Transportation for America

Boston Region MPO Meeting
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www.T4america.org
@t4america

About Transportation for America

Transportation for America, a program of Smart Growth America, is an advocacy organization made up of local, regional and state leaders who envision a transportation system that safely, affordably and conveniently connects people of all means and ability to jobs, services, and opportunity through multiple modes of travel.

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Why consider costs in project prioritization?

Cost-effectiveness: Recieving a good value/benefit for the amount spent on transportation.

Goal: Use your limited funds as well as possible to meet your stated goals for as much of the region as possible.

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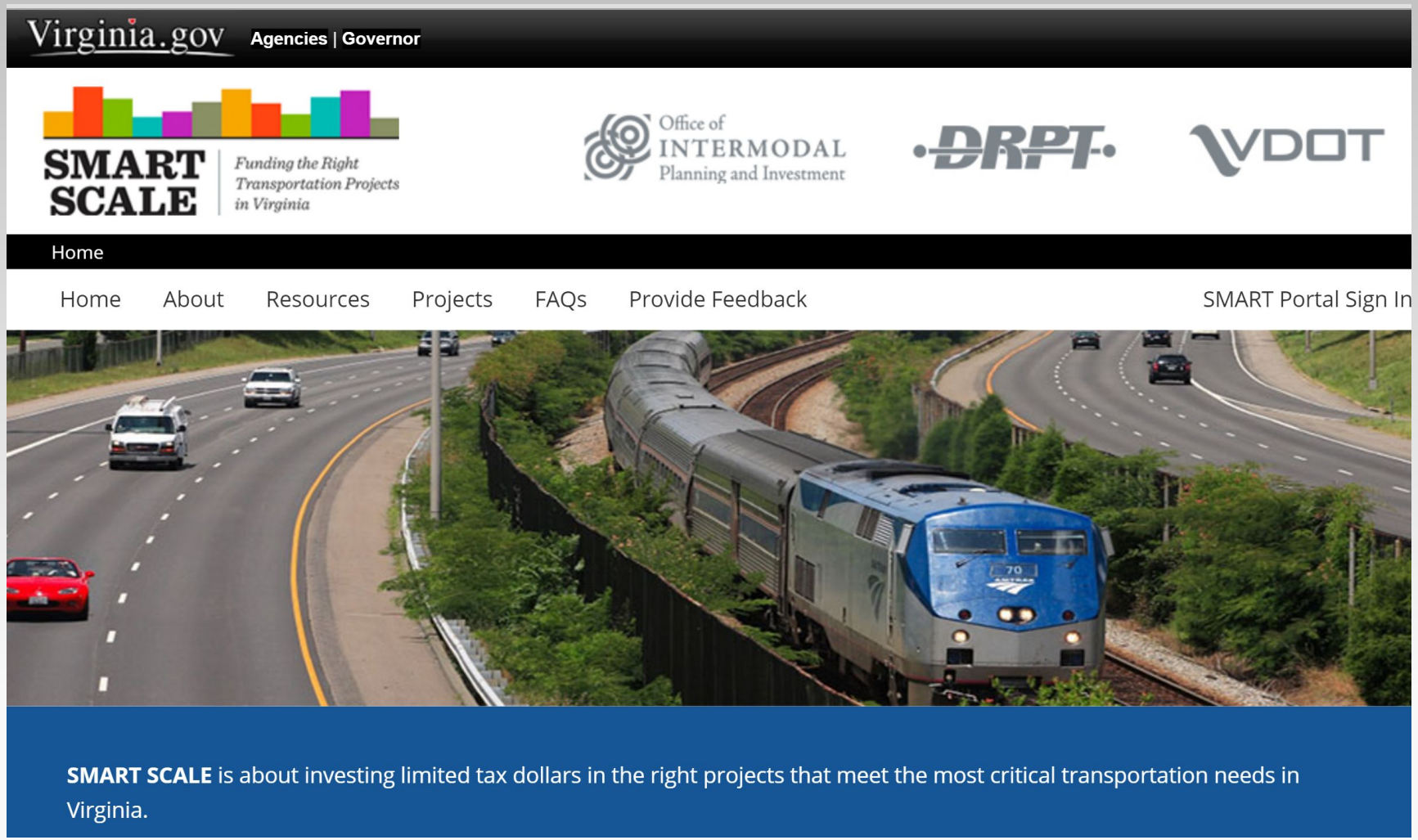
Virginia's approach



