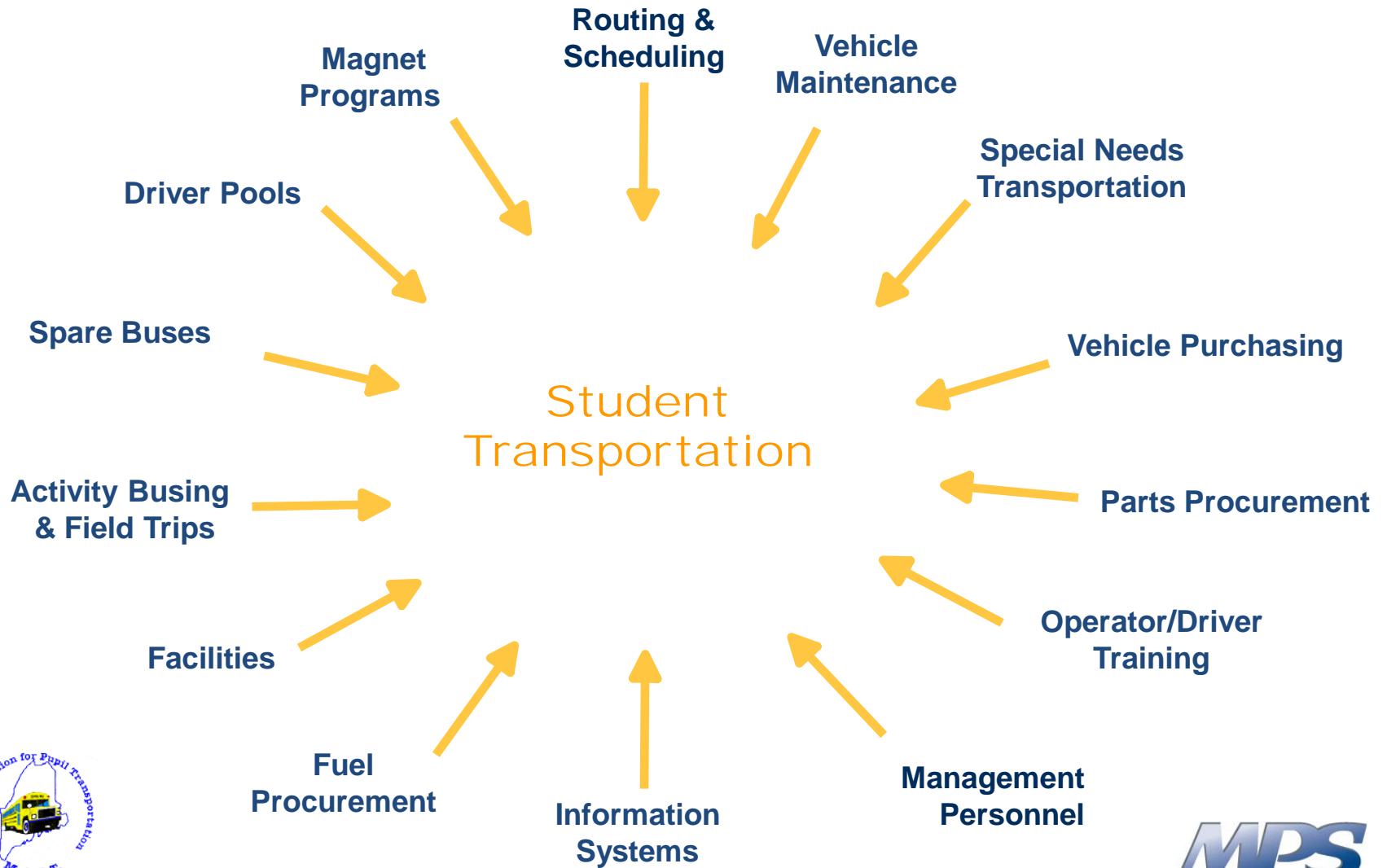


Controlling Transportation Costs: Options & Innovations

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Where are the Costs?



Where are the Costs?

Despite everything, controlling transportation costs is still mostly about two principles:

Fill It



Reuse It



Can We Fill It & Reuse It?

