Driving Innovation into School Transportation Operations

Workshop for the Washtenaw County, School Boards Association

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TRANSPORTATION STRATEGIES

Releasing Potential

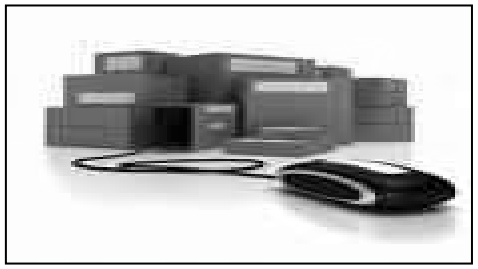
XLC XAVIER LEADERSHIP CENTER

XAVIER UNIVERSITY

The Sodrel Group – 12 transportation companies

A 4th Generation Family Company – Operating over a 100 Years With 900+ Employees

Sodrel Logistics



TRANSPORTATION STRATEGIES

Releasing Potential

STUDENT***TRANSIT***

Sodrel Truck Lines

Free Enterprise System

Star of America

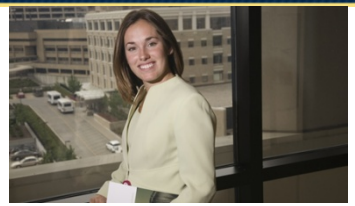
There are also 4 additional service companies in the following areas:
Vehicle Leasing, Maintenance, Real Estate and Travel Services

The XLC resource network

COLLEGE OF SOCIAL SCIENCES, HEALTH, & EDUCATION

Graduate Program in Human Resource Development

Graduate Program in Nursing



Graduate Program in Health Services Administration

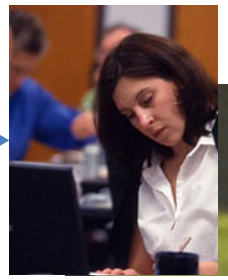
Graduate Programs in Education and Education Administration

Network of 100 experienced consultants, exec-utives, practitioners, MD's and Superintendents

XLC XAVIER LEADERSHIP CENTER

Leadership Programs
Certificates,
Immersion Learning
Simulations
Facilitated Learning
Practical Workshops
Coaching and Consulting

14th ranked MBA Program

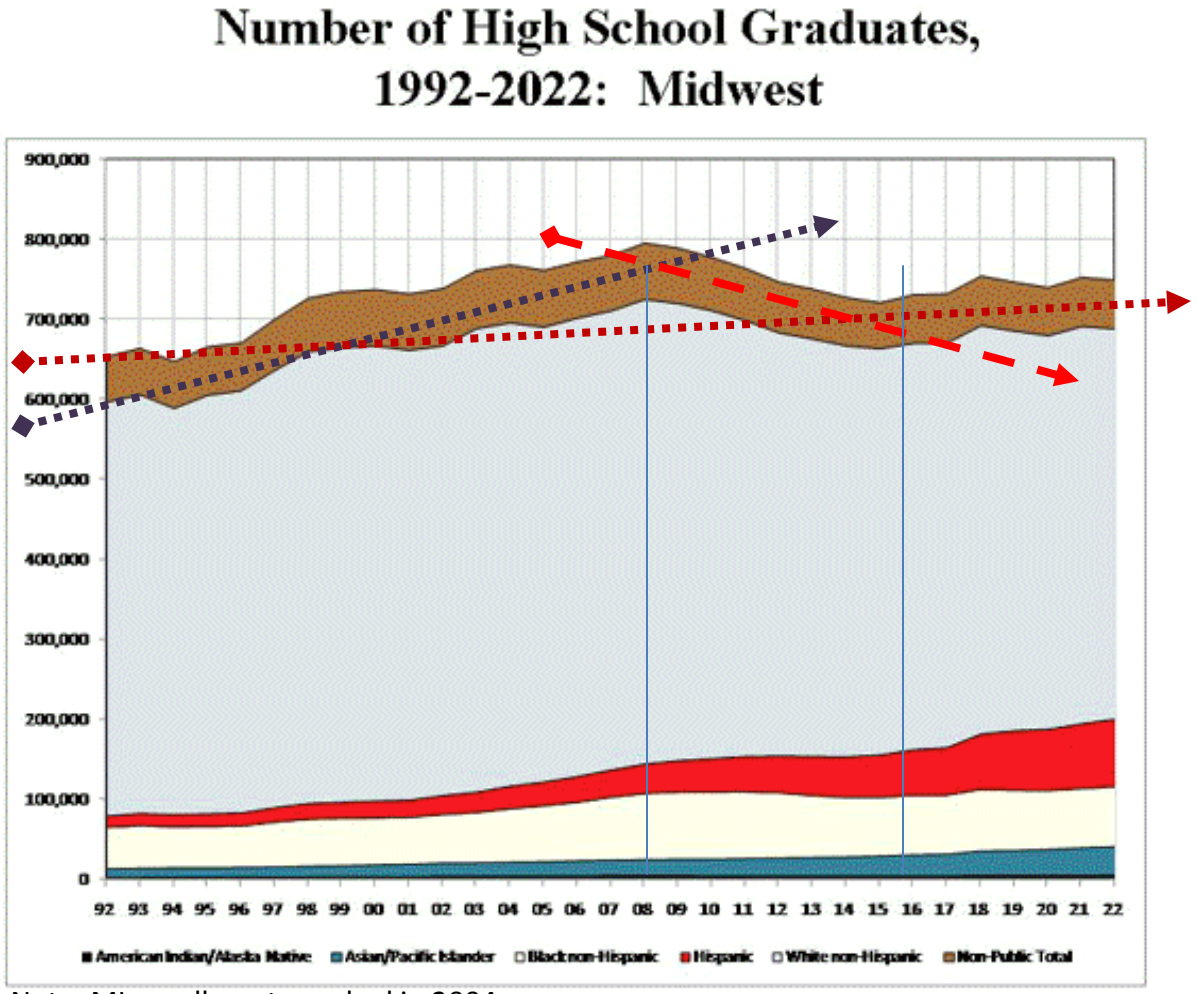


Executive MBA Program

WILLIAMS COLLEGE OF BUSINESS

What is the root cause of the current “crisis”?

- Is the current crisis temporary, or is there **tectonic shift** occurring?
- If the latter, what must we do?
- What are the long term implications?



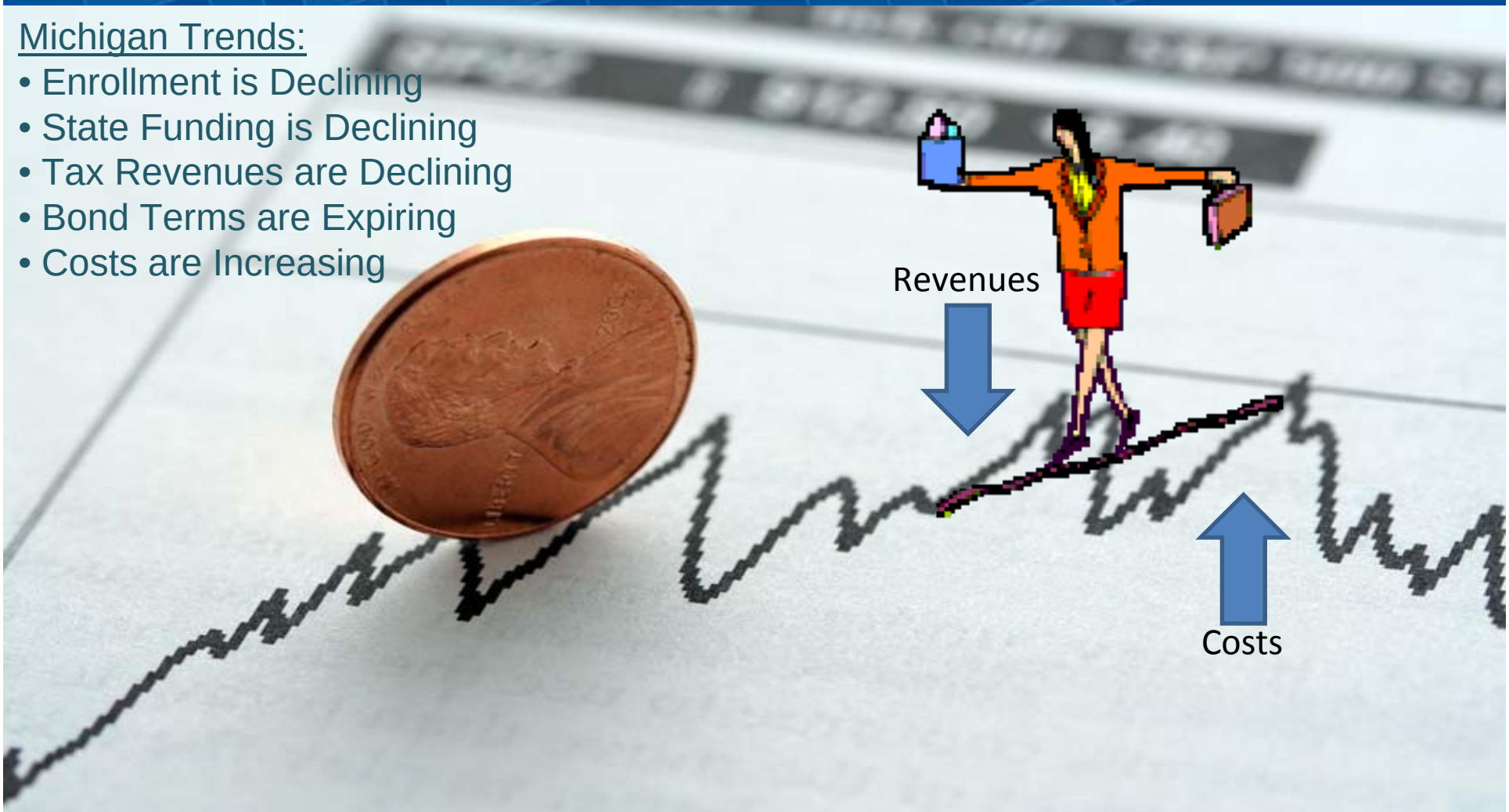
Note: MI enrollments peaked in 2004

Source: WICHE/The College Board

Overview

Michigan Trends:

- Enrollment is Declining
- State Funding is Declining
- Tax Revenues are Declining
- Bond Terms are Expiring
- Costs are Increasing



Market drivers suggest declining revenues and a **8 yr budget** problem.