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15.4
SMART SCALE SCORE

#23 OF 433 STATEWIDE

#2 OF 42 DISTRICTWIDE

SMART SCALE Requested Funds..... **$2,009,265**

Total Project Cost..... **$12,689,020**

Project Benefit..... **3.1**

Project Benefit / Total Cost..... **2.4**

SMART SCALE Area Type B

Factor	Congestion Mitigation		Safety		Accessibility			Economic Development			Environment		Land Use	
Measure	Increase in Peak Period Person Throughput	Reduction in Peak Period Delay	Reduction in Fatal and Injury Crashes	Reduction in Fatal and Injury Crash Rate	Increase in Access to Jobs	Increase in Access to Jobs for Disadvantaged Populations	Increase in Access to Multimodal Travel Choices	Square Feet of Commercial/Industrial Development Supported	Tons of Goods Impacted	Improvement to Travel Time Reliability	Potential to Improve Air Quality	Other Factor Values Scaled by Potential Acreage Impacted	Transportation Efficient Land Use	Increase in Transportation Efficient Land Use
Measure Value	8.8 persons	0.0 person hrs.	1.5 EPDO	54.8 EPDO / 100M VMT	12.3 jobs per resident	13.8 jobs per resident	44.0 adjusted users	3,936,762.4 thousand adj sq. ft.	0.0 thousand adj daily tons	3,286,088.9 adj. buffer time index	0.0 adjusted points	2.2 scaled points	36,682.5 access * pop/emp density.h	7,612.7 access * pop/emp density change.
Normalized Measure Value (0-100)	0.0	0.0	0.4	0.1	0.2	0.2	0.2	20.0	0.0	0.1	0.0	6.6	2.8	2.2
Measure Weight (% of Factor)	50%	50%	50%	50%	60%	20%	20%	60%	20%	20%	50%	50%	70%	30%
Factor Value	0.0		0.3		0.2			12.0			3.3		2.6	
Factor Weight (% of Project Score)	15%		20%		25%			20%			10%		10%	
Weighted Factor Value	0.0		0.1		0.1			2.4			0.3		0.3	
Project Benefit	3.1													
SMART SCALE Cost	$2,009,265													
SMART SCALE Score (Project Benefit per $10M SMART SCALE Cost)	**15.4**													

FY20 VDOT Results (total funding: $870M)

Actual Outcome (Benefit/Cost)	Benefit Only
134 projects funded	**17 projects funded**
• 36 bike/ped	• 0 bike/ped
• 7 bus transit	• 5 bus transit
• 86 highway	• 11 highway
• 1 rail transit	• 1 rail transit
• 4 TDM	• 0 TDM
87 localities got a project	**10 localities get a project**

