



**ALVAREZ & MARSAL**  
SOUTH CAROLINA DEPARTMENT OF EDUCATION  
SCHOOL DISTRICT EFFICIENCY REVIEW

**PHASE 1 DISTRICTS**

**DRAFT**

April 1, 2017



## PROJECT OVERVIEW

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- This document contains observations and recommendations completed in conjunction with the School Efficiency Review conducted for the South Carolina Department of Education and pursuant to Part 1B Section 1 Proviso 1.92 of the FY2016-17 General Appropriations Act.
- The scope of the District Efficiency Review focused on the following central operations: **(1) finance; (2) human resources; (3) procurement; (4) transportation; and (5) overhead.**
  - Instructional, Food, Facilities and Technology functions were outside the scope of this efficiency review.
  - Facilities and Technology Assessments were completed in accordance with Part 1B of Proviso 1.92 and are separate from this report.
- A&M's review focused on identifying opportunities across the operational areas noted above that would yield:
  - 1. Increased Effectiveness and Efficiency**
    - Improved processes that would enable increased levels of service to the districts' students and teachers and enhance financial controls and financial stewardship of the District's funds and assets.
    - A&M considered potential opportunities that could be realized both in the current state and in a situation where the districts choose to collaborate with other nearby or like-minded districts.
  - 2. Cost Avoidance and / or Cost Savings**
    - Enhanced processes and structures that would enable the District to realize savings and/or avoid potential costs in the future, including consideration of potential investments required to mitigate ongoing cost exposure.

## PROJECT OVERVIEW (CONTINUED)

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- A&M conducted School Efficiency Reviews in two phases. Phase 1 includes 32 of 34 Plaintiff districts. (Clarendon 1 and Lexington 4 were excluded from the reviews due to the previously completed efficiency reports.) Phase 2 includes reviews of the 48 remaining districts.
- Between February 13 and March 18, 2017, A&M conducted 1-2 partial day site visits at the Phase 1 districts in order to meet with district personnel to understand their organizations, processes and approaches.
- The report identifies two themes that will help drive greater efficiency and effectiveness in school districts:
  1. **Modernize:** A series of one-time investments in technology that must be made in order to enhance processes and drive operational efficiency.
  2. **Collaborate:** Small districts must perform and support a fixed, minimum cost structure that does not allow them to benefit from economies of scale available to larger districts. There are a range of opportunities for cross-district collaboration that will realize efficiencies and generate the highest level of savings. *Efficiencies and effectiveness will increase as the number of districts collaborating increase.*
- This analysis presents two types of estimates:
  1. **Investments** in school district modernization necessary to drive future cost savings; and
  2. **Net savings** from implementation of a shared services model for functions within the scope of this study.

## PROJECT OVERVIEW (CONTINUED)

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### ➤ Sources of Data and Savings Estimates:

- A&M based the recommendations included in this report on data received from both the State and districts.
  - State provided data: FY16 revenue and expenditure data submitted by districts to the State, 3-year historical enrollment/average daily membership data, FY16 school transportation routes by district
  - District provided data: FY17 personnel rosters, FY16 disbursements by vendor, vendor contracts and invoices, and various operational and financial metrics tracked and maintained by individual districts.
- Many districts were unable to provide all of the data requested. As a result of data limitations, savings estimates calculated rely on aggregate expenditure data to derive estimates for potential savings.
- In addition, savings estimates are based on a series of assumptions about changes in process, staffing levels and technology (stand-alone and multi-district) that will vary upon implementation. Variation from the amounts presented as net savings are likely in the event the State of South Carolina implements a shared services model.
- In addition, savings estimates (especially related to cross-district collaboration) will likely be refined upon completion of review of larger districts that are included in Phase 2.

## PROJECT OVERVIEW (CONTINUED)

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### ➤ **State-wide Benchmarking Data:**

- A&M has compiled a robust set of benchmarks and metrics to compare staffing and spending levels at each of the Phase 1 districts. Upon completion of the review of all districts in the State, A&M will provide the State Education Department with access to a live database and analytics dashboard to enable cross-district analytics and gain further insights into the rationale behind A&M's observations and recommendations.