The logical progression

Where We've Been | **Where We Are** | **Where We Must Go**

Phase 1 — Cut the Easy Stuff

- Pay for play
- Small budget cuts
- Freeze hiring
- Reduce capital investment

Phase 2 — Deeper, Painful Cutting

- Privatize custodial, transportation
- Re-open labor agreements
- Implement staff cuts

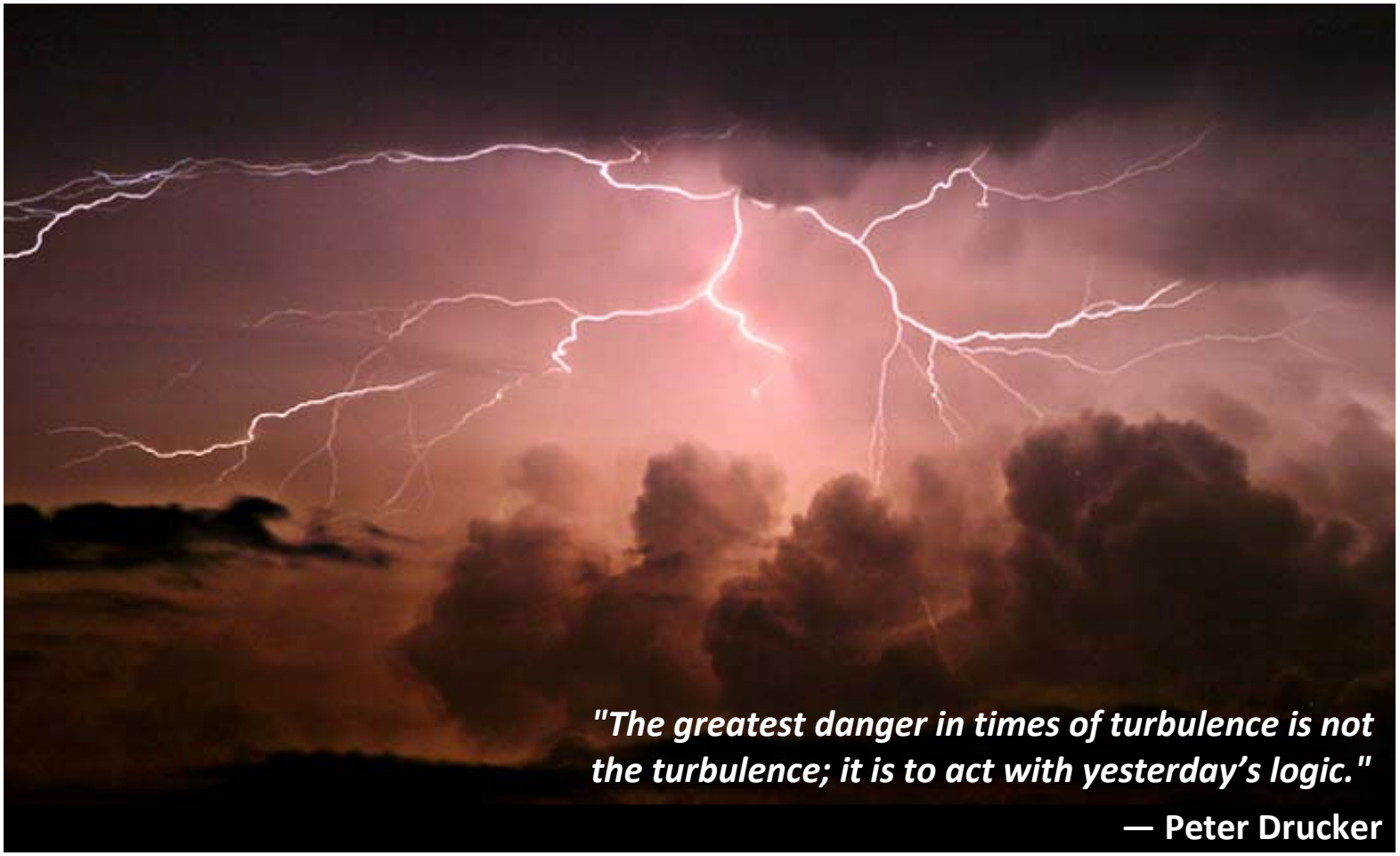
Phase 3 — Structural Change

Look for new ways of doing business:

- Cost savings through systems redesign
- New sources of revenue

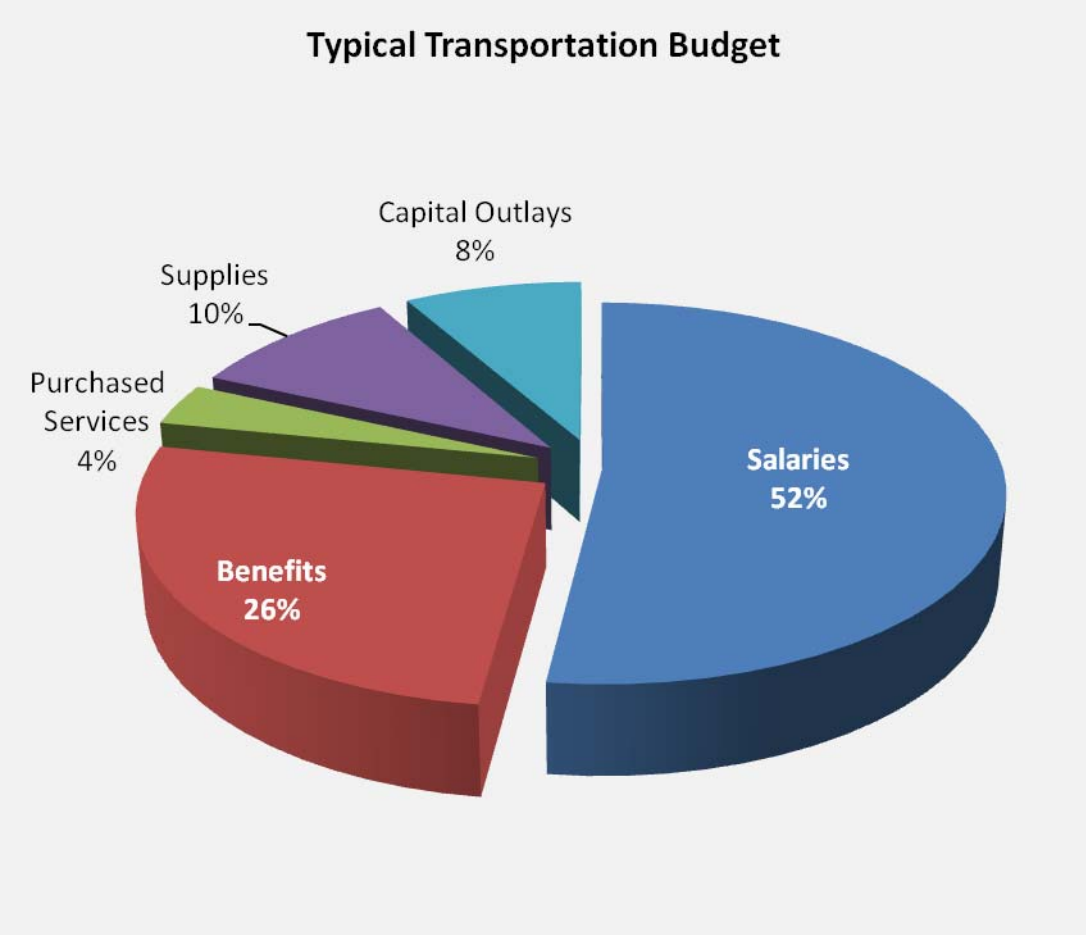
These are short term, incremental. (they inflict pain WITHOUT solving the "8-year problem")