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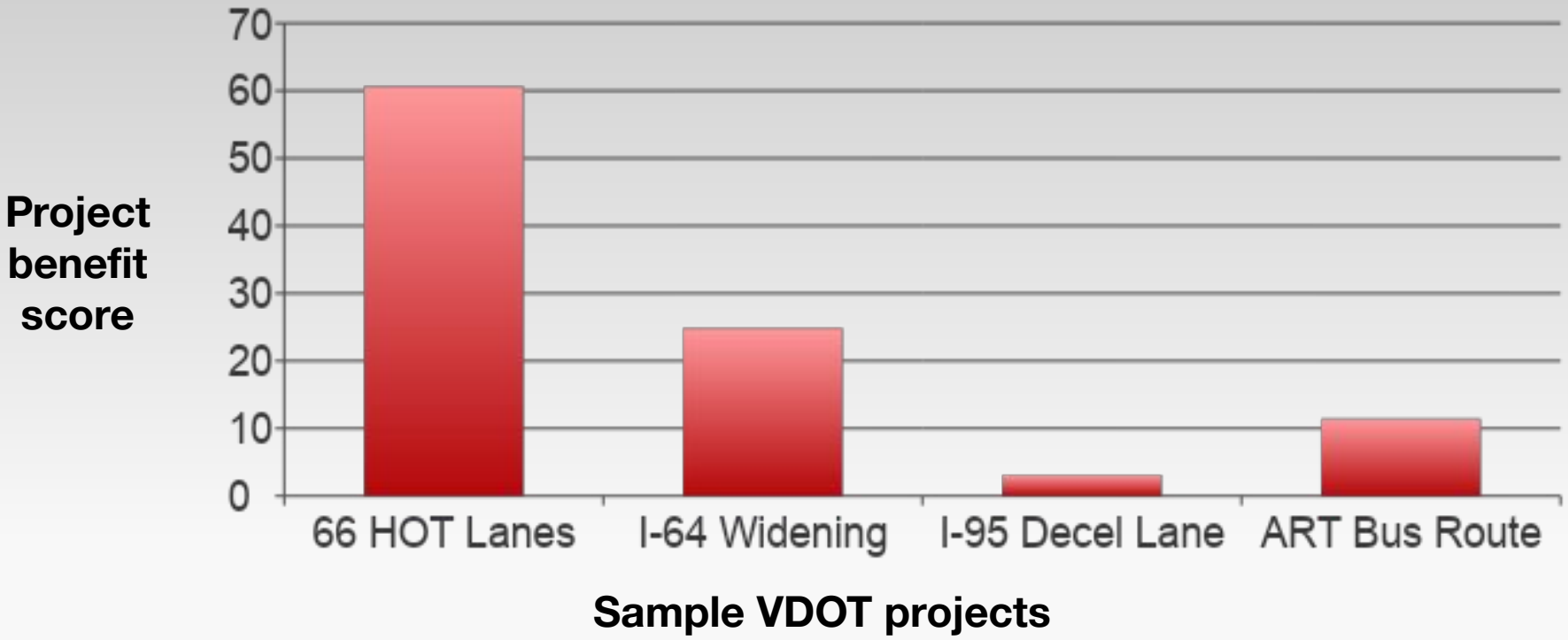
Benefits