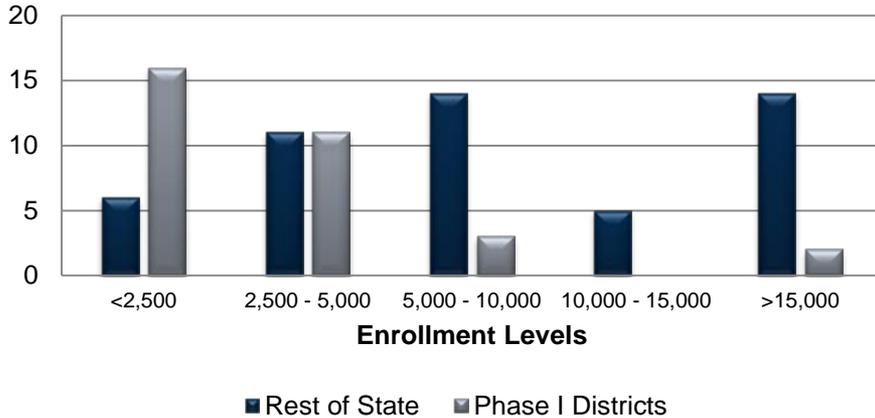
### ➤ **Implementation:**

- Implementation of certain recommendations included in this report will require one-time investments in order to achieve savings. A&M has developed preliminary estimates for these costs that will likely need to be refined as additional information regarding decisions on implementation plans and approach become available.

PROFILE OF PHASE 1 DISTRICTS

Student Population

Number of Districts By Enrollment Level



Enrollment

Districts	# of Districts	Total Enrollment		
		2015	2017	% Change
<b>Phase I:</b>				
All (excl. Berk & FSD1)	30	79,285	77,092	(2.8%)
Berkely and FSD1	2	47,122	48,933	3.8%
<b>Phase II:</b>				
Rest of State	50	601,655	616,383	2.4%
	<b>82</b>	<b>728,061</b>	<b>742,407</b>	<b>2.0%</b>

Spending within Scope of Efficiency Review



14% of total spending within Phase 1 districts is within the scope of the efficiency review.

A&M Functional Area	Spend (\$M)
Finance	\$12.0M
HR	\$7.2M
Overhead	\$16.3M
Transportation	\$36.2M
Procurement	\$192.5M

Key Takeaways of Phase I Review

- Of the 32 districts reviewed during Phase 1, all but five districts have enrollment less than 5,000 students.
- Excluding Berkeley and Florence 1, enrollment in the Phase 1 districts has declined 2.8% over the past three years, while enrollment has increased across the rest of the State by 2.4%.
- The functional areas under review for efficiencies represent 14% of the total spend of the Phase 1 districts, with procurement making up the majority of this total.

## COMMON OBSERVATIONS ACROSS DISTRICTS

	Current State
<b>District Size and Minimum Costs</b>	<ul style="list-style-type: none"> <li>• <b>Minimum Cost Base:</b> Every district, regardless of size, must perform and support a fixed, minimum level of functional activities required to provide the services encompassed within this study – Finance, Human Resources, Procurement, Transportation and Overhead.</li> <li>• <b>Resource Utilization:</b> Many of the smaller districts that have been subject to Phase I review leverage resources within and across functional areas and often opt to have resources wear multiple hats in order to complete key processes.</li> </ul>
<b>Opportunities for Improvement</b>	<ul style="list-style-type: none"> <li>• <b>Modernize / Process Improvements:</b> The districts have opportunities to implement new technology applications and streamline process in order to enhance overall effectiveness of support functions. <ul style="list-style-type: none"> <li>✓ <i>Investments:</i> Implementation of improvements on a district by district basis, will likely require investment in technology and people.</li> <li>✓ <i>Staff Capabilities:</i> Many of the districts reviewed lack the necessary experience or skill sets to establish effective practices in internal controls, compliance, billing, accounts payable, accounting and budgeting. Establish a centralized shared service center will enable hiring and development of specialized staff.</li> <li>✓ <i>Impacts:</i> The impact of these improvements will likely result in a combination of service level improvements that free up resources to focus on more value-added support and yield cost-avoidance and cost savings from strengthened internal controls and improved processes.</li> </ul> </li> <li>• <b>Collaboration / Maximizing Efficiencies:</b> Given the small size and spending base of individual districts, there are a range of collaboration opportunities for cross-district collaboration that will provide the greatest ability to realize efficiencies and generate the highest level of savings.</li> </ul>

