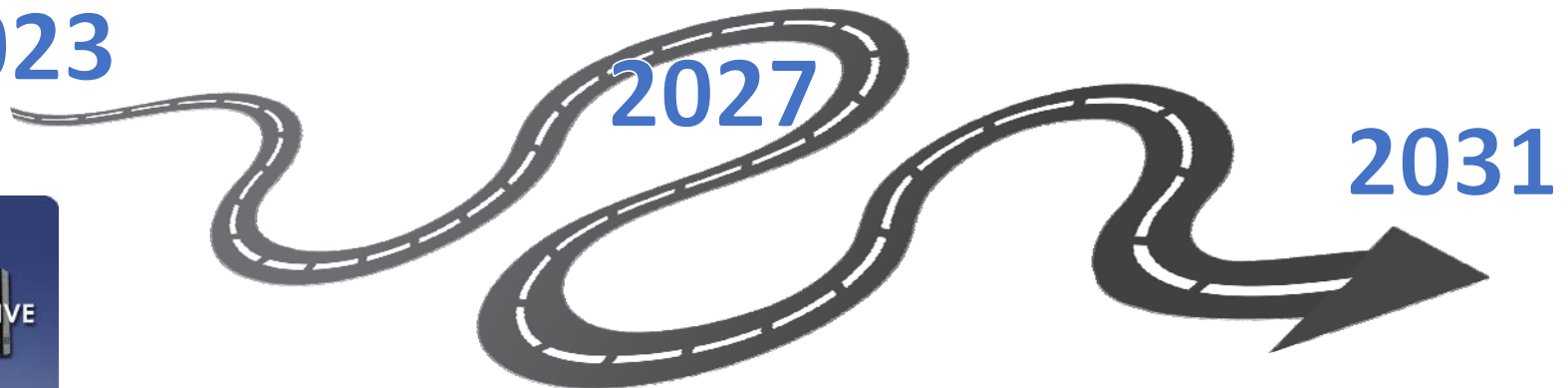
[www.wikipedia.org/wiki/Shared\\_services](http://www.wikipedia.org/wiki/Shared_services) . Accessed 21 August 2018

Should future state leaders worry about IT or focus on solving problems and improving the quality of life in Arkansas?

2023

2027

2031



How can you help?





## In Closing

- The status quo is no longer a viable option for the state.
- Together, we must take action to mitigate the significant risks identified in the Gartner Data Center Assessment and the Kroll Cybersecurity Assessment.
- Optimization will enable the state to address these risks and achieve efficiency improvements.
- Your executive sponsorship and commitment to this strategy is critical to success.