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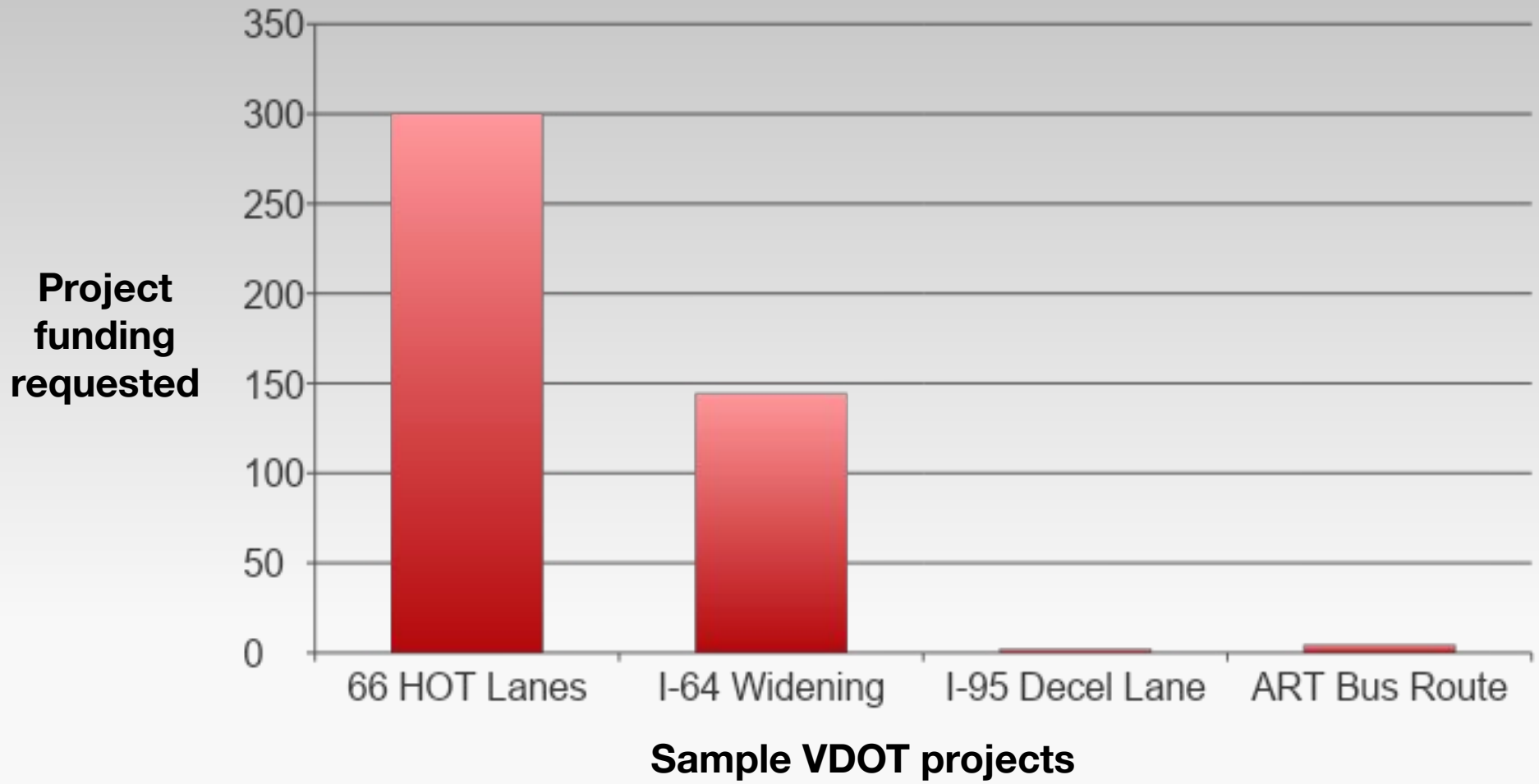
Costs