## COMMON OBSERVATIONS: INDIVIDUAL SCOPE AREAS

	Current State
<b>Finance</b>	<ul style="list-style-type: none"> <li>• <b>Gaps in Financial Management:</b> Staffing levels and processes contribute to Material Weaknesses in internal controls; 6 of 32 districts had Material Weaknesses, 4 of 32 districts had significant deficiencies, and 13 of 32 districts had other findings noted in their audit reports in the past two years alone; 1 District was in financial distress three years ago and now has a financial monitor and a second is being managed by the state.</li> <li>• <b>Limited Staffing / Manual Processes:</b> Limited staffing and under-investment and under-utilization of technology contribute to high numbers of internal control weaknesses and gaps in financial processes.</li> </ul>
<b>Human Resources</b>	<ul style="list-style-type: none"> <li>• <b>Limited Staffing / Manual Processes:</b> Many smaller districts have extremely limited levels of resources that are fully dedicated to Human Resources. In addition, there are varying levels of utilization of technology that support candidate sourcing through on-boarding.</li> <li>• <b>Challenges with Recruiting and Retention:</b> General challenges associated with teaching shortages are exacerbated by varied pay scales, as average teacher salaries of smaller districts generally lag larger districts. There is a reliance on agencies for placement of hard to staff positions and use of international teachers to fill hundreds of vacancies [approx. 193 across the 32 districts].</li> </ul>
<b>Transportation</b>	<ul style="list-style-type: none"> <li>• <b>Transportation Management:</b> The State directly pays for costs of bus purchasing, maintenance, fuel costs and a portion of driver salaries. The majority of districts are grappling with a shortage of drivers.</li> <li>• <b>Manual Routing:</b> Districts generally do not have routing software that can be used to help drive routing efficiencies.</li> </ul>
<b>Procurement</b>	<ul style="list-style-type: none"> <li>• <b>Staffing and Organization:</b> Limited, if any, resources dedicated to Procurement.</li> <li>• <b>Strategic sourcing:</b> Low leverage with vendors due to low purchasing volumes. Contracts are negotiated without volume discounts / rebates. There is significant off-contract purchasing and limited collaboration across districts.</li> </ul>
<b>Overhead</b>	<ul style="list-style-type: none"> <li>• <b>Staffing and Organization:</b> There are generally 1-3 heads in the office of the Superintendent, including the Superintendent.</li> <li>• <b>Collaboration:</b> Varying levels of informal collaboration with other Superintendents.</li> </ul>

## RECOMMENDATIONS

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*School Districts' efficiencies identified during the review can best be summarized into two key categories: Modernize and Collaborate*

### Modernize School District Operations

- Invest in technology
  - New state-wide bus routing software
  - Purchase new or expand existing technologies to minimize “paper-pushing”
  - Drive data quality improvements across district financial and personnel systems
- Streamline people and processes around new technology

### Collaborate Across Districts

- Districts can achieve greater economies of scale in administrative (Finance and HR) and procurement functions
  - Regional shared service model that includes Finance, HR and procurement (at a minimum)
  - Strengthened purchasing collaboration through dedicated volume
- Collaboration will not only drive cost savings, but will increase the effectiveness of the services

**MODERNIZATION RECOMMENDATIONS**

*There are a number of steps Districts can take to modernize and improve the effectiveness of their overall processes and operations on a stand-alone basis.*

MODERNIZATION RECOMMENDATIONS			
FINANCE	HUMAN RESOURCES	PROCUREMENT	TRANSPORTATION
<p><b>System Enhancements:</b> Update software versions and / or add modules to financial systems to facilitate automated and purchase-to-pay processes, along with integrated timekeeping and payroll processes with position control functionality.</p> <p><b>Process Improvements:</b> Modernize processes to limit manual activities and strengthen internal controls</p> <p><b>Staffing/Organization:</b> Train/cross-train personnel on key financial functions to increase the capabilities and effectiveness of the teams.</p>	<p><b>System Enhancements:</b> Implement new technologies to automate HR processes such as integrated applicant sourcing, tracking and on-boarding.</p> <p><b>Process Improvements:</b> Formalize plans to implement and enhance incentive programs to help navigate teaching shortages and increase recruitment and retention rates.</p> <p><b>Staffing and Organization:</b> Train/cross-train personnel on recruiting, talent management and professional development strategies.</p>	<p><b>Process Improvements:</b> Leverage state contracts and group purchasing organizations to optimize spend.</p> <p>Enable other districts to purchase off individually negotiated contracts.</p> <p>Negotiate discounts / rebates for tiered levels of spending using minimum buying commitments as appropriate.</p> <p>Monitor compliance with major contracts and analyze spending distribution on an ongoing basis to identify opportunities for potential savings</p>	<p><b>System Enhancements:</b> Implement new routing software, GPS, and security cameras on all buses.</p> <p><b>Process Improvements:</b> Staggered Bell Times: - Complete analysis (in conjunction with use of routing software) to evaluate potential financial benefits of using routing software.</p> <p><b>Staffing / Organization:</b> Implement staggered bell times and routing software to make routes more efficient and reduce the number of bus drivers necessary for operation.</p>