- Student Density & Clustering
- Distance & Time
- Scale (size of operation)



Policy as Context

It is impossible to talk about cost without understanding the cost versus service tradeoff:

- Policy provides the constraints under which transportation operates
- The goal is to minimize costs given these constraints



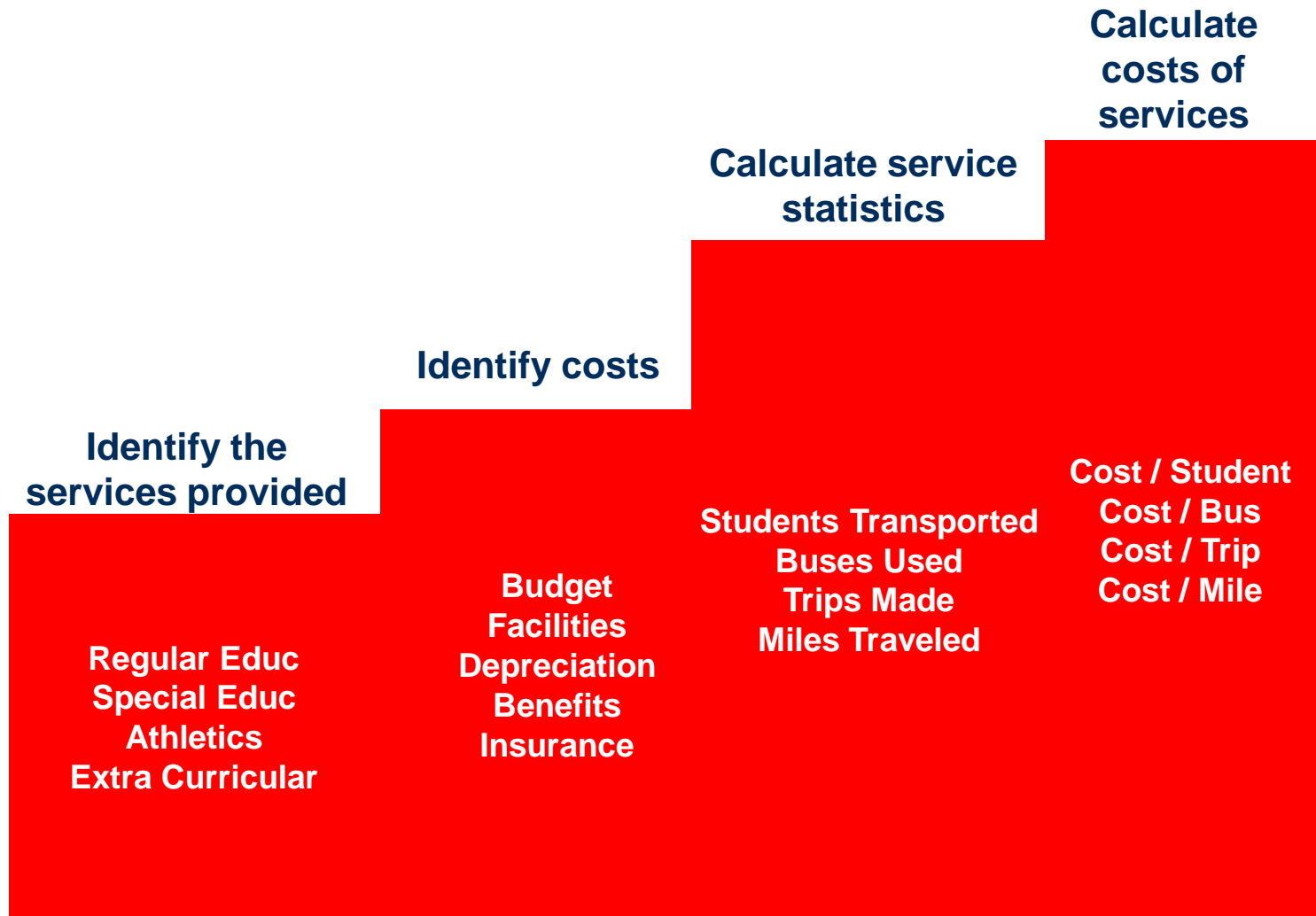
Where to Begin?

You cannot manage that which you cannot measure

- This requires accurate cost accounting
- This requires operational data and appropriate coding structures



Cost Accounting Techniques



Identify the Services

- “Services” relate to the different activities performed:
 - Regular home-to-school transportation
 - Center-based special needs transportation
 - Fleet maintenance
- Focus on what is important for *you* to be tracking
- Understand the tradeoff between precision and relevance



Identify all of the Costs

- Line item expenditure detail for accuracy & completeness
- *All* cost items, whether or not they reside in the transportation budget
- Include non-cash items that still represent real cost
- Include expenditures allocable to transportation