On Leading Change



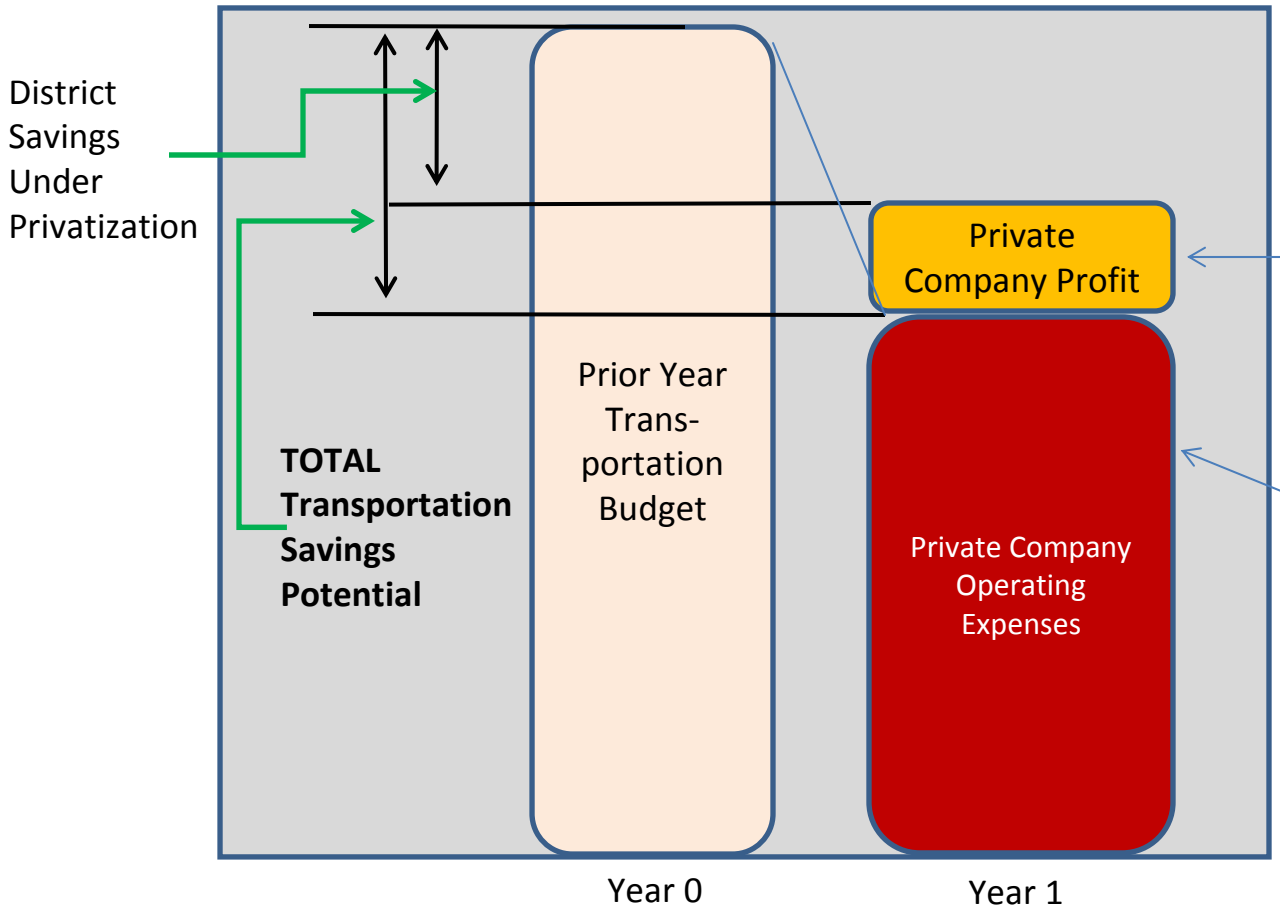
Let's consider privatization

Given this budget composition. . .



What is the logical path for a private company to reduce costs?

On the surface, privatization seems a reasonable answer:



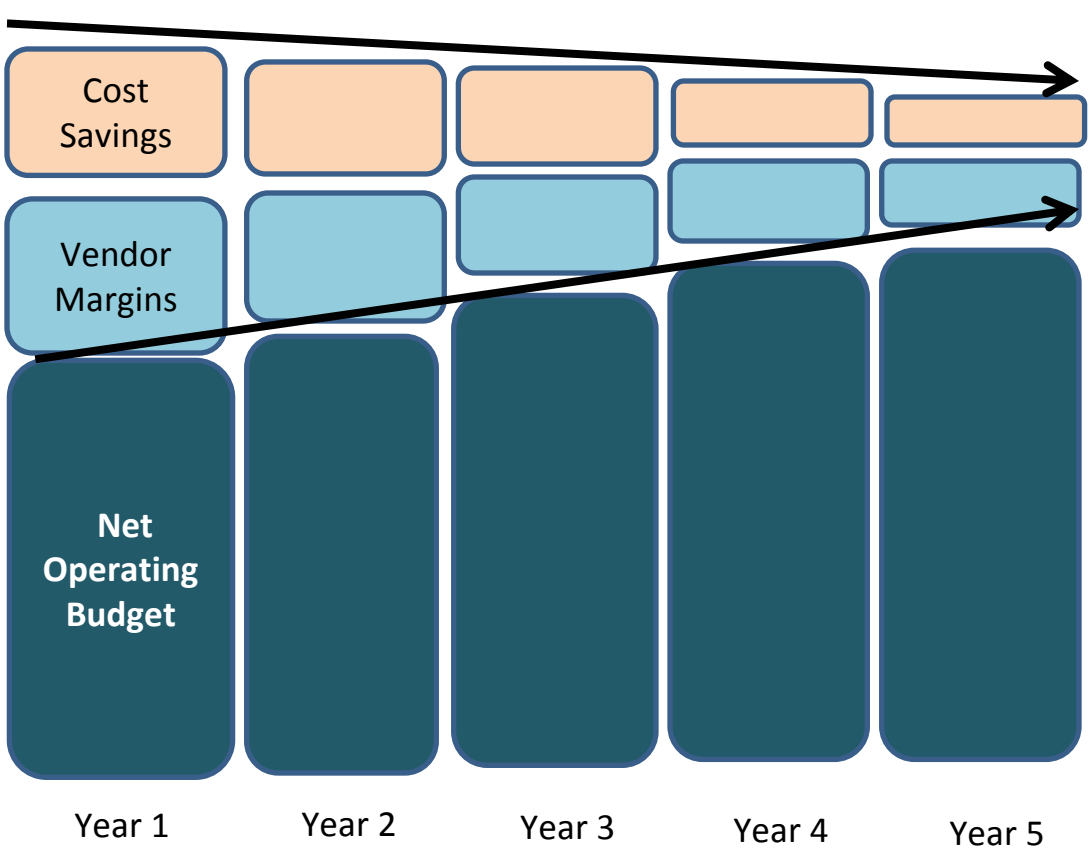
If districts could operate <u>like a private company</u>, **they could also access this saving**.

These expenses are less *<u>MAINLY</u>* due to a different wage and benefit approach.

- Part time workers
- Less Benefits
- Alternate Wage Scale

Operating improvements generate savings <u>for the private company, not the school district</u>

We don’t see privatization as a viable long-term solution



Funding Level Decreases

Savings Disappear Rapidly

Vendor Margins Decrease or…….

Costs Increases:
Fuel, Buses, Parts, Utilities
Labor
Benefits (if applicable)
Support Services

<u>Conundrum</u>

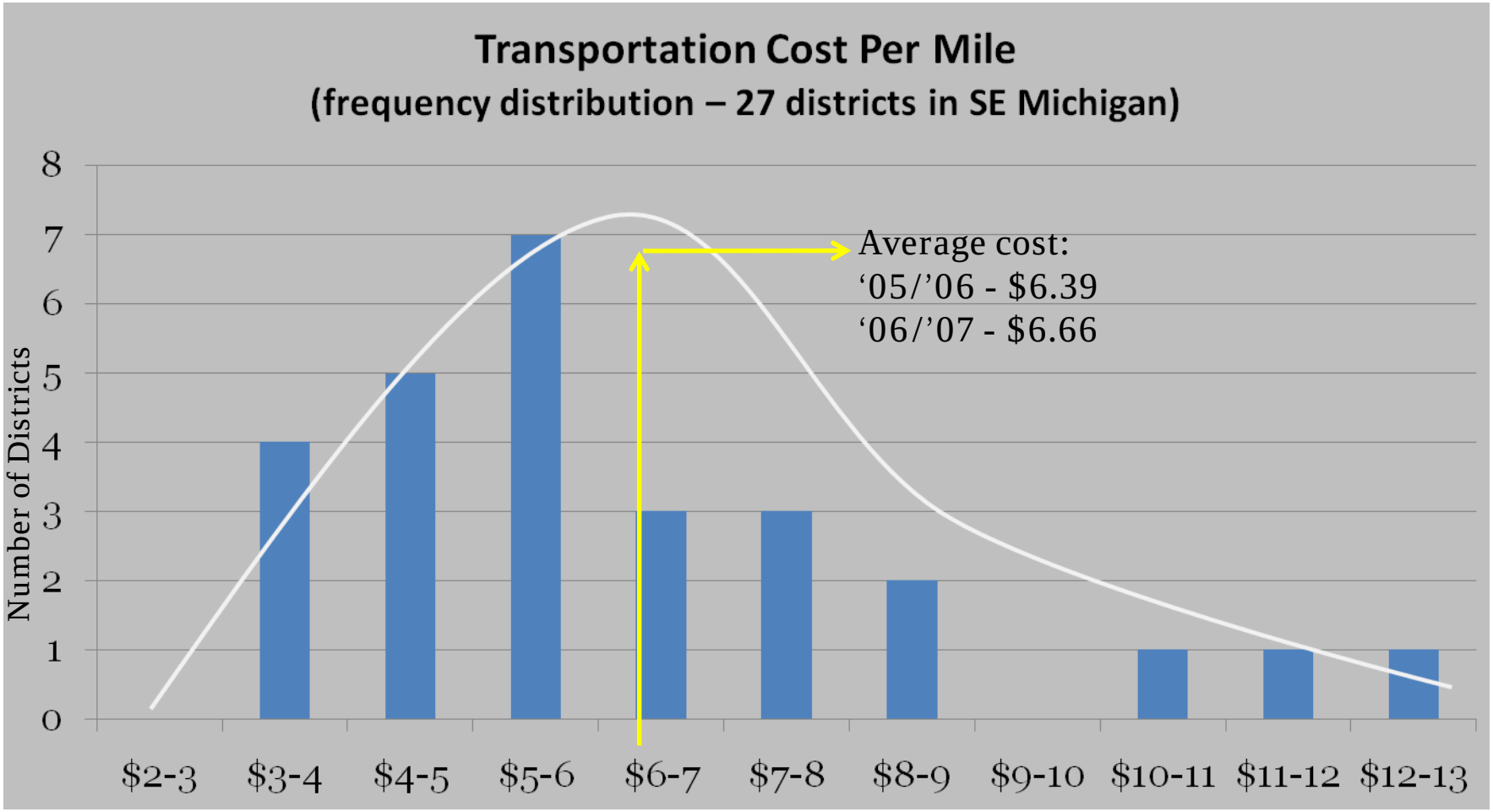
Vendor has 3 choices:

- Maintain Profitability and make **compromises in operating budget**
- Accept lower margins
- Ask for budget increase

COLLABORATIVE
Cost Reduction

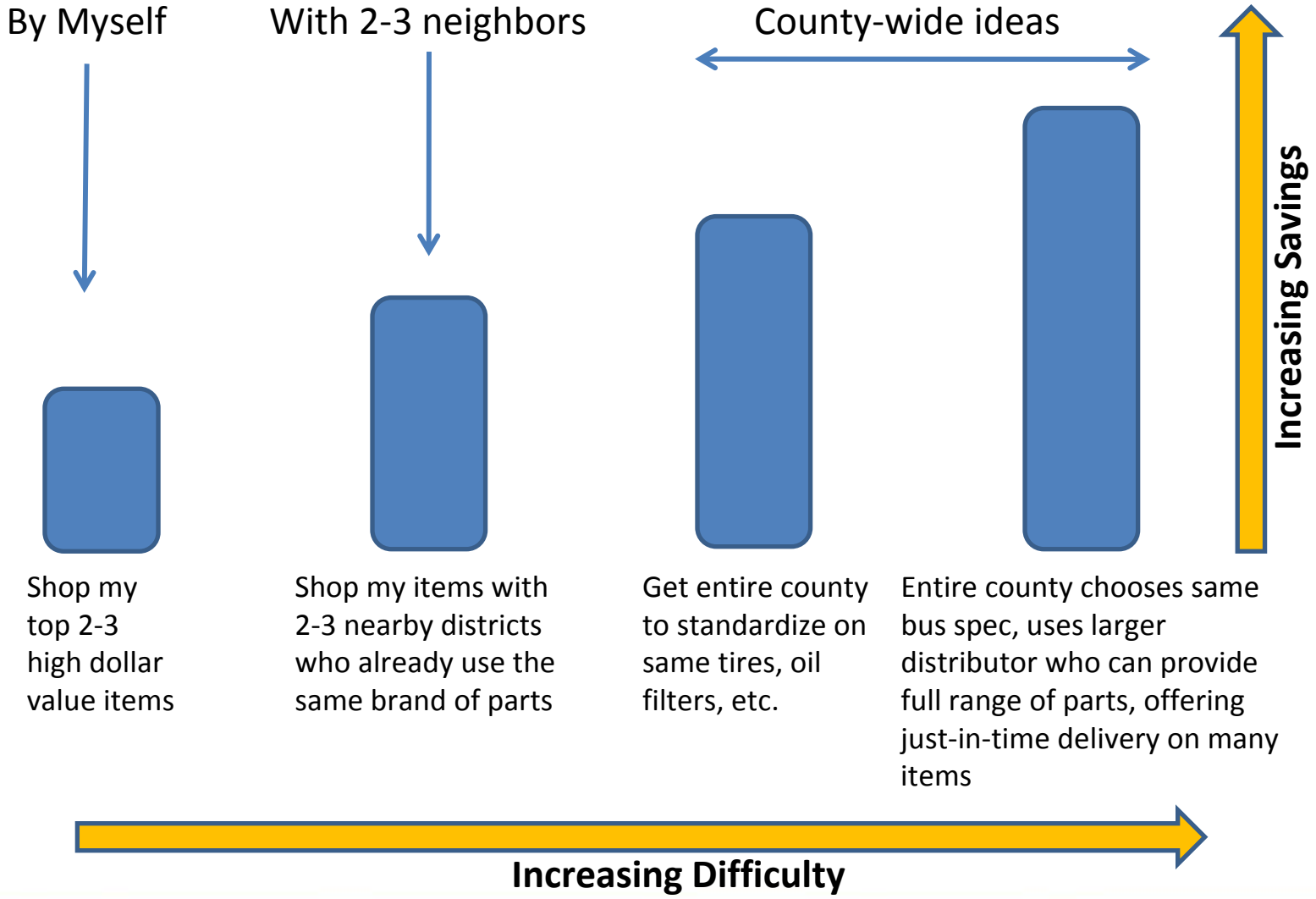
Some districts operate better than others

What can we learn from each other?



Source: Plante Moran, 4/29/08

Why collaboration makes sense



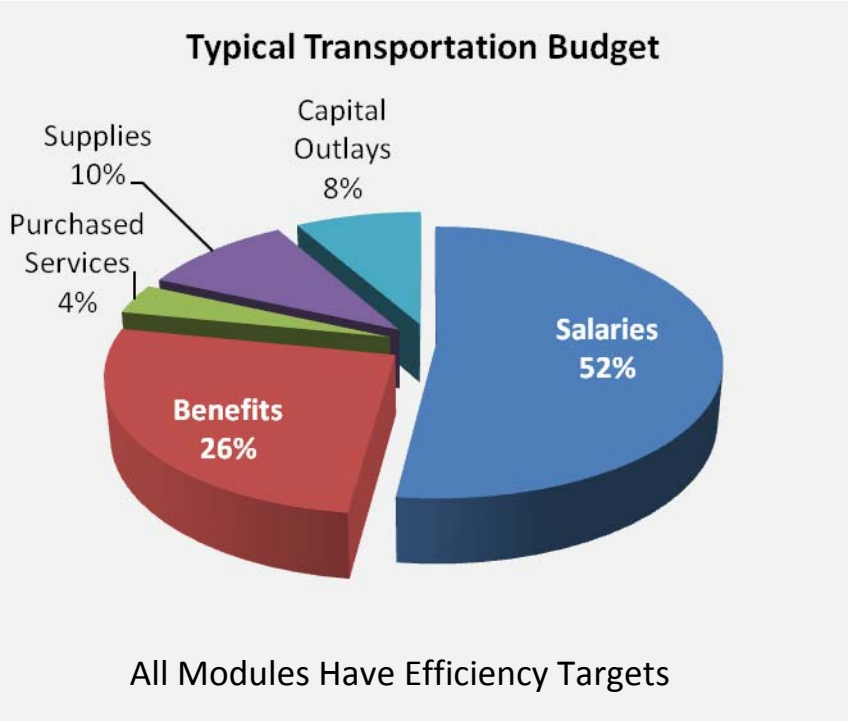
Improving operating performance first, creates better prospects for a more "humane" solution

Six (6) areas to look

Fuel Management	Route Management	Maintenance Management	Vehicle Management	Driver Management	Property Management

Basic Strategy:

- cut obvious inefficiencies
- reduce # of routes – which drops all other cost categories
  - route optimization
  - district policy changes

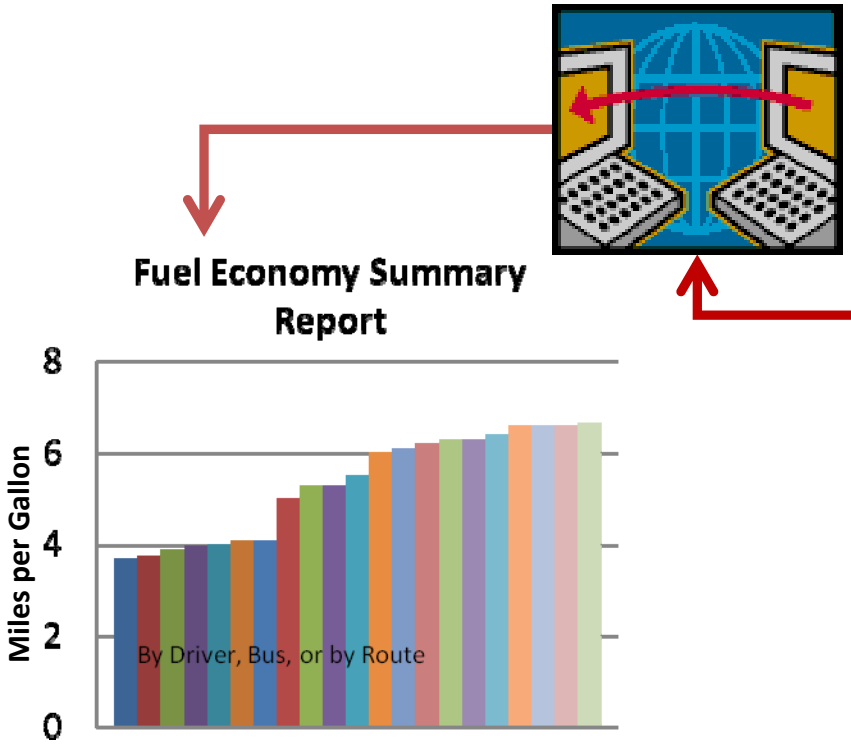


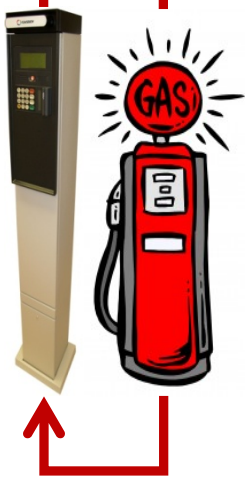
All Modules Have Efficiency Targets

Most operations can be improved by trained management with relevant data

Key Issue:

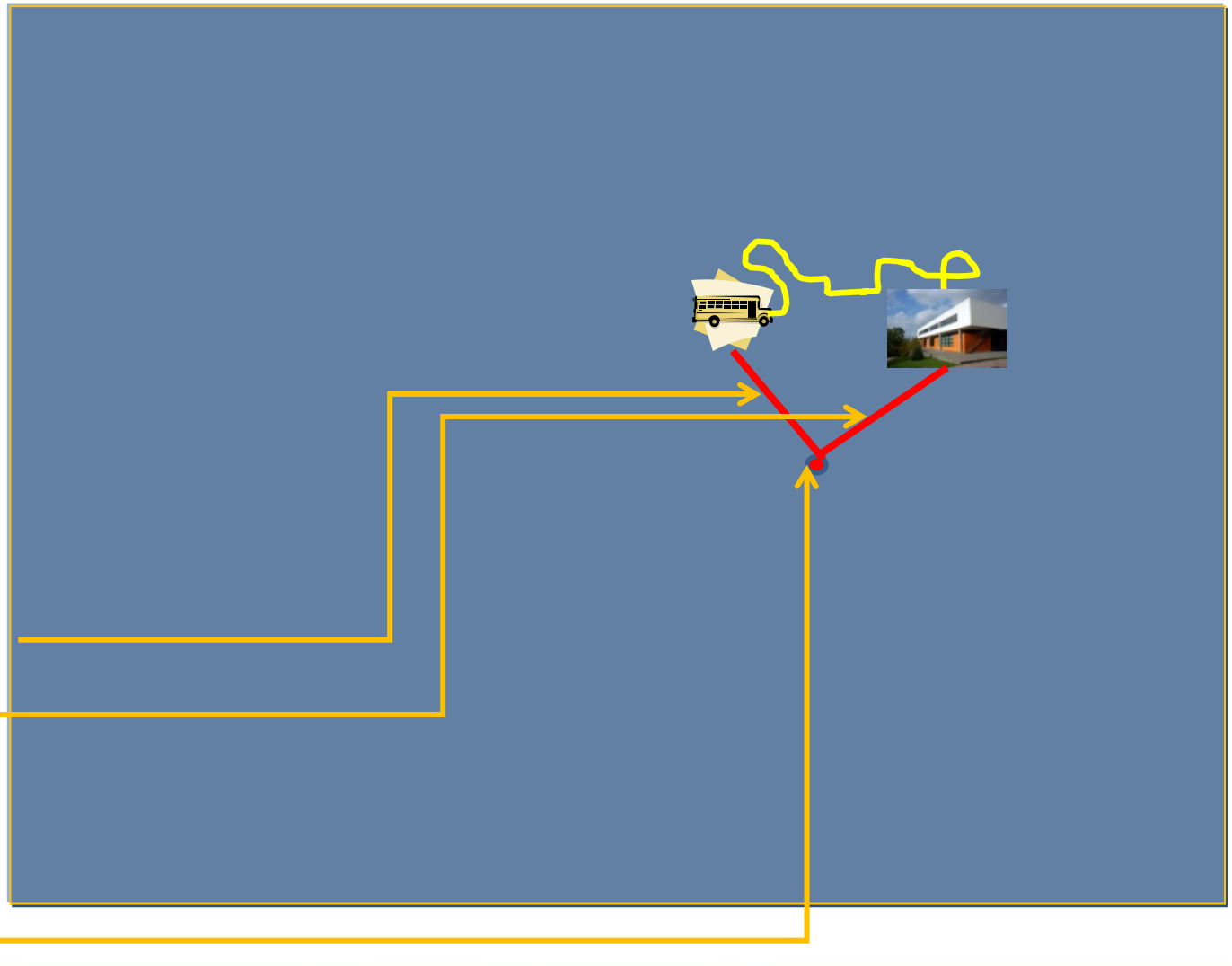
If you don't measure it, you will never improve it.



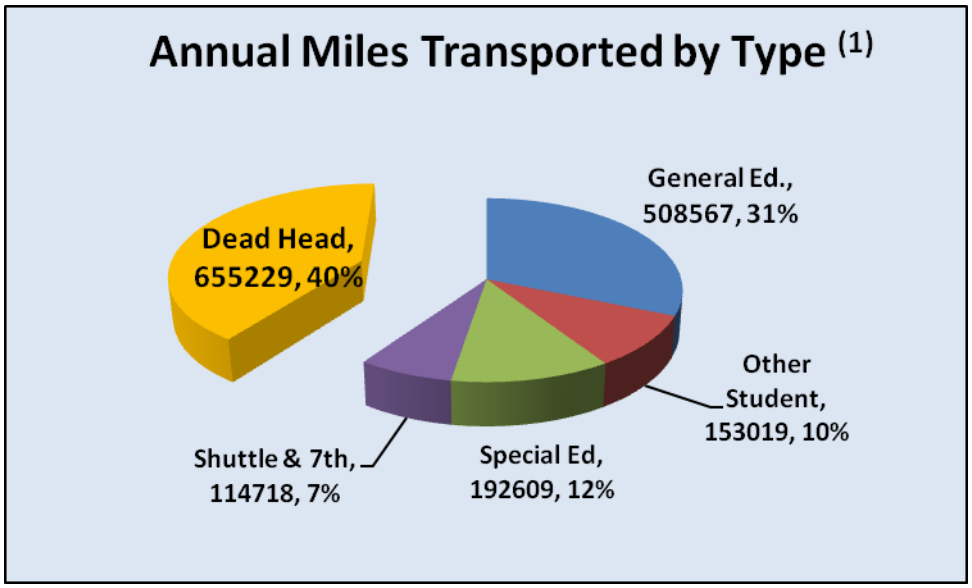


Collaborative problem solving

Question:
Could "dead head" miles be reduced by adding a new parking lot or staging buses from a neighboring district?



Operational savings: an example



(1) Actual data from Ann Arbor schools

What these Dead-Head Miles Cost (Cost per year - in $)	
Fuel	$ 191,307
Driver Labor	$ 941,345
Maintenance	$ 222,465
TOTAL	$ 1,355,117

Dead-head Miles – Miles Without Students On The Bus

Ideas for improvement

- create remote parking locations or
- share facilities in neighboring districts
- optimize routes not bound by existing district boundaries

Proper "tiered" routing can also save money

Single Tier Solution	Elementary	Middle	High	Total	Per Day	Per Year
Drivers	3	3	3	9		
Hours per driver	1.33	1.33	1.33	4	36	6,300
Buses	3	3	3	9		
Miles	75	75	75		225	39,375
Three Tier Solution	**Elementary**	**Middle**	**High**	**Total**	**Per Day**	**Per Year**
Drivers				3		
Hours per driver				8	24	4,200
Buses				3		

Bus cost	$ 70,000	each
Bus Life	10	years

Annual Cost Comparison		
Cost Item	**Single**	**Three Tier**
Fuel	$ 14,960	$ 14,960
Bus Amortization	$ 63,000	$ 21,000
Driver	$ 176,400	$ 117,600
Bus Maintenance	$ 47,250	$ 47,250
	$ 301,610	**$ 200,810**

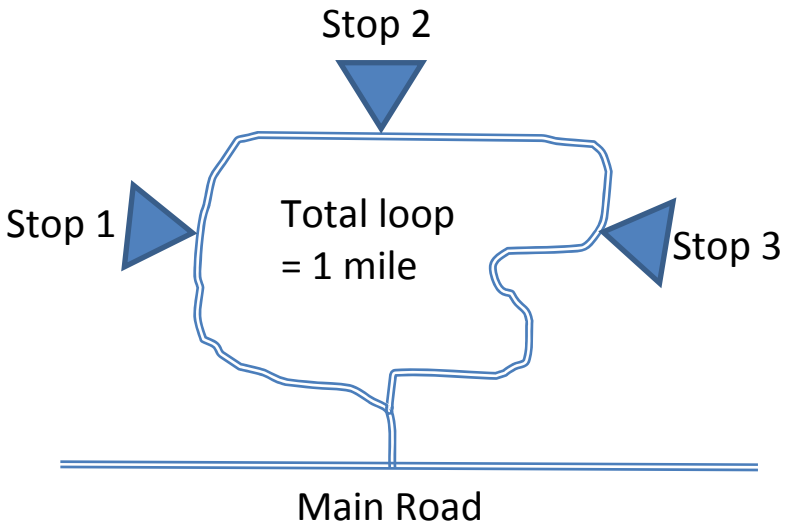
Hypothetical example only

Depends on:

- bell times
- school and student locations
- district geography
- driver pay policies

Note: For some rural districts, or those with a central campus, single tier routing may be more cost effective.

Economics for adding a new bus stop(s)



How many requests to your dispatchers get like this every year?