**COLLABORATION RECOMMENDATIONS**

*Organizational effectiveness and cost savings opportunities can increase through formal collaboration efforts between districts.*

REGIONAL COLLABORATION OPPORTUNITIES			
FINANCE	HUMAN RESOURCES	PROCUREMENT	OTHER AREAS
<p><b>Accounts Payable and Payroll:</b> Shared Processing; Standardized and automated workflow on approvals</p> <p><b>Potential to add in:</b></p> <ul style="list-style-type: none"> <li>Accounting Entries</li> <li>Financial Reporting</li> <li>General Oversight</li> <li>ERP Systems</li> <li>Grant Compliance and Claiming</li> </ul>	<p><b>Benefits Coordination:</b> Shared Processing and Support</p> <p><b>Potential to add in:</b></p> <ul style="list-style-type: none"> <li>Intl. Recruiting: H1B Process or collaborative</li> <li>System Licenses for Recruiting, Substitute Management, and on-boarding</li> <li>Sharing of instructional resources across varying classroom models</li> </ul>	<p><b>Purchasing Coordination:</b> Collaborate on market intelligence, pricing opportunities, RFP management, contract negotiations, contract management and minimum buying commitments.</p> <p>Capitalize on volume discounts and rebates.</p> <p>Shared analysis of spending, monitoring and optimization of pricing.</p>	<p><b>Transportation:</b> Sharing of administrative resources</p> <p><b>Facilities/ Maintenance:</b> Shared staffing of key maintenance positions across districts (e.g, HVAC, Electrician, Plumbing)</p> <p><b>Technology:</b> Shared oversight and support functions</p> <p><b>Curriculum:</b> Shared research and development functions</p>

*Governance structures, service level agreements and implementation plans will vary based upon the range of services included and the districts participating in a collaborative model.*

## APPROACH TO SAVINGS

### GENERAL APPROACH TO ESTIMATING INVESTMENTS AND SAVINGS

- Investments and cost savings were estimated based on interviews with District personnel across each functional area and using financial and operational data received from both the state and each district.
- Data provided was benchmarked and analyzed to understand costs, productivity and utilization.
- Actual savings may vary based on implementation decisions.

#### FINANCE AND HUMAN RESOURCES

- A&M conducted interviews and analyzed personnel rosters and expenses to understand the intersection of people, process and technology within each district.
- A&M estimated a range of potential synergies from district collaboration based on average district spend in key finance and HR functional areas. Synergies will be realized when participating district resources are pooled in a Shared Service Center. For purposes of this analysis, A&M calculated the District level savings by estimating the level of resources that would be required to support two average sized smaller districts at the low end and five districts of varying sizes at the high end.