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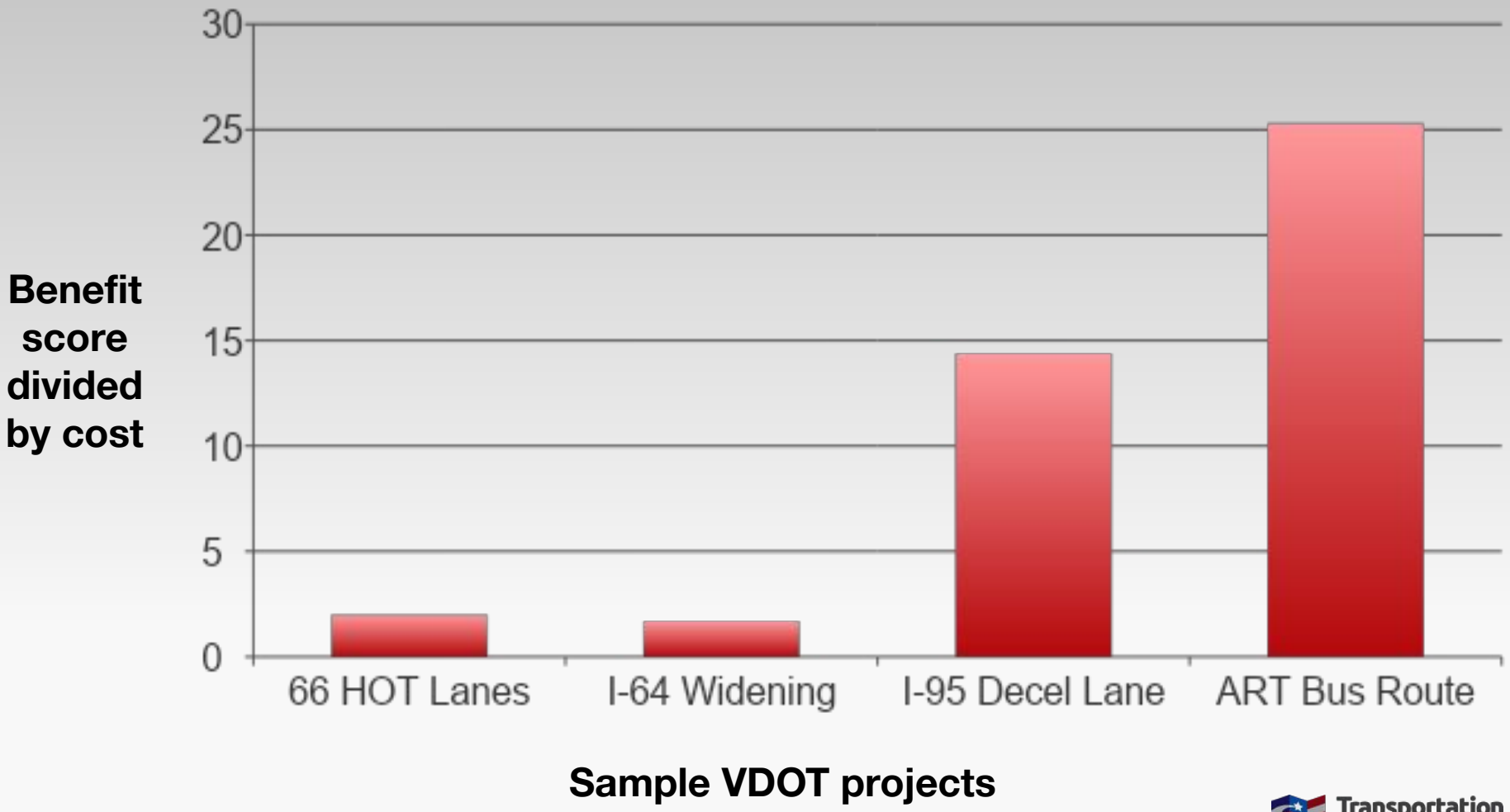
Benefits and Costs



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Common Sense Engineering

I-64 Widening from I-295 to Bottoms Bridge

Original design

Revised design

Original design - $79M | Revised design - $60M
Both projects provide the same benefits

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I-87 Exit 17 Interchange

Original design

Revised design

Original design - $157M | Revised design - $21M

Revised design provided nearly the same benefits

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ATL Transit Project Prioritization Process

Performance Measure Category	Project-Level Performance Measures	Expansion	Enhancement	SGR
Market		42	27	15
	Existing, Projected Population Density	6	4	3
	Existing Population - Communities of Interest	8	6	6
	Existing Employment Density	5	3	2
	Existing Low Wage Employment Density	7	5	4
	Land Use Mix - Existing, Planned (+/- Community Impacts)	8	4	0
	(Re) Development Potential	8	5	0
Performance		30	50	70
	Transit Trips	10	10	15
	Transit Reliability	15	20	25
	Increased Useful Life	0	10	25
	Elements to Improve Safety/Security/Environment	5	10	5
Deliverability		28	23	15
	Financial Plan	15	10	10
	Documented Project Support	4	4	0
	Project Readiness - Schedule, Environmental Impacts	4	4	0
	Regional Integration / Connectivity	5	5	5

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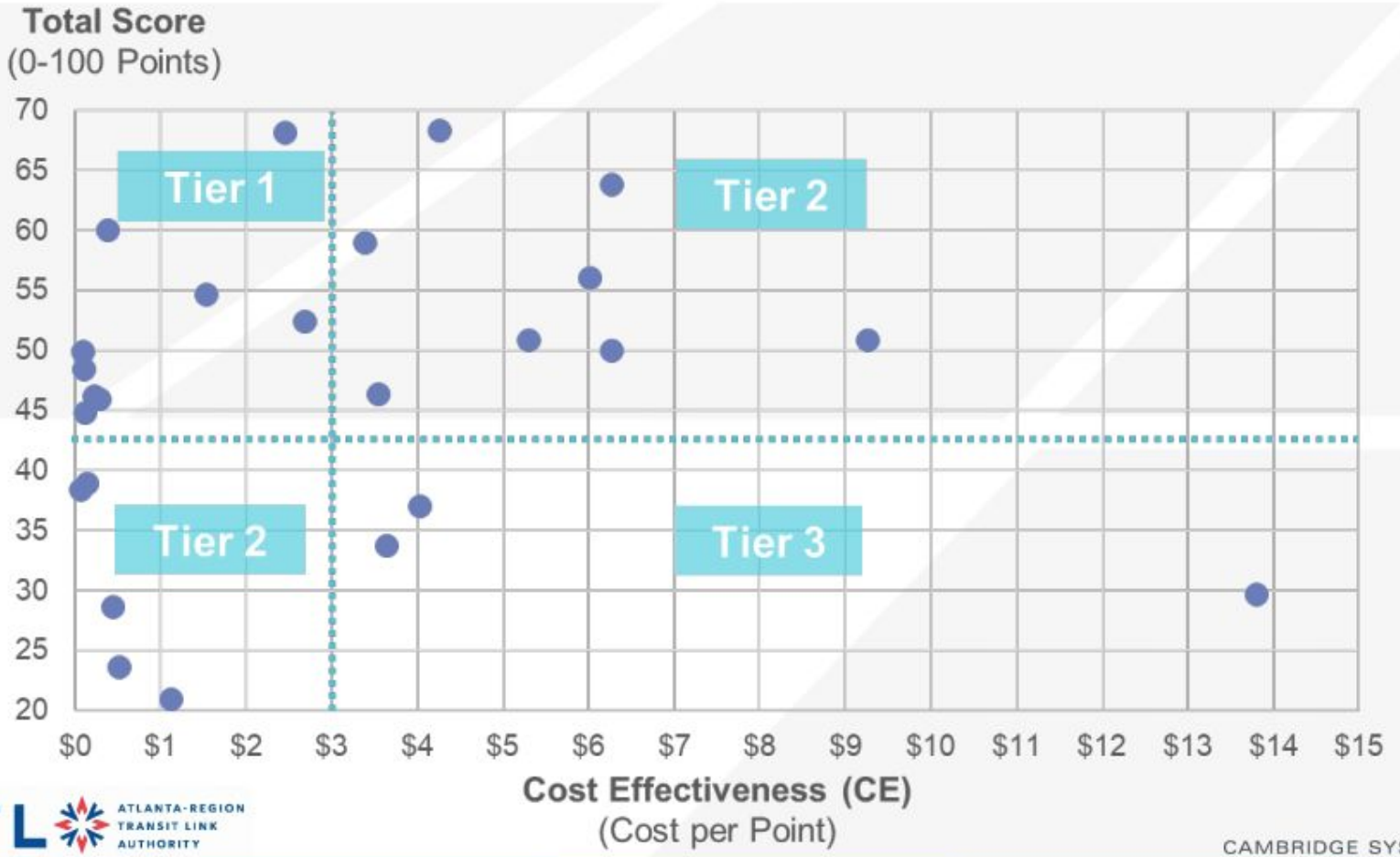
Cost Effectiveness tiers

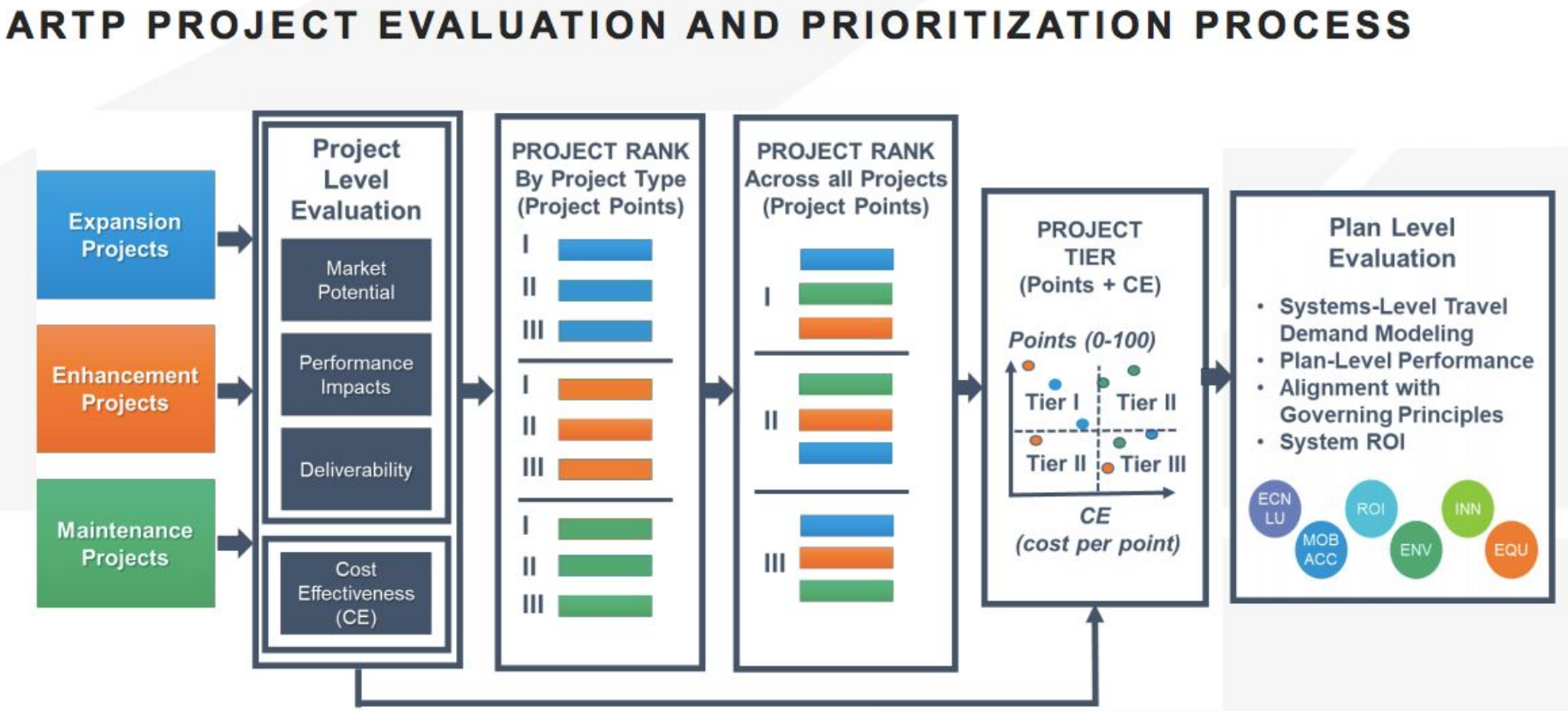
Four-Quadrant Matrix Model



ATL ATLANTA-REGION TRANSIT LINK AUTHORITY

CAMBRIDGE SYSTEMATICS

ATL Prioritization



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