Fuel		Labor		Bus	
miles /day	1	miles/day	1		
days	175	stops	3		
miles/yr	350	min/day	23		
mpg	6.85	MPH	15		
gallons/ year	51.09	hrs/year	67.08	hrs/year	58.33
$/gallon	$2.50	$/hour	$28.00	$/hour	$2.95
$/year	**$127.74**	**$/year**	**$1,878.33**	**$/year**	**$172.03**

Total Cost = $2,178.10 per year

DISTRICT CONSOLIDATION

Case study – some sources of savings

The savings that can come from:

• Remote Parking – Reduced Dead Head	4%
• 2-3 Tier Routing System	2%
• 2+ Tier Wage Systems – (increasing over time)	3%
• Special Ed optimization	4%
• Elimination of Pension Liability	9%
• Lower Hourly Wages and/or Benefits Cost	5%

Additional Savings From partnering:

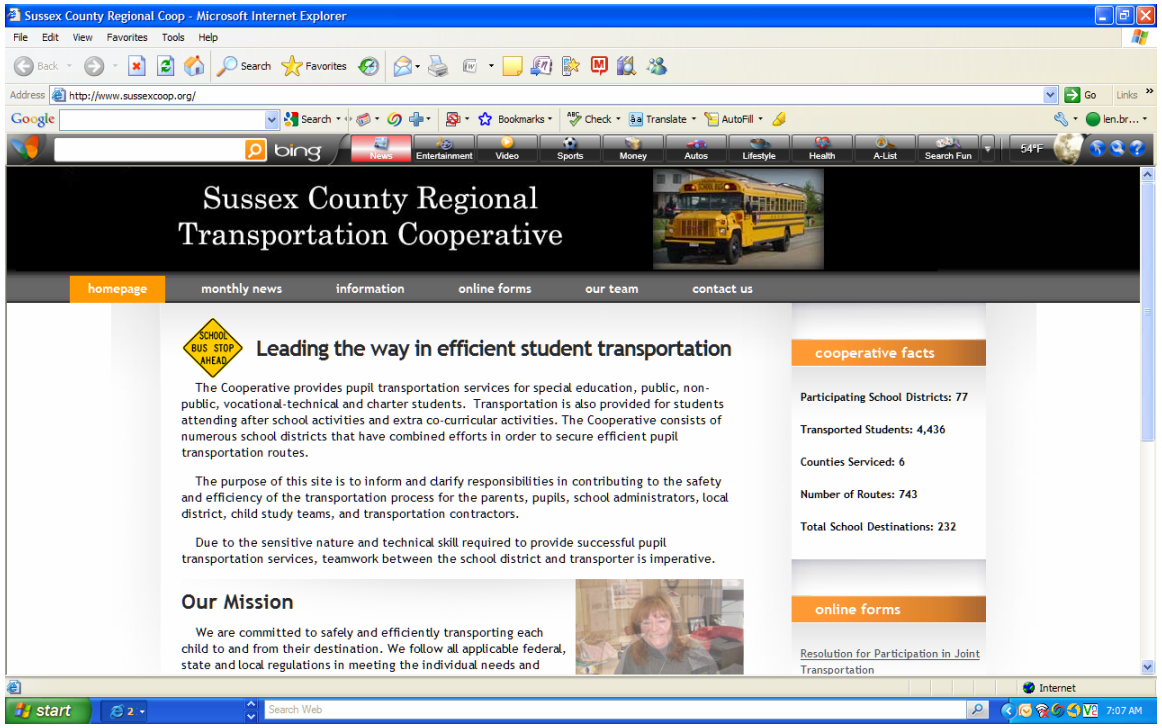
• Purchasing Economies of Scale – Common Vendors	1%
• Common Fleet and Bus Specification	1.5%
• Common Policies, Processes and Standards	.5%
• Centralized management	2%

Comparison between privatization and consolidation

Cost Categories	Privatization Model	Consolidation Model
Operations Improvements	0%	6-7%
Wage and Benefit	12-15%	8-13%
Overhead Reductions	3%	3-5%
Total Cost Savings:	**15-18%**	**17-25%** [(1)]

[(1)] Based on Washtenaw County analysis and Privatization bids by Durham, First Student, and STUDENT*TRANSIT*. *Added benefits from new revenue streams are not yet included*.

Such collaborations are taking place in other parts of North America



". . .the cooperative now serves over 70 districts in Sussex, Morris, Essex, Hunterdon and Warren counties, and provides transportation for not only students with disabilities but those attending vocational schools, nonpublic schools and other programs. Its billings have increased from $300,000-$400,000 in its first year of operation to $15 million in 2007. **Member boards decrease their transportation costs by at least 50 percent** by sharing cooperative routes with other districts."

Hamilton Ontario:
http://webserver.hwdsb.on.ca/schools/transportation/index.aspx

New York:
http://dcs.neric.org/news/0910/sharedbus.htm

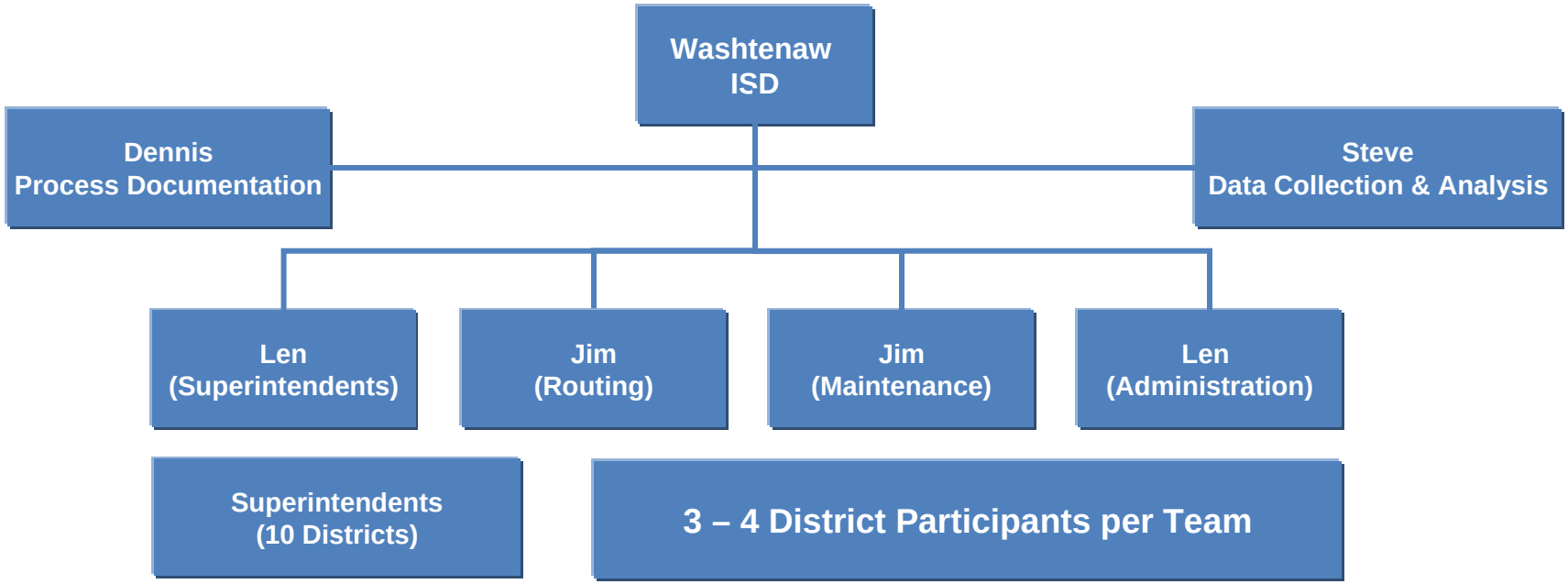
Deloitte study
http://www.deloitte.com/dtt/cda/doc/content/DTT_DR_SS_Education_Nov05.pdf

"By creating a single bus system, the two boards will save $8 million in administrative, capital, and fuel costs over three years. The boards' shared AV library serves classrooms in both districts, saving $300,000 annually" p14.