#### PROCUREMENT

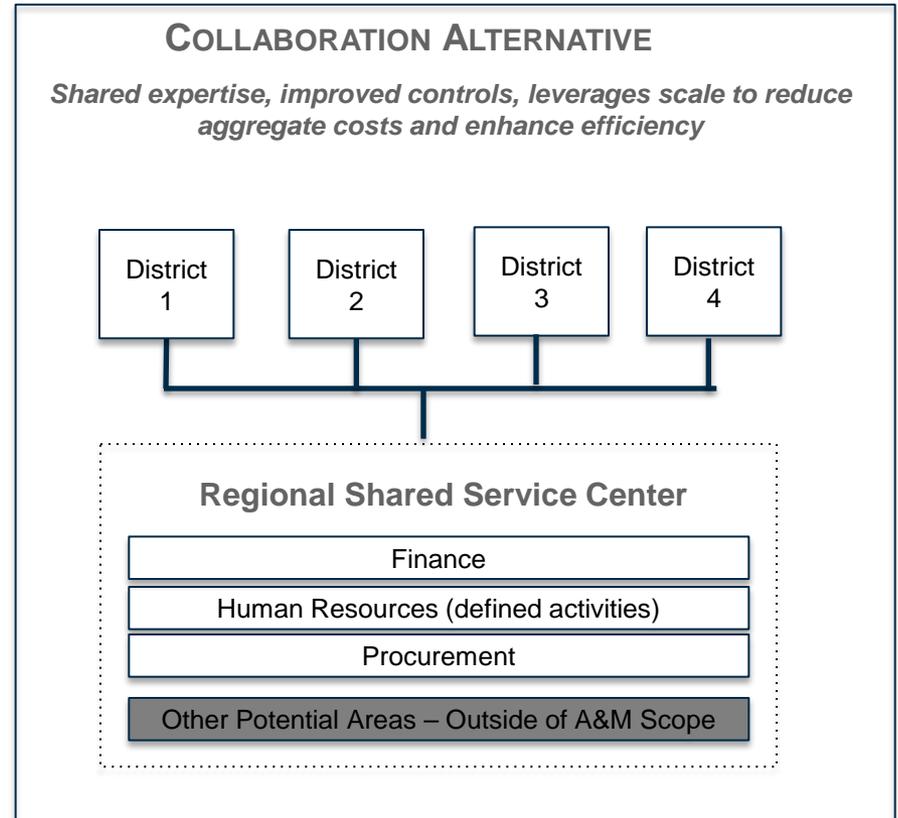
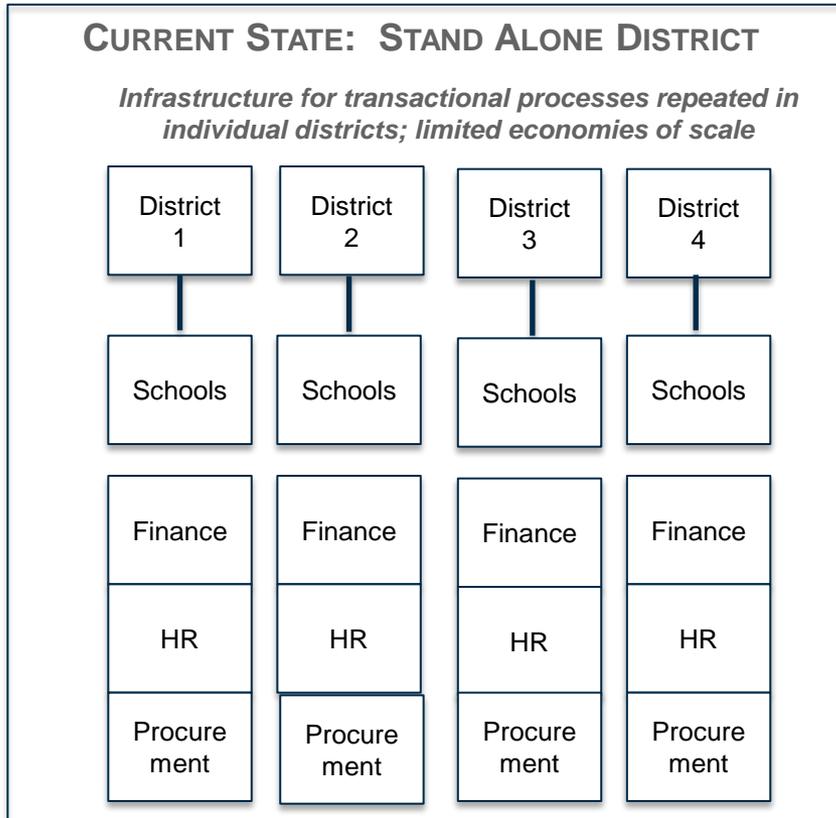
- A&M reviewed the District disbursement register and reviewed a limited sampling of vendor invoices to gain an understanding of the Districts procurement spend.
- On a limited basis, A&M reviewed rates paid to individual vendors by multiple districts.
- In order to estimate savings, A&M leveraged the information gathered above and then applied potential savings rates to key spend categories. Savings rates were based upon past experience that our clients have achieved by partnering with A&M on strategic sourcing.

#### TRANSPORTATION

- A&M used data provided by the state to analyze the district route mileage, frequency, timing, and volume to estimate potential efficiencies available through the implementation of routing software and staggered bell times.
- Benchmarks were established based on districts currently using routing software and staggered bell times.
- Savings were estimated based on a target benchmark for the District that took into consideration the location, population and rural profile of the each district.
- Estimates include savings for bus drivers, fuel, maintenance and buses.

## COLLABORATION: SHARED SERVICE MODELS

*Given the limited spending across the different areas within scope and the fixed cost requirements of these functions, it is necessary to consider collaboration alternatives when looking for ways to optimize efficiency.*



*Collaboration provides a pathway to optimizing effectiveness and efficiencies across processes, capturing economies of scale, increasing standardization and addressing common challenges faced by all districts.*

## SHARED SERVICES MODEL: SAVINGS APPROACH

Cost savings potential from a Shared Services Model will vary greatly depending upon: (1) the number of districts; (2) sizes of districts opting to work together and (3) the services functions that are included in the shared services center.

In order to develop a range of savings that a collaboration model would yield, A&M considered collaborations of multiple types and amounts of districts. An example of the range of options considered for financial management collaboration is shown below.