## Collaboration-Donnie Matthews



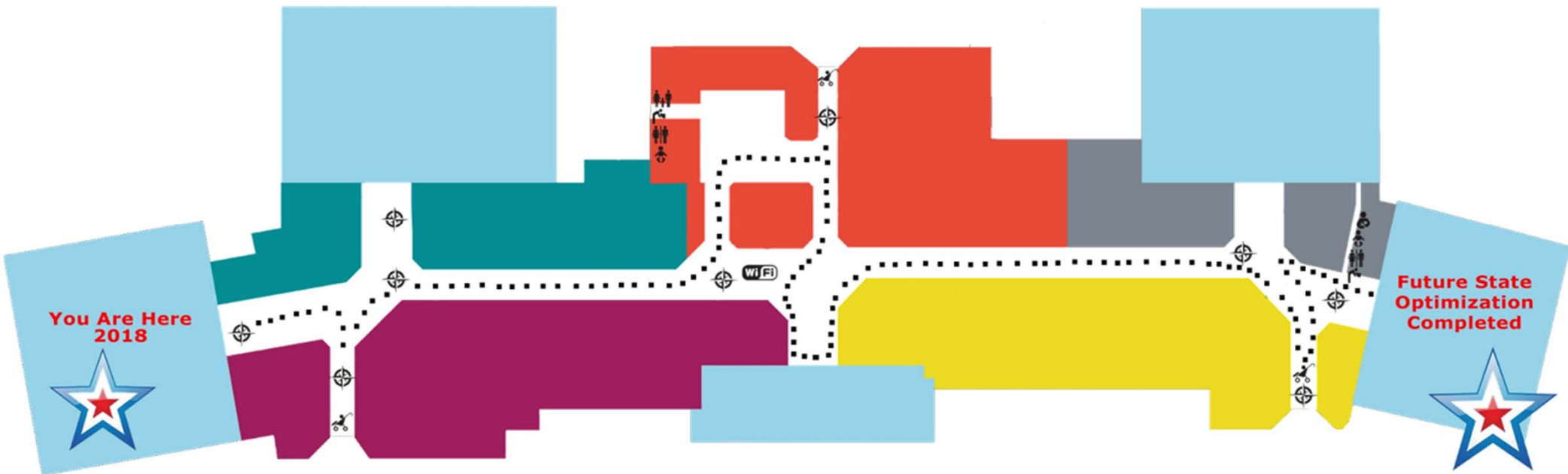
Collaboration is Critical for Success



# Data Center Optimization

## Push/Pull Team

### We Are Here





## Opportunities for Improvement

- Improve governance process
- Improve enterprise IT change management process/communication
- Promote service priority transparency
- Improve/simplify the IT service catalog
- Remove siloed support and delivery
- Improve IT financial management practices

## Opportunities for Improvement

- Provide service desk self-service capabilities
- Provide disaster recovery as a service
- Provide more robust data protection/backup services
- Enable self-service provisioning

## Why Push/Pull Teams?

- ✓ Collaborative approach
- ✓ Successful in other states



# Data Center Optimization

## Push/Pull Team

### Push/Pull Team Issues

Funding

Procurement

Contracts

Governance

Service Level Agreements

Rates

Infrastructure

Business Relationship Mgmt.

Applications



# Data Center Optimization

## Push/Pull Team

### Pull Team

Jim Coyne

Enterprise Architecture – DCO Project Sponsor

Debbie Martin

Operations Center Manager

Brian Fortson

Enterprise Operations Division Director

Amy Buss

Chief Financial Officer

Donnie Matthews

Customer Relationship Manager

Rick Martin

State Network Architect

Missy Morehart

Enterprise Applications Manager

Kristi McKinnon

Legislative Liaison/Policy Coordinator

Murat Al

Lead Quality Analyst

# Data Center Optimization

## Push/Pull Team

This Will Not be Easy!



