

# Applying Performance Management Techniques in the Transportation Planning Process

*presented at*

**TRANSPORT Chicago**

*presented by*

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**Transportation leadership you can trust.**

# Outline

- **Performance management overview**
- **Examples applications within planning context**

# Role of Performance Measures

- Provide link between goals and specific actions
- Evaluate impacts of policies, plans, programs, and projects
- Guide resource allocation decisions
- Track system performance over time
- Communicate results and strengthen accountability

# Performance Management Framework

## Linking Goals/Objectives to Resources and Results



# Examples

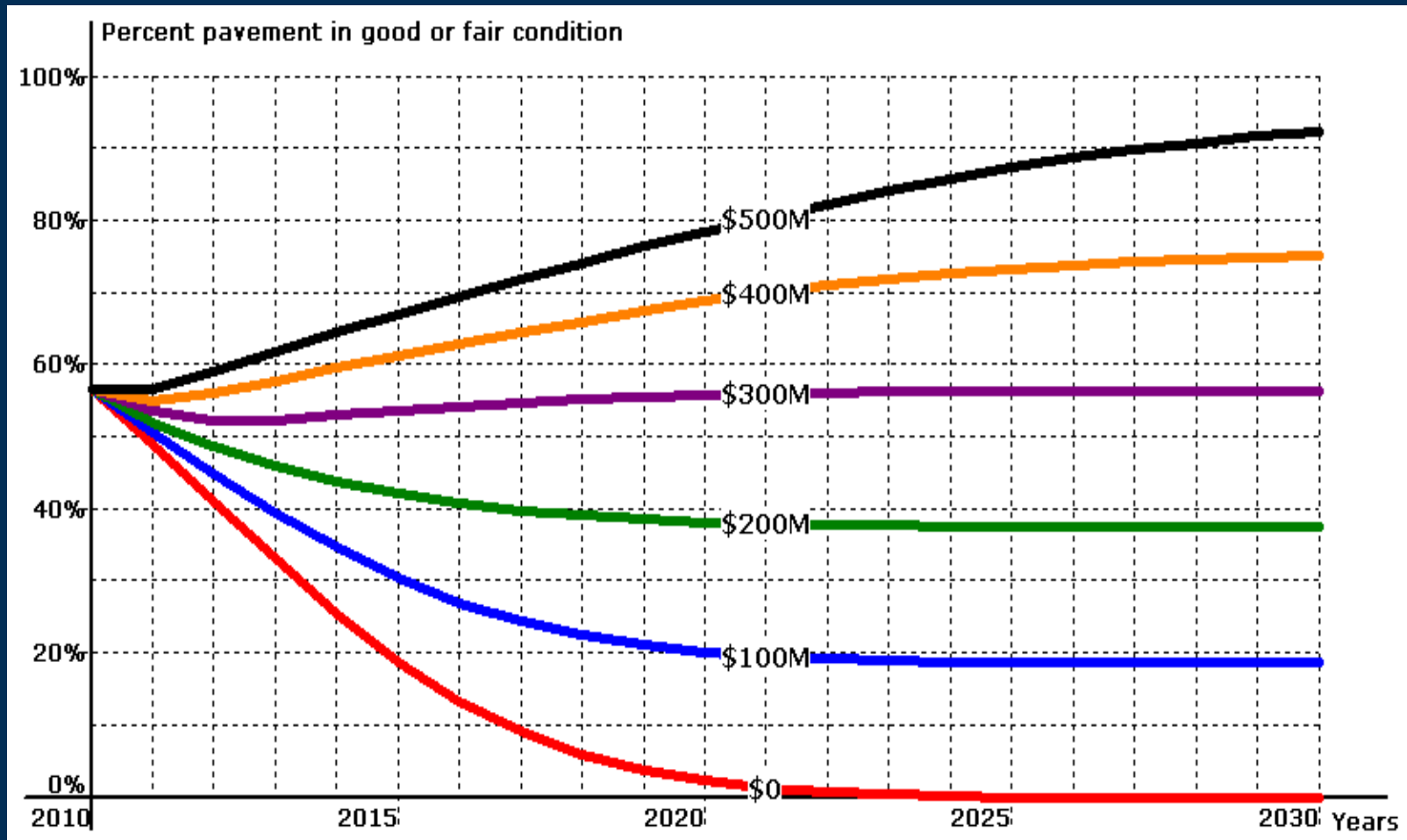


# Southeast Michigan Council of Governments Regional Targets

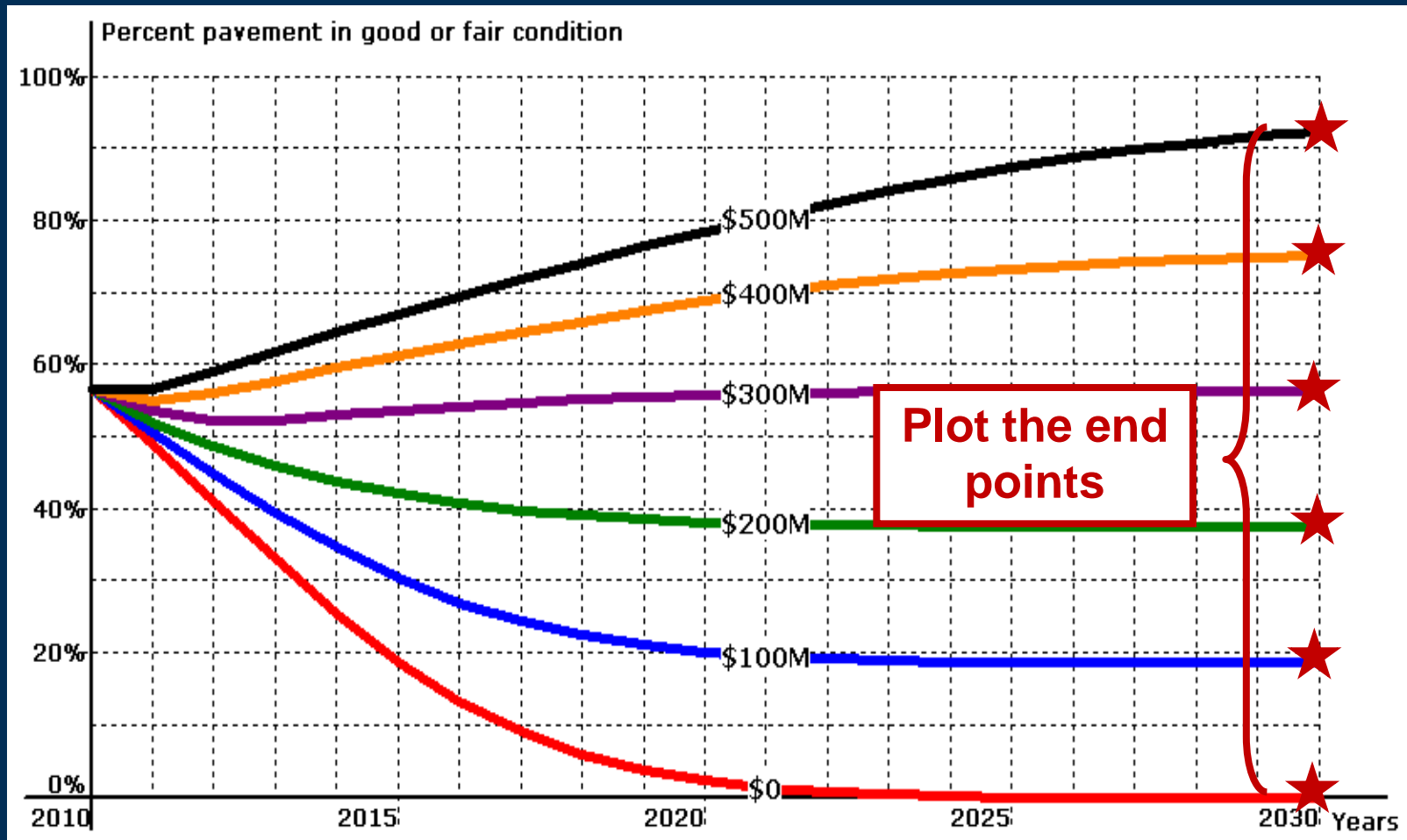
- As part of long range planning process, SEMCOG wanted to reach a consensus on regional priorities
- Priorities were defined as a set of funding splits and performance targets in the following program areas
  - Safety
  - Pavement preservation
  - Bridge preservation
  - Transit
  - Highway capacity expansion
  - Nonmotorized
  - Roadway Operations