Number	Description	2004-2005
3079	Salaries - Supervisor	\$46,607
3080	Salaries - Mechanic	\$58,809
3081	Salaries - Vehicle	\$264,504
3082	Salaries - Special Ed	\$16,505
3083	Salaries - Secretary	\$7,828
3084	Salaries - Fieldtrips	\$114,464
1615	Salaries - Athletic High School	\$35,350
1588	Salaries - Athletic Middle School	\$8,966
95271	Benefits - Group Life	\$1,011
91271	Benefits - Health	\$20,004
92271	Benefits - Retirement	\$71,849
93271	Benefits - FICA	\$41,687
232	Private - Special Ed	\$65,801
3085	Travel - Local	\$7,051
3091	Utilities	\$9,919
3093	Insurance	\$33,031
3096	Repairs and Maintenance	\$29,151
3098	Supplies - Gas and Oil	\$36,535
3099	Supplies - Batteries and Other	\$8,882
3100	Supplies - Repair Parts	\$51,728
3102	Supplies - Office	\$4,175
3105	Capital Equipment - Furniture	\$0
3106	Capital Equipment - Buses	\$0
3109	Other Expenses	\$20,676
Alloc	Depreciation	\$90,400
		\$1,044,932



Gather Operational Data

- How many.....
 - Buses, routes, students, miles, hours...
 - What you gather depends on what you want to measure
- Why is coding important for each of these elements?
 - Facilitates a more nuanced understanding of cost
 - Allows for detailed reporting and analysis
- Understand the tradeoff between precision and relevance



Coding Operational Data

Example: Bad Route Coding:

Bus Number	Route Number
1	001
2	002
3	003
4	004
5	005
6	006
7	007

Example: Good Route Coding:

Bus Number	Route Number
1	FES.R.001
2	FES.SE.001
3	T.NP.001
4	FES.NPS.001
5	FES.1.001
6	FES.2.001
7	C.FES.001



Allocate Costs

- Determine what costs should be allocated
- Determine which statistic to use for allocating each cost
- Use percentages to allocate each cost to the identified services

Number	Description	2004-2005	Not Allocated	Allocated Amount	Home to School	Special Education	Extra Curricular
3079	Salaries - Supervisor	\$46,607		\$46,607			
3080	Salaries - Mechanic	\$58,809		\$58,809	\$39,819	\$3,318	\$3,470
3081	Salaries - Vehicle	\$264,504		\$264,504	\$50,243	\$4,187	\$4,379
3082	Salaries - Special Ed	\$16,505		\$16,505	\$264,504		
3083	Salaries - Secretary	\$7,828		\$7,828		\$16,505	
3084	Salaries - Fieldtrips	\$114,464		\$114,464	\$6,688	\$557	\$583
1615	Salaries - Athletic High School	\$35,350		\$35,350			\$114,464
1588	Salaries - Athletic Middle School	\$8,966		\$8,966			\$35,350
95271	Benefits - Group Life	\$1,011		\$1,011			\$8,966
91271	Benefits - Health	\$20,004		\$20,004	\$863	\$72	\$75
92271	Benefits - Retirement	\$71,849		\$71,849	\$17,090	\$1,424	\$1,489
93271	Benefits - FICA	\$41,687		\$41,687	\$61,384	\$5,115	\$5,350
232	Private - Special Ed	\$65,801		\$65,801	\$35,615	\$2,968	\$3,104
3085	Travel - Local	\$7,051		\$7,051		\$65,801	
3091	Utilities	\$9,919		\$9,919	\$6,024	\$502	\$525
3093	Insurance	\$33,031		\$33,031	\$8,475	\$706	\$739
3096	Repairs and Maintenance	\$29,151		\$29,151	\$23,297	\$3,022	\$6,712
3098	Supplies - Gas and Oil	\$36,535	\$3,653	\$29,228	\$20,561	\$2,667	\$5,923
3099	Supplies - Batteries and Other	\$8,882	\$888	\$7,105	\$20,615	\$2,674	\$5,939
3100	Supplies - Repair Parts	\$51,728	\$5,173	\$41,382	\$5,011	\$650	\$1,444
3102	Supplies - Office	\$4,175		\$4,175	\$29,187	\$3,786	\$8,409
3105	Capital Equipment - Furniture	\$0		\$0	\$3,567	\$297	\$311
3106	Capital Equipment - Buses	\$0		\$0			
3109	Other Expenses	\$20,676		\$20,676			\$20,676
Alloc	Depreciation	\$90,400		\$90,400	\$63,760	\$8,271	\$18,369
		\$1,044,932	\$9,714	\$1,025,503	\$656,703	\$122,523	\$246,277