## Customer Feedback



Larry Tate, IT Manager

Arkansas Development Finance Authority

Arkansas Economic Development Commission

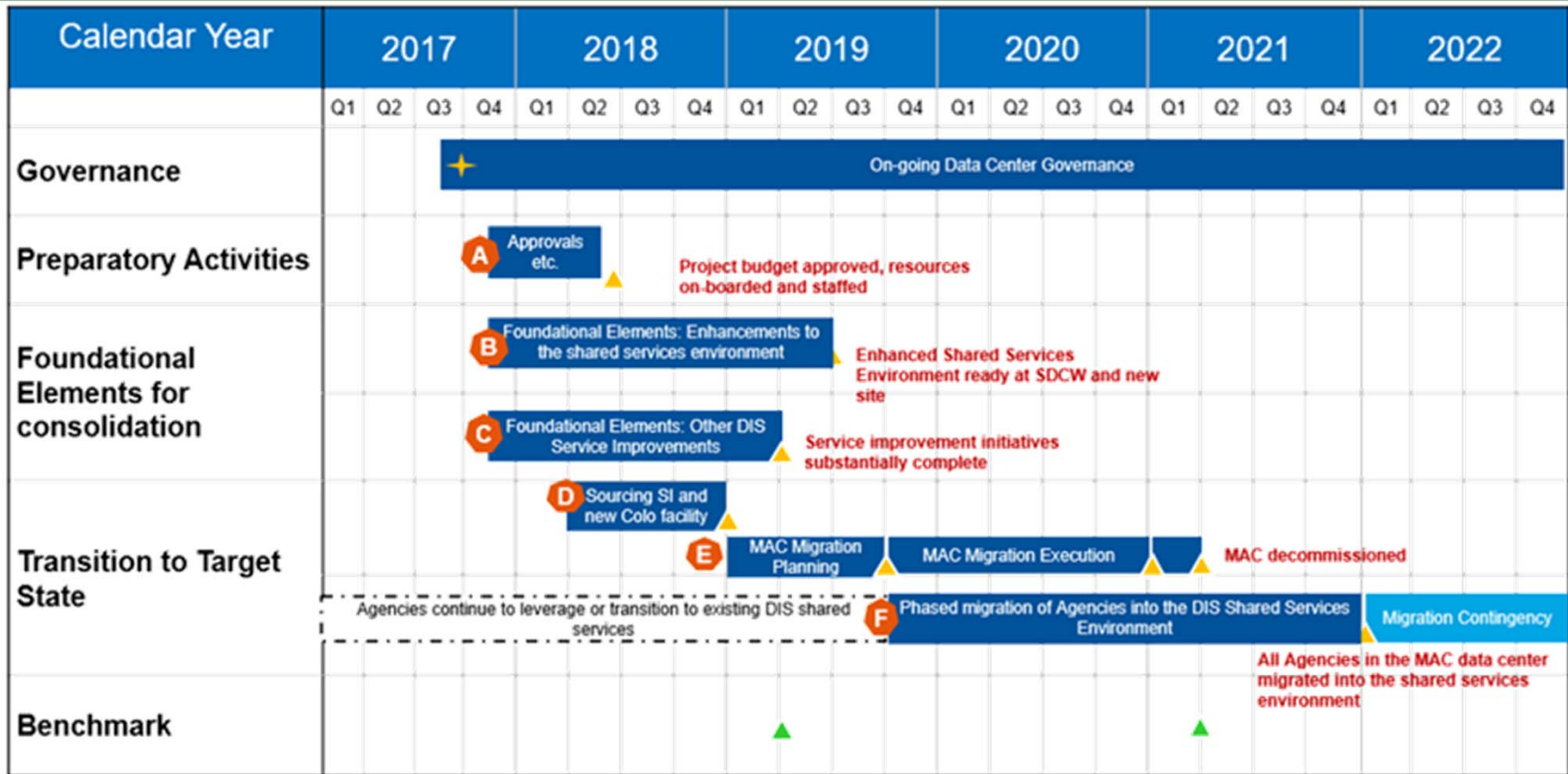
## Scheduling-Jim Coyne





# Data Center Optimization

## Push/Pull Team



On-going Continuous Improvement

Program Milestone

Bi-Annual Benchmark

## Scheduling – Who Goes First?

- Volunteers
- Low-Hanging Fruit
  - New systems/applications in the acquisition process
  - Systems/applications due to be replaced
  - All new infrastructure implementation will take place in the DIS shared services environment
- After That, Start Small/Work Our Way Up
- Larger Agencies May Expect Multiple Migrations

## Scheduling Process– Selection Criteria

- Unfortunately, we can't assist everyone all at once:
  - Obviously, “life and limb” takes first priority (i.e., life-critical or life-impacting)
  - Followed by “biggest bang for the buck” (i.e., highest rate of return, for the state)
  - Next, come migrations most-readily accommodated by the evolving shared services environment
  - Ramping up to everything else
- Consideration Factors:
  - Cost avoidance (e.g., contract renewals)
  - New functionality implementation
  - Aging infrastructure replacement
  - Business/Timing issues (e.g., peak seasons, school terms, SEC football games, etc.)