# Analysis within each Program Area

## *Expected Performance over time for Different Funding Levels*



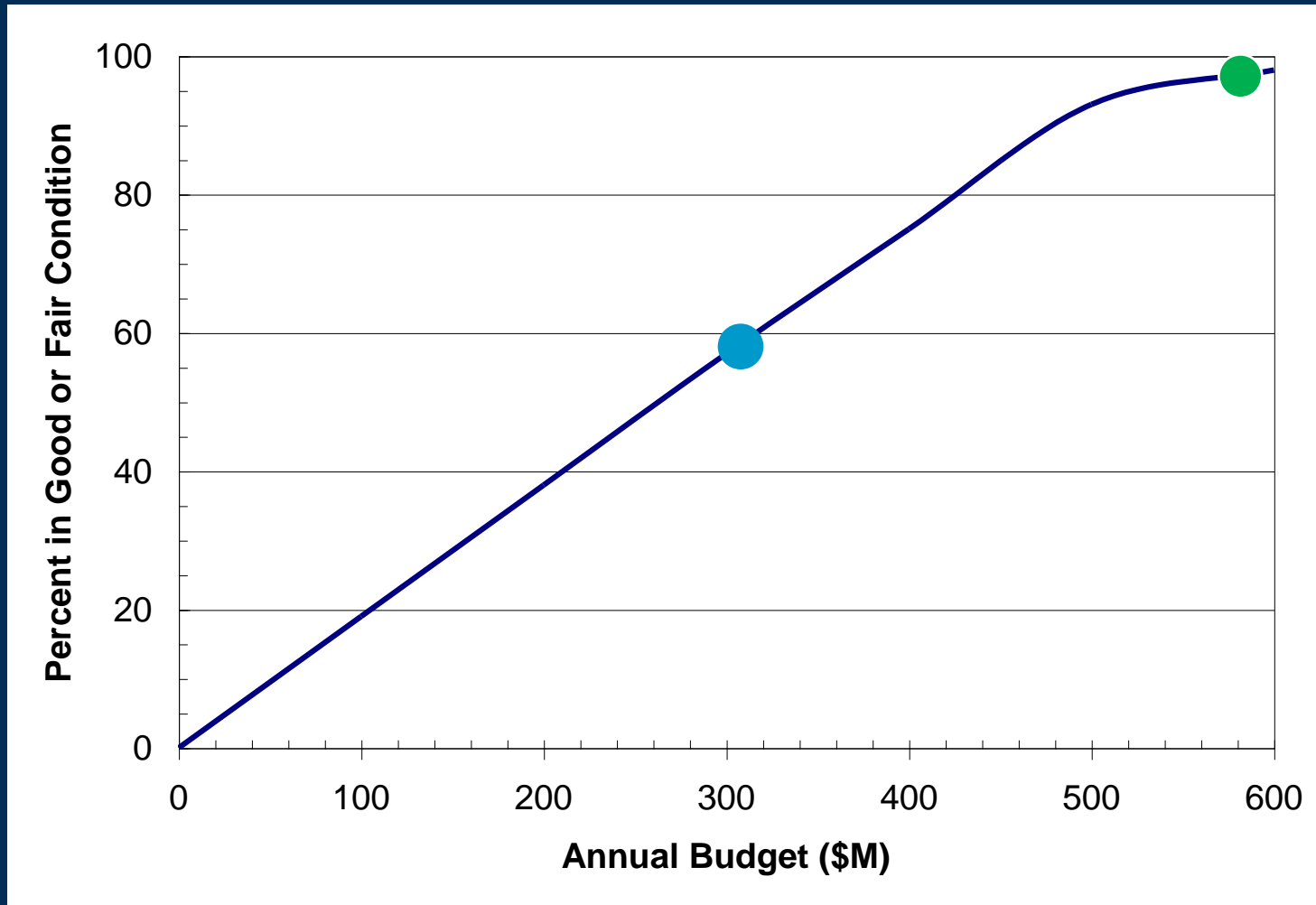
# Analysis within each Program Area, cont.