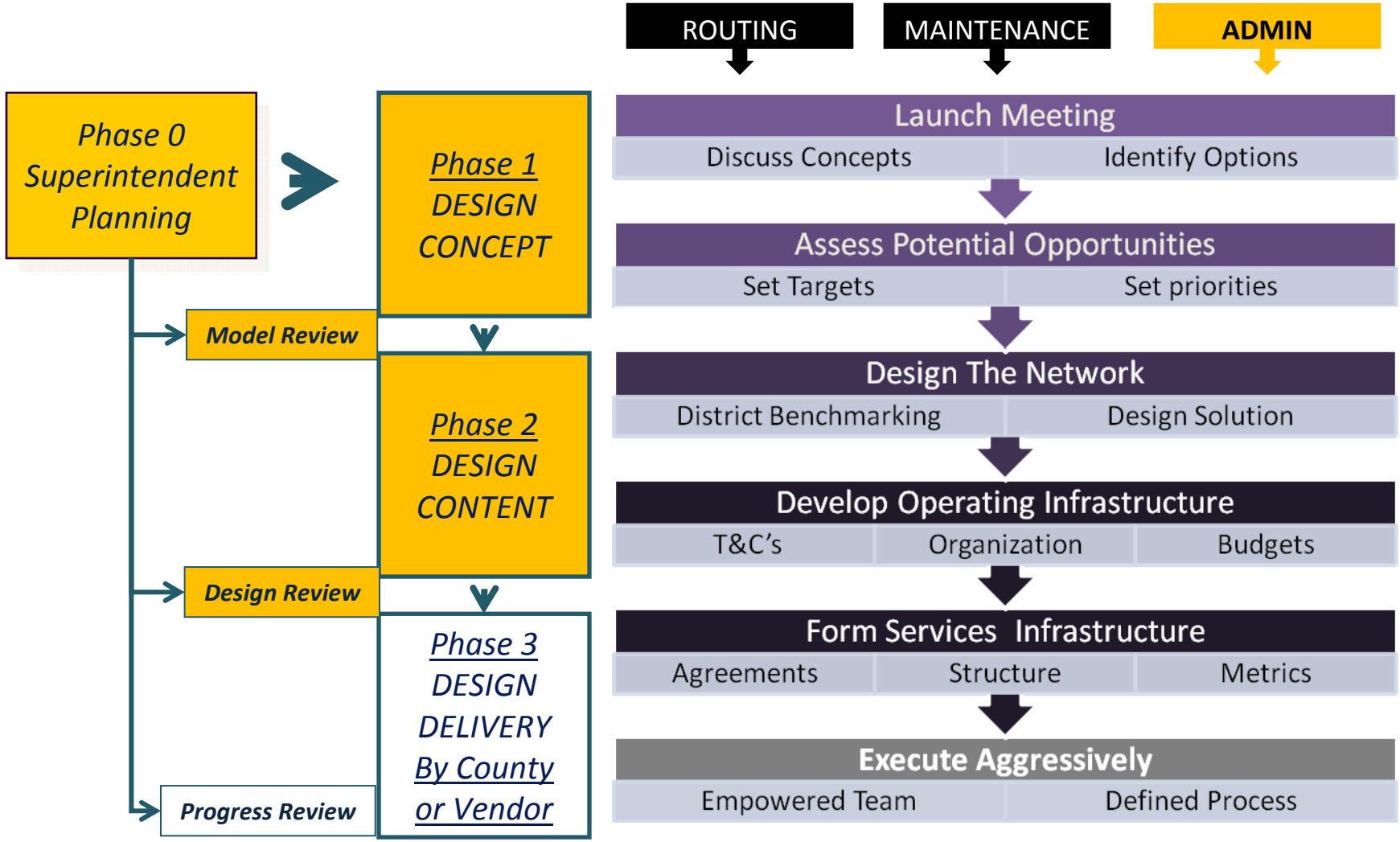
WORK PLAN

Our WISD project teams

Team Member	Association	Email Address	Role
Steve Aretakis	Xavier Leadership Center	saretakis@insightbb.com	Data collection, analysis, and Admin team Support
Len Brzozowski	Xavier Leadership Center	brzozowskil@xavier.edu	Leader of Superintendents and Admin teams
Dennis O'Connor	Transportation Strategies	doconnor@transtrategies.com	Process documentation
Jim Regan	Transportation Strategies	jregan@transtrategies.com	Leader of Maintenance and Routing teams



Three Phases: concept, design, delivery



Phase 1 summary

Phase 1
DESIGN CONCEPT

Launch Meeting

Discuss Concepts | Identify Options

Assess Potential Opportunities

Set Targets | Set priorities

ROUTING TEAM	MAINTENANCE TEAM	ADMIN TEAM
Objective of the Phase: 1. Develop integrated routing infrastructure Model	**Objective of the Phase:** 1. Develop Fleet, Facility, Maintenance and Inventory Model	**Objective of the Phase:** 1. Develop Human and Financial Capital Support Model
Key Outputs 1. As-is Profile 2. Design Options/Scenarios 3. Could-Be Model	**Key Outputs** 1. As-is Profile 2. Design Options/Scenarios 3. Could-Be Model	**Key Outputs** 1. As-is Profile 2. Design Options/Scenarios 3. Could-Be Model

Phase 2 summary

Phase 2
DESIGN CONTENT

Design The Network

District Benchmarking	Design Solution

Develop Operating Infrastructure

Terms &Conditions	Organization	Budgets

ROUTING TEAM

Objective of the Phase:

1. Develop integrated routing infrastructure scenario and budget

Key Outputs

1. Tier Plan for General Ed.
2. Bell Times to Match Tier Plan
3. Special Needs Plan
4. Number of Routes
5. Number of Drivers
6. Additional Services Plan
7. Routing Software
8. County Routing Database
9. Routing Organization

MAINTENANCE TEAM

Objective of the Phase:

1. Develop Fleet, Facility, Maintenance, Inventory scenarios and budget

Key Outputs

1. Fleet Plan
2. Common bus specification
3. Inventory Plan and Software
4. Vendor List
5. Maintenance Organization
6. Facility Plan
7. Services Plan
8. Maint. Schedule & Standards

ADMIN TEAM

Objective of the Phase:

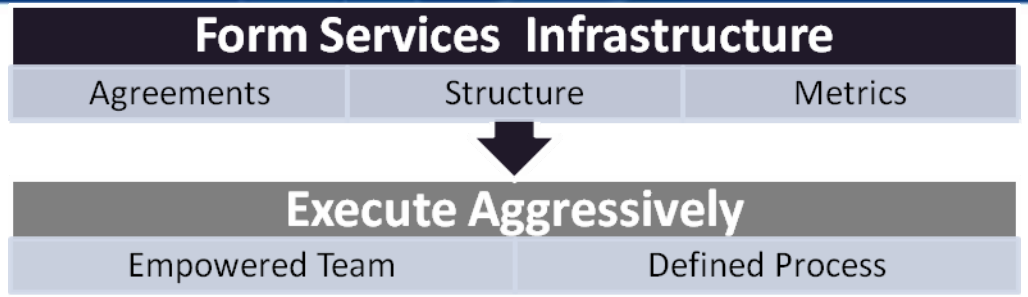
1. Develop Human and Financial Capital Support scenario and budget

Key Outputs

1. Wage and Benefits Plan
2. HR Support Service Plan
3. Finance Service Plan
4. Building and Grounds Plan
5. IT Support Plan
6. Overall Organization
7. Payroll and Timekeeping Plan
8. Labor Relations Plan

If Phase 2 proposal is accepted

Phase 3: DESIGN *DELIVERY WASHTENAW PROJECT*



If the decision is to privatize:

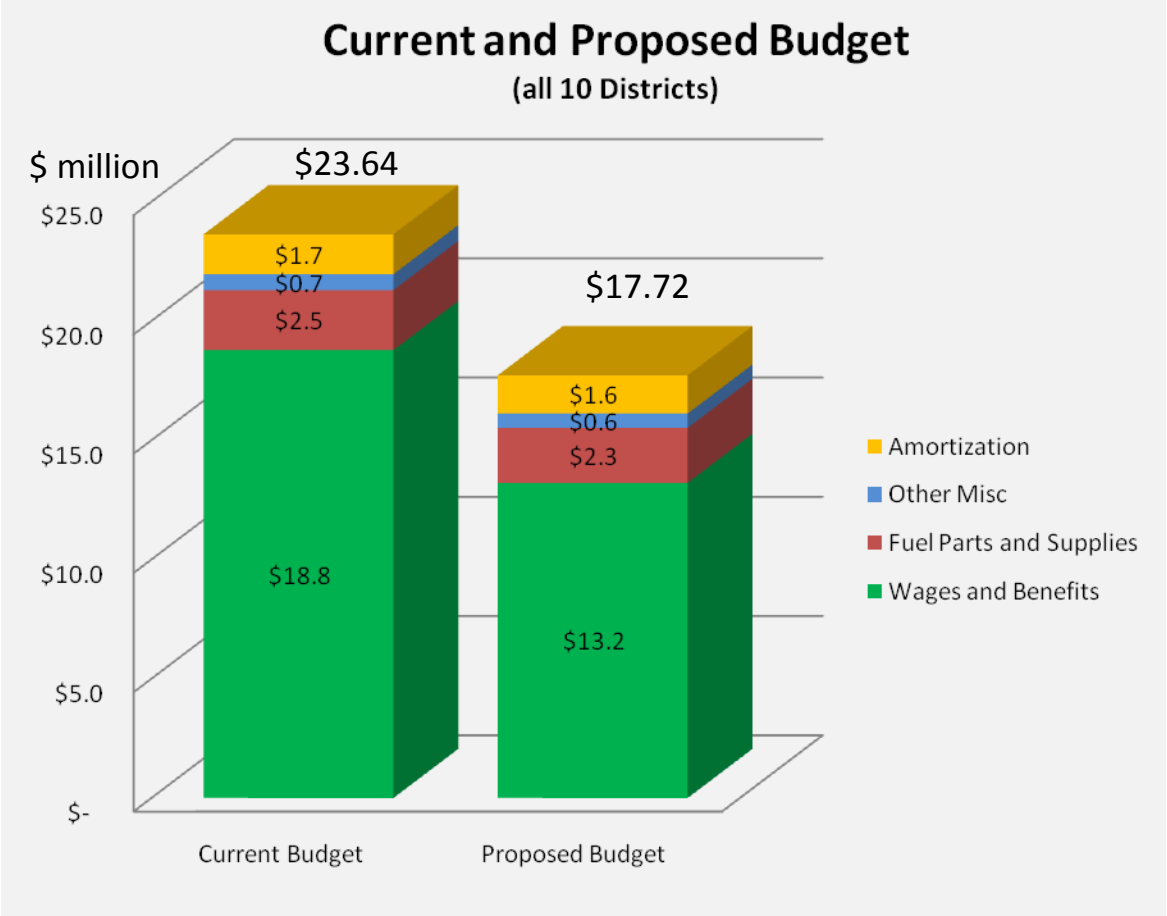
PREPARE, and ISSUE the RFP, EVALUATE RESPONSES and CONTRACT WITH A VENDOR