	Financial Management Collaboration: Two District Collaboration [Both Small]		
	Current State	Collaboration Model	Savings
# of Districts	2	2	NA
Total ADM	2,500	2,500	NA
Total FTEs <sup>(1)</sup>	4.75	4.00	0.75
Total Spend <sup>(1)</sup>	\$468,856	\$427,128	\$41,728
Savings %			8.9%

(1) Total FTEs and Total Spend based upon average FTEs of average spend of two small districts (less than 2,500 enrollment). Actual results may vary depending upon districts opting to collaborate.

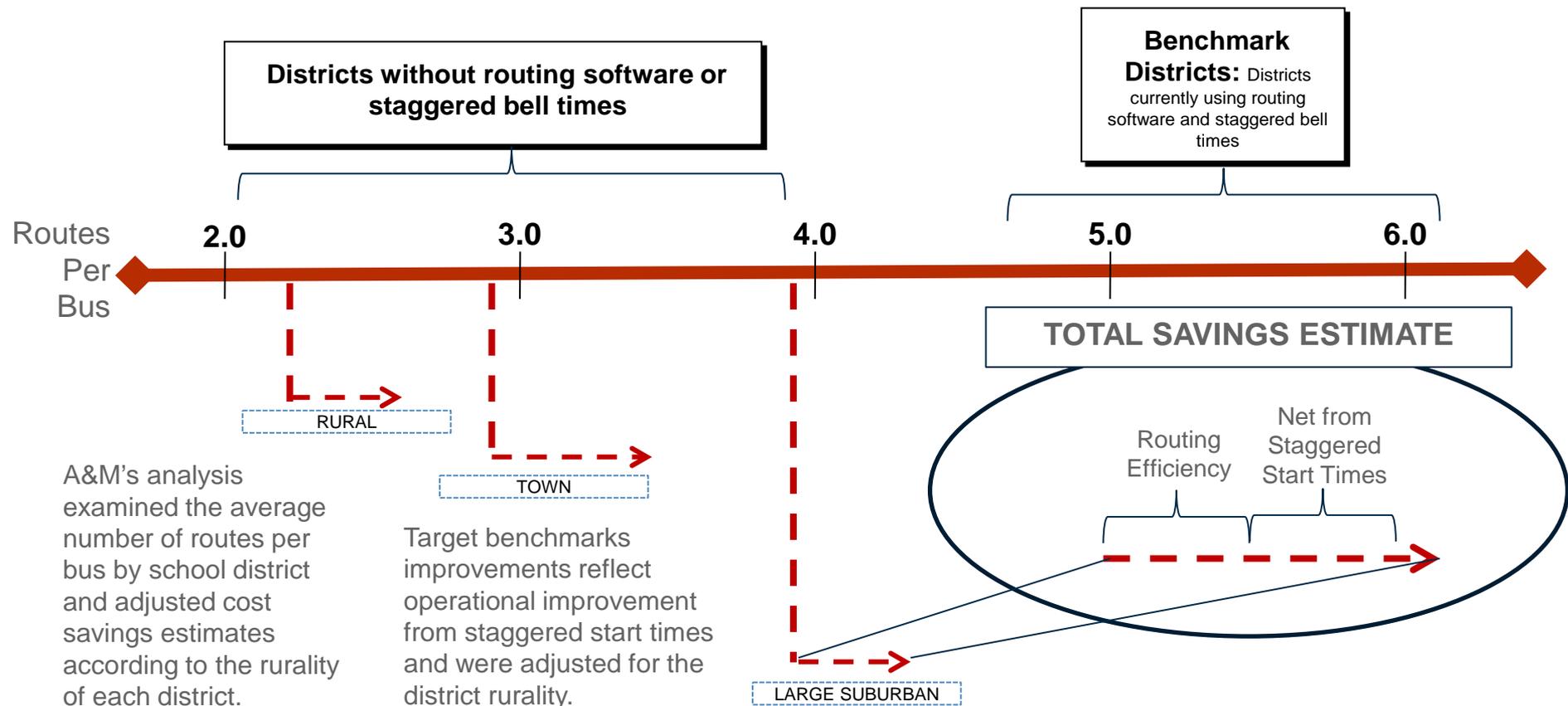
	Financial Management Collaboration Five Districts [1 Large, 1 Med, 3 Small]		
	Current State	Collaboration Model	Savings
# of Districts	5	5	NA
Total ADM	21,000	21,000	NA
Total FTEs <sup>(2)</sup>	18.9	13.0	6.0
Total Spend <sup>(2)</sup>	\$2,409,840	\$1,684,478	\$725,326
Savings %			30.1%