# Analysis within each Program Area

## *Expected Performance in 2030 for Different Funding Levels*



● Current performance expectation ● Maximum performance

# Analysis Across Program Areas

Program Area	Measure of Effectiveness	Projected 2010	1. Current Allocation		2. Public Opinion		3. Preservation First	
			2030 Target	Funding Split	2030 Target	Funding Split	2030 Target	Funding Split
Transit	System extent	Current System	Current System	21%	< Current System	12%	< Current System	21%
Pavement	% pavement in good or fair condition	57%	57%	21%	49%	18%	85%	31%
Bridge	% bridges in good or fair condition	85%	100%	6%	100%	7%	85%	3%
Expansion	hours of congestion delay per 1,000 vehicle miles traveled	2.9	2.6	10%	2.6	10%	3.0	2%
Safety	fatalities per 100 million vehicle miles traveled	0.77	0.74	0%	NA	7%	0.73	1%
Nonmotorized	% pop. and emp. within ½-mile of nonmotorized facility	13%	44%	1%	100%	5%	44%	1%
Roadway Operations	NA			41%		41%		41%

# Examples



# Georgia DOT Project Prioritization

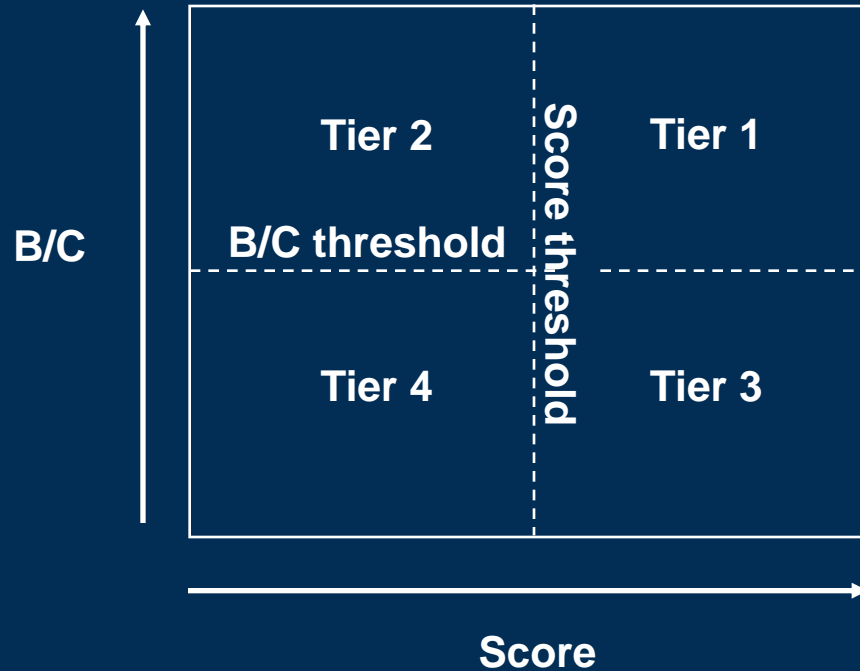
- **GDOT recently developed a data-driven, transparent methodology for prioritizing projects**
- **Projects are prioritized based on a combination of:**
  - **Benefit/cost analysis**
  - **An assessment of how well each project supports goals and objectives established in the long range plan**
- **GDOT automated the process and applied it to its backlog of nearly 1,000 projects**
- **Results are used to communicate priorities and inform the programming process**