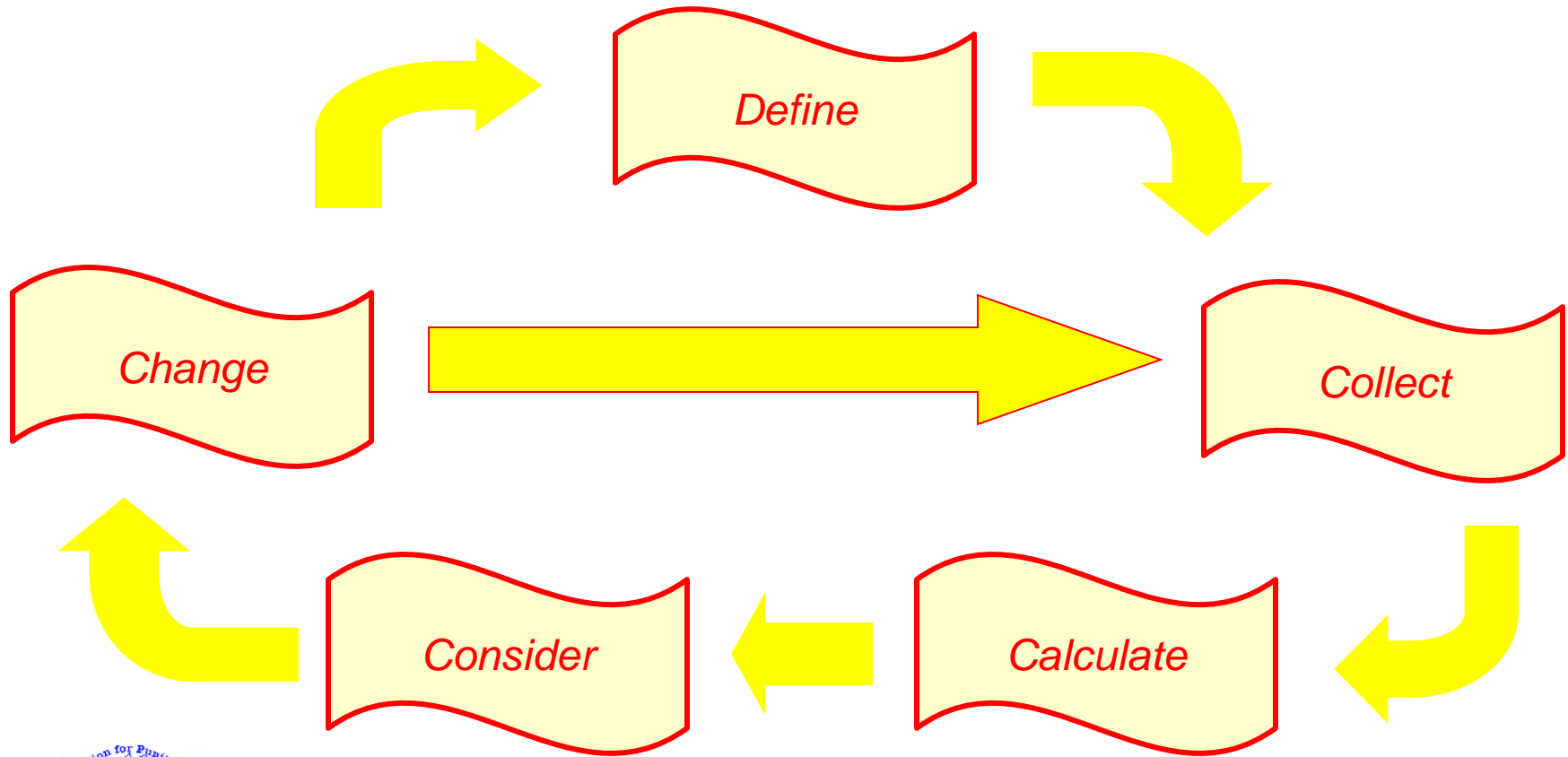
Calculate & Interpret Measures

MEASURE	RESULT
Total cost per transported student	\$454
Cost per regular education student	\$374
Cost per special education student	\$2,831
Cost per non-public school student	\$857
Average rated capacity utilization	54%
HS & HS/MS	106%
ES	62%
Non-public	45%
Average daily runs per bus	3.93
Average student ride time	0:29

Techniques:

- “Basket of Goods”
- Trend analysis
- How to drill down
- How to draw inferences

The Measurement Process



Remember why this is important...