(2) Total FTEs and Total Spend based upon average FTEs and average spend of one large district (>10,000 ADM), one medium district (between 5,000 and 10,000 ADM) and 3 small districts (less than 2,500 enrollment)

**Preliminary estimates, excluding costs of one time investments related to technology and organizational changes, of potential savings from collaboration of financial management functions across districts range from 8.9% to 30.1%.**

**TRANSPORTATION ROUTING: SAVINGS APPROACH**

*Implementation of new routing software can help districts optimize existing routes and evaluate alternative routing strategies such as staggered bell times.*



**TRANSPORTATION ROUTING: SAVINGS APPROACH (CONTINUED)**

**Savings from Routing Efficiencies**

A&M analyzed districts’ route mileage, frequency, timing, and volume to estimate potential efficiencies available through the implementation of routing software.

This analysis separates the district and state portions of estimated cost savings according to the amount of reimbursement the state provides to each district.

Fuel and maintenance savings are based on state cost per vehicle mile.

The reduction in buses is the result of a reduction in the need to purchase new buses per year across the plaintiff districts. It is important to note that variances in population growth across the state could impact the estimated reduction in fleet vehicles needed.

**DISTRICT EXAMPLE OF COST SAVINGS OPPORTUNITIES FROM ROUTING SOFTWARE**

DISTRICT A	VOLUME	UNIT	DISTRICT	STATE
<b>DRIVERS</b>	5.0	\$ 19,390	\$ 55,051	\$ 37,238
<b>FUEL</b>	43,560	\$ 0.15	\$ -	\$ 6,749
<b>MAINTENANCE</b>	43,560	\$ 0.34	\$ -	\$ 14,595
<b>BUSES (COST AVOIDANCE)</b>	1.0	\$ 60,000	\$ -	\$ 60,000
<b>TOTAL</b>			\$ 55,051	\$ 118,582

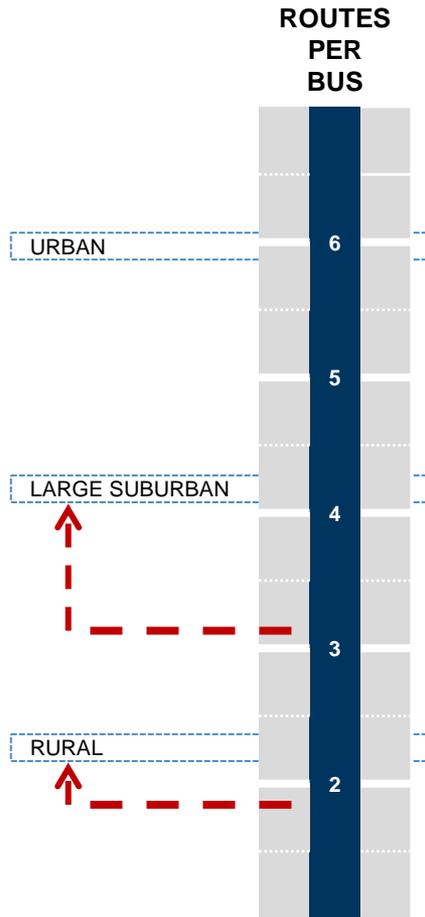
***Cost savings from more efficient routing are significant, with savings shared between the districts and the State.***

**TRANSPORTATION ROUTING: SAVINGS APPROACH (CONTINUED)**

**Savings from Increased Utilization:**

A&M’s analysis examined the average number of routes per bus by school district and adjusted cost savings estimates according to the rurality of each district.

Target benchmark improvements are shown in the graphic to the right reflecting operational improvement and adjusting for district rurality.



**DISTRICT EXAMPLE COST SAVINGS OPPORTUNITIES FROM STAGGERED SCHOOL START TIMES**

DISTRICT A	VOLUME	UNIT	DISTRICT	STATE
<b>DRIVERS</b>	2.0	\$ 19,390	\$ 23,133	\$ 15,647
<b>FUEL</b>	-	\$ 0.15	\$ -	\$ -
<b>MAINTENANCE</b>	2.0	\$ 4,138	\$ -	\$ 8,276
<b>BUSES (COST AVOIDANCE)</b>	-	\$ 60,000	\$ -	\$ -
<b>TOTAL</b>			\$ 23,133	\$ 23,923

*Staggered bell times would help reduce routes and the number of buses required.*

## COLLABORATION: PURCHASING COORDINATION AND AGGREGATION

Given the size of many of the individual districts, there is little leverage to negotiate best pricing or invest in resources needed to develop or implement a defined procurement strategy. These districts would benefit from greater purchasing coordination, aggregation of buying power and minimum commitments in order to improve overall pricing.