# Georgia DOT Project Prioritization

## *Define Measures and Relative Weights – Capacity Program*

SWTP Goal	Performance Measure	Atlanta Region	Other MPOs	Rural
Preservation	Bridge – SD	2.5	5	5
	Pavement – PACES	2.5	5	5
Safety	Crash Reduction	5	20	20
Congestion	Delay Reduction – VHT	70	35	20
Connectivity, Access and Mobility	Travel Time – Intermodal Connector, Truck Route, STRAHNET	4	10	15
	Activity Center	4	5	5
	Land Use Plan	3	5	5
	Access Management	4	5	5
Economic Development	Gross State Product	2	5	10
	Economic Policy Area	2	5	10
Total Weight		100	100	100

# Georgia DOT Project Prioritization *Using Tiers to Communicate Results*





# Prioritas<sup>CS</sup>

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 Program:    Filter by     Compare measures within: 

Map						Preservation		Safety	Congestion	Connectivity, Access, Mobility				Economic Development		
Tier	ID	County	Score	B/C	Cost	Percent Deficient Bridge	Pvmt	Crash Reduction	Delay Reduction	Travel Time Red. on Key Corridor	Activity Centers	Land Use Plan	Access Mgmt	Change in GSP \$M	Dev. Policy Area	
+	1	<a href="#">0002868</a>	DeKalb	74	277.10	\$18,450,000	0 %	0 %	49	87,698	N/A	P	Y	N	\$469	N
+	1	<a href="#">0000715</a>	DeKalb	74	7.36	\$501,502,000	0 %	0 %	1,595	63,299	38 %	P	Y	N	\$338	N
+	1	<a href="#">0003432</a>	DeKalb	67	4.92	\$458,000,000	32 %	0 %	2,986	41,824	22 %	P	Y	N	\$224	N
+	1	<a href="#">0000378</a>	DeKalb	65	25.40	\$80,300,000	0 %	0 %	244	39,152	23 %	P	Y	N	\$209	N
+	1	<a href="#">0003166</a>	DeKalb	55	5.59	\$159,000,000	20 %	0 %	1,019	15,267	15 %	P	N	N	\$82	N
+	1	<a href="#">0006889</a>	DeKalb	50	35.19	\$10,714,000	0 %	0 %	N/A	6,816	N/A	Y	Y	N	\$36	N
+	1	<a href="#">0001791</a>	DeKalb	46	41.74	\$5,500,000	0 %	0 %	1	5,103	N/A	N	Y	N	\$27	N
+	2	<a href="#">0006895</a>	DeKalb	37	7.89	\$6,279,000	0 %	0 %	66	793	N/A	P	Y	N	\$4	N
+	2	<a href="#">0006879</a>	DeKalb	36	1.80	\$21,675,000	0 %	0 %	18	814	N/A	P	Y	N	\$4	N
+	2	<a href="#">0005905</a>	DeKalb	25	3.57	\$4,617,000	0 %	0 %	58	331	N/A	P	Y	N	\$2	N
+	4	<a href="#">0006888</a>	DeKalb	8	0.00	\$11,163,000	0 %	0 %	20	1	N/A	Y	Y	N	\$0	N
+	4	<a href="#">0006891</a>	DeKalb	7	0.00	\$13,185,000	0 %	0 %	3	1	N/A	Y	Y	N	\$0	N
+	4	<a href="#">0006890</a>	DeKalb	6	0.00	\$21,210,000	0 %	0 %	55	1	N/A	P	Y	N	\$0	N
+	4	<a href="#">0006894</a>	DeKalb	6	0.00	\$14,065,774	0 %	0 %	43	1	N/A	P	Y	N	\$0	N
+	4	<a href="#">0006880</a>	DeKalb	5	0.00	\$8,610,000	0 %	0 %	13	1	N/A	P	Y	N	\$0	N
+	4	<a href="#">0006882</a>	DeKalb	5	0.00	\$13,050,000	0 %	0 %	88	0	N/A	N	Y	N	\$0	N
+	4	<a href="#">0005528</a>	DeKalb	3	0.00	\$10,490,000	0 %	0 %	8	0	0 %	N	Y	N	\$0	N

# Questions?