## Scheduling Process— How do we get in line?

- Pull team members will be available immediately following this meeting
- Pull team member contact information is available on the Push-Pull teams web page: <http://dis.publishpath.com/data-center-hosting-services>
- Engage with your DIS customer relationship manager (CRM)
- Eventually, we will be contacting you
- We look forward to working with you to provide optimal IT services for Arkansas

## Data Gathering-Missy Morehart



## Data Gathering

- AIMS – Arkansas IT Management System
- AIMS will be accessible to agency users throughout the duration of the effort
- We are working on identifying data elements available through other sources – less for agencies to key
- Will begin with your initial Push/Pull team meeting
- Spreadsheets will be used in the interim and uploaded into the system

## Data Gathering (cont.)

- Categories of data collection:
  - Agency information and IT objectives
  - Applications
  - Data
  - Equipment
  - Network
  - Fiscal

## Data Gathering (cont.)

- Sample of data elements for agency information & IT objectives:
  - Total number of full time employees currently supporting the IT infrastructure
  - Who are your customers?
  - What are your agency's long term goals as they relate to IT?
- Sample of data elements for applications:
  - Is this a custom application or a commercial off-the-shelf solution?
  - Is there a development/maintenance agreement for the application with a vendor?
  - Where is the application hosted?



## Data Gathering (cont.)

SECTION	QUESTION	ADDITIONAL INFO	NETWORK A RESPONSE
<a href="#">Home</a>			
<b>NETWORK A (Customer Manages LAN)</b>	What is the State Network bandwidth to your location that houses servers to be relocated		10Mbps
	Are there other WAN or Internet connections serving this location?	Yes / No	No
	Number of remote locations accessing in house applications today		75
	Number of remote users accessing in house applications today		10
	Is local VPN in use today?	Yes / No	Yes
	What is current VPN technology?		DIS provided
	Approximate number of VPN users?		20
	Number of local users accessing in house applications today		6
	Network and security assets (switches, firewalls, filtering appliances, load balancers etc)		Firewalls, Switches
	Asset brand		Firewalls = Juniper, LAN & Server Switches = Dell
	Asset model		Firewalls = Juniper SRX, Switches = Dell S3148
	Do you have server interface utilization monitoring in place today?	Yes / No	Yes
	If the above is yes, what format is this report available in?		PDF or CSV
	Describe IP addressing scheme in use today		Private IP addresses used on all devices with NAT at firewall
	Do users access local applications via hostname or IP	Hostname / IP	One application is accessed by IP and all others by Hostname
	List all impacted maintenance contracts in effect today and their expiration dates		SRX maintenace contract expires June 23, Switches are not covered
	Vendor with whom you have a maintenance contract in effect today.		Juniper
	Expiration Date of Vendor agreement		Juniper June 23
	Who manages the firewall		Vendor - Presidio
	What is your backup methodology?		Backup to tape every night then store offsite

## Questions



## Fiscal/Procurement/Contract Questions

- How do fiscal divisions relate to the push/pull initiative?
- What push/pull goals related to fiscal?
- Will agencies receive cost estimates for budgeting purposes? If so, how will they be received and what level of detail will be available?
- Will agencies need to provide funding information?
- Will IT procurements occur at the agency or state level?

## Fiscal/Procurement/Contract Questions

- What type of approval process is anticipated for IT purchases and/or contracts?
- Will there be IT reporting requirements related to budgets, funding, assets etc.?
- Will billing occur on the current DIS bill using the current billing system?
- Will agency level contracts be allowed?

## Technology Questions

- Who will control the replacement of IT equipment?
- Will agencies be allowed to keep local servers for file storage/backups?
- Once consolidated, will there be a mechanism to allow sharing data and access to various databases from the cloud or will this functionality be removed?
- What is the design for accessibility of IT staff to meet agency IT needs?

## Technology Questions

- Will agencies have access to programmers for agency specific application needs?
- Will there be a cost to the agency for maintaining existing and future applications?

More Questions?



Adjourn

DCO Resources on the DIS website:

<http://dis.publishpath.com/data-center-hosting-services>