### EXAMPLES OF STATE-WIDE PROCUREMENT OPPORTUNITIES

#### Example 1: Differentiated Pricing in Professional Services

District	Labor Rate Mark-up for Temporary Staff
District A	0.43 to 0.49
State Contract	0.40
District B	0.39

- At a minimum, many districts could benefit from leveraging State contracts. Districts could additionally benefit from favorable pricing negotiated by other districts.

#### Example 2: Volume Discounts and Rebates with a Technology Vendor

Minimum \$ Value	Discount
\$50,000	1%
\$100,000	2%
\$200,000	4%
\$500,000	6%
\$1,000,000	8%

- Nearly all districts could benefit from additional discounts by aggregating spend statewide.

## PURCHASING COORDINATION AND AGGREGATION: SAVINGS APPROACH

In order to develop a range of savings that a purchasing consortium would yield, A&M estimated savings based on current district spend and applied savings ranges based on the experience that our clients have achieved by partnering with A&M on strategic sourcing.

To determine actual savings amounts by District, A&M applied the savings ranges to FY16 expenditure data from the state. The expenditure data from the State is summarized at function and major object codes.

Given the approach to estimate savings was a top-down approach rather than a bottom-up approach of savings by vendor, the estimates of savings achieved through purchasing coordination are high-level estimates.

	Range of Savings Based A&M Strategic Sourcing Experience	
	Low	High
Building Services	2.6%	5.8%
Non-Instructional Supplies	2.0%	4.4%
Instructional Supplies	2.0%	4.4%
Instructional Services	4.8%	8.0%
Support Services	2.1%	5.0%
Technology	2.7%	5.0%
Other	3.0%	5.8%
Overhead Services	2.7%	5.4%
Transportation Services	2.2%	6.8%

*Preliminary estimates of potential savings from increased collaboration of purchasing across districts range from 2.0% to 5.1%.*

## CONCLUSION: ESTIMATED ONE-TIME INVESTMENT AND ANNUAL SAVINGS

*Preliminary investment and savings estimates for the Phase 1 districts are shown below. These estimates are subject to change based upon additional analysis and finalization of Phase 2 district reviews.*

	MODERNIZE Est. One-Time Investment		COLLABORATE Est. Net Annual Savings	
	Low	High	Low	High
Finance	\$350,000	\$800,000	\$900,000	\$3,700,000
Human Resources	250,000	500,000	0	700,000
Procurement	0	0	4,000,000	10,000,000
Transportation – Districts	0	0	1,200,000	1,800,000
<b>District Total</b>	<b>600,000</b>	<b>1,300,000</b>	<b>6,100,000</b>	<b>16,200,000</b>
Transportation – State	400,000	1,600,000	1,100,000	2,300,000
<b>Phase I Total</b>	<b>\$1,00,000</b>	<b>\$2,900,000</b>	<b>\$7,200,000</b>	<b>\$18,500,000</b>

*Investment and savings ranges shown above reflect preliminary estimates of impacts of A&M recommendations. These amounts are subject to change based upon the implementation strategies selected. In addition, potential costs associated with additional planning activities are not reflected in these estimates.*

**CONCLUSION: ESTIMATED FIVE YEAR IMPACT**

*The preliminary five year impact of investment and savings estimates for the Phase 1 districts are shown below. These estimates are subject to change based upon additional analysis and finalization of Phase 2 district reviews.*

*Actual savings amounts realized during the five year period will be subject to how quickly initiatives are implemented and implementation strategies selected.*

	Estimated 5 Year Impact	
	Low	High
<b>Savings by Area</b>		
Finance	\$4,500,000 -	\$18,500,000
Human Resources	0 -	3,500,000
Procurement	20,000,000 -	50,000,000
Transportation – Districts	6,000,000 -	9,000,000
<b>District Total</b>	<b>30,500,000</b>	<b>81,000,000</b>
Transportation – State	5,500,000 -	11,500,000
<b>Phase I Savings Before Investment</b>	<b>\$36,000,000</b> -	<b>\$94,000,000</b>
District Modernization Costs	<u>(600,000)</u>	<u>(1,300,000)</u>
Incremental State Costs	<u>(400,000)</u> -	<u>(1,600,000)</u>
<b>Net Savings</b>	<b><u>\$35,000,000</u></b>	<b><u>\$89,600,000</u></b>