If the decision is to consolidate:

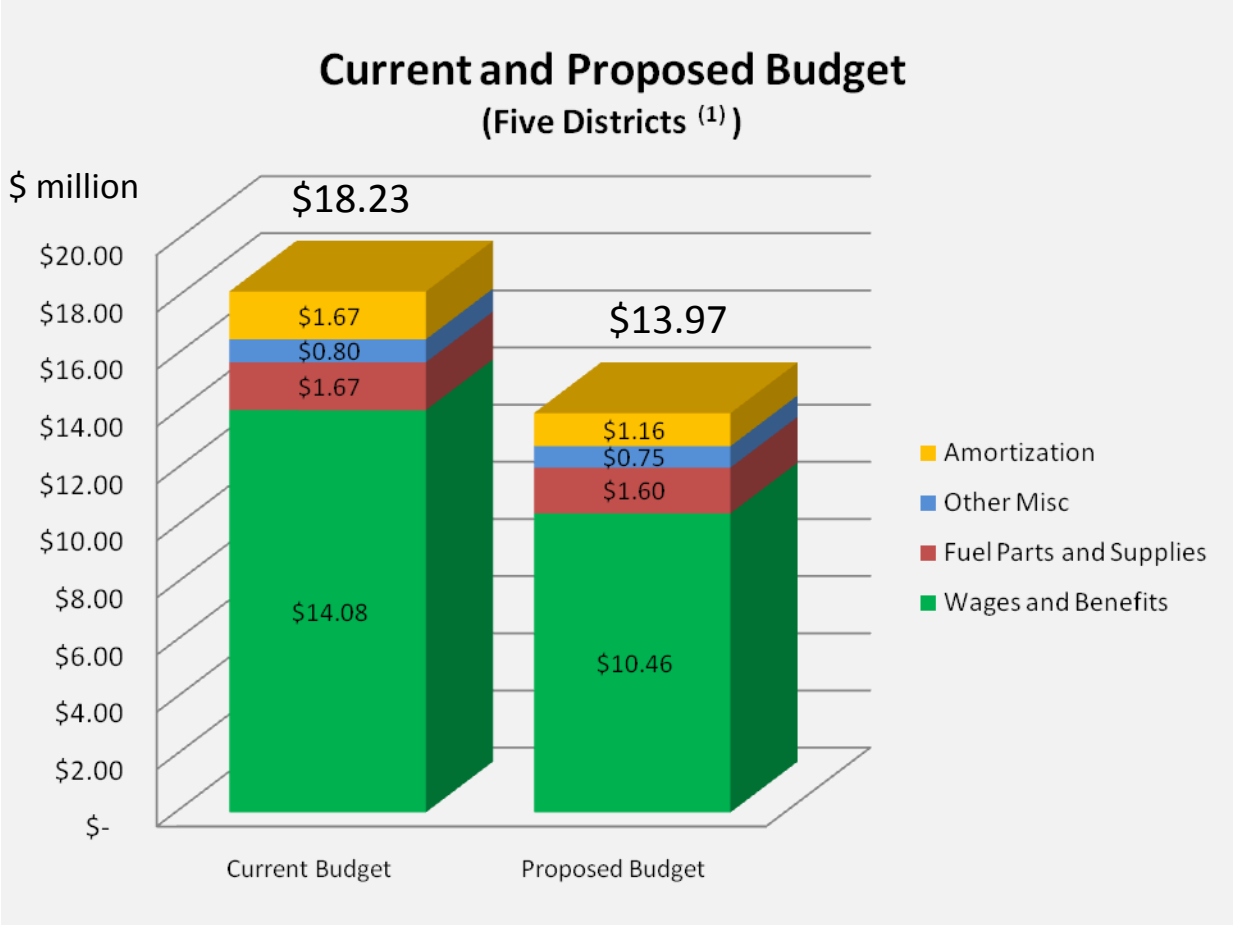
ROUTING TEAM	MAINTENANCE TEAM	ADMIN TEAM
Objective of the Phase: 1. Identify the integrated routing infrastructure plan priorities and implementation process	**Objective of the Phase:** 1. Identify Fleet, Facility, Maintenance and Inventory plan and implementation process	**Objective of the Phase:** 1. Identify Human and Financial Capital Support plan and implementation process
Key Outputs 1. Time Phased Project Plan 2. Pro-Forma Budget	**Key Outputs** 1. Time Phased Project Plan 2. Pro-Forma Budget	**Key Outputs** 1. Time Phased Project Plan 2. Pro-Forma Budget

Possible Consolidated System Design

We project saving $5.91M (25.0%)



We project saving $4.25M (23.3%)



(1) Ann Arbor, Lincoln, Whitmore Lake, Willow Run, and Ypsilanti

Key Milestones

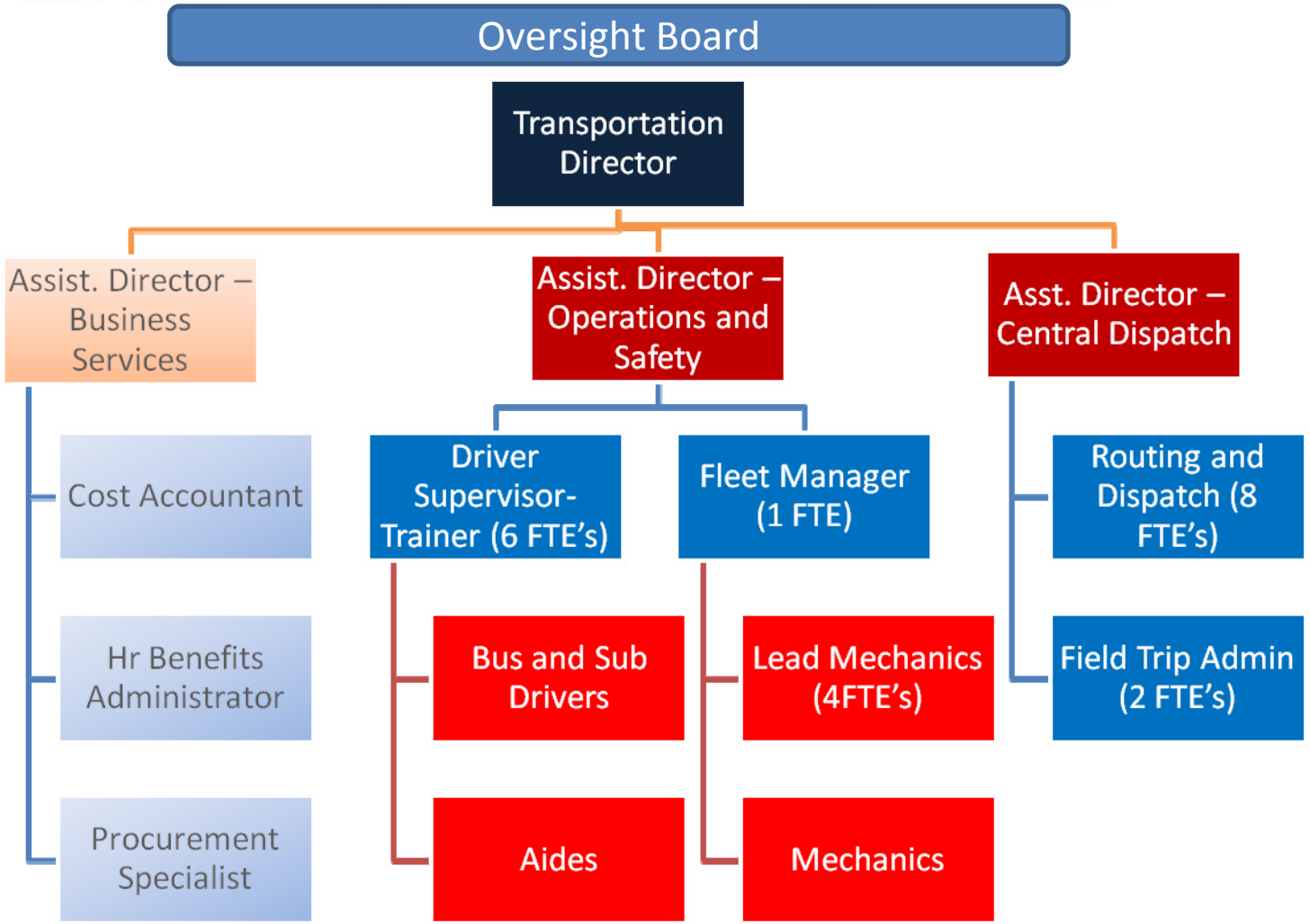
COMPLETE

- A common bus specification and purchasing via MSBO Program
- A WISD OEM parts purchasing program with common vendors
- A WISD Aftermarket parts purchasing program with common vendors
- A WISD Fuel purchasing plan with a common vendor
- Common Inventory Management software and a goal of $250 of inventory per bus
- Common Routing Software
- Common routing guidelines
- Moving to the MAPT Preventative Maintenance Standards
- Organizational structure, and business model

IN PROCESS

- WISD Special Needs Transportation Network for both In and Inter-District Students
- Wage scales
- Refined benefits proposals
- GPS technology options
- Back office support system

Proposed WISD Transportation Organization (10 district infrastructure)



Note: Back-office support mainly from the WISD

Implementation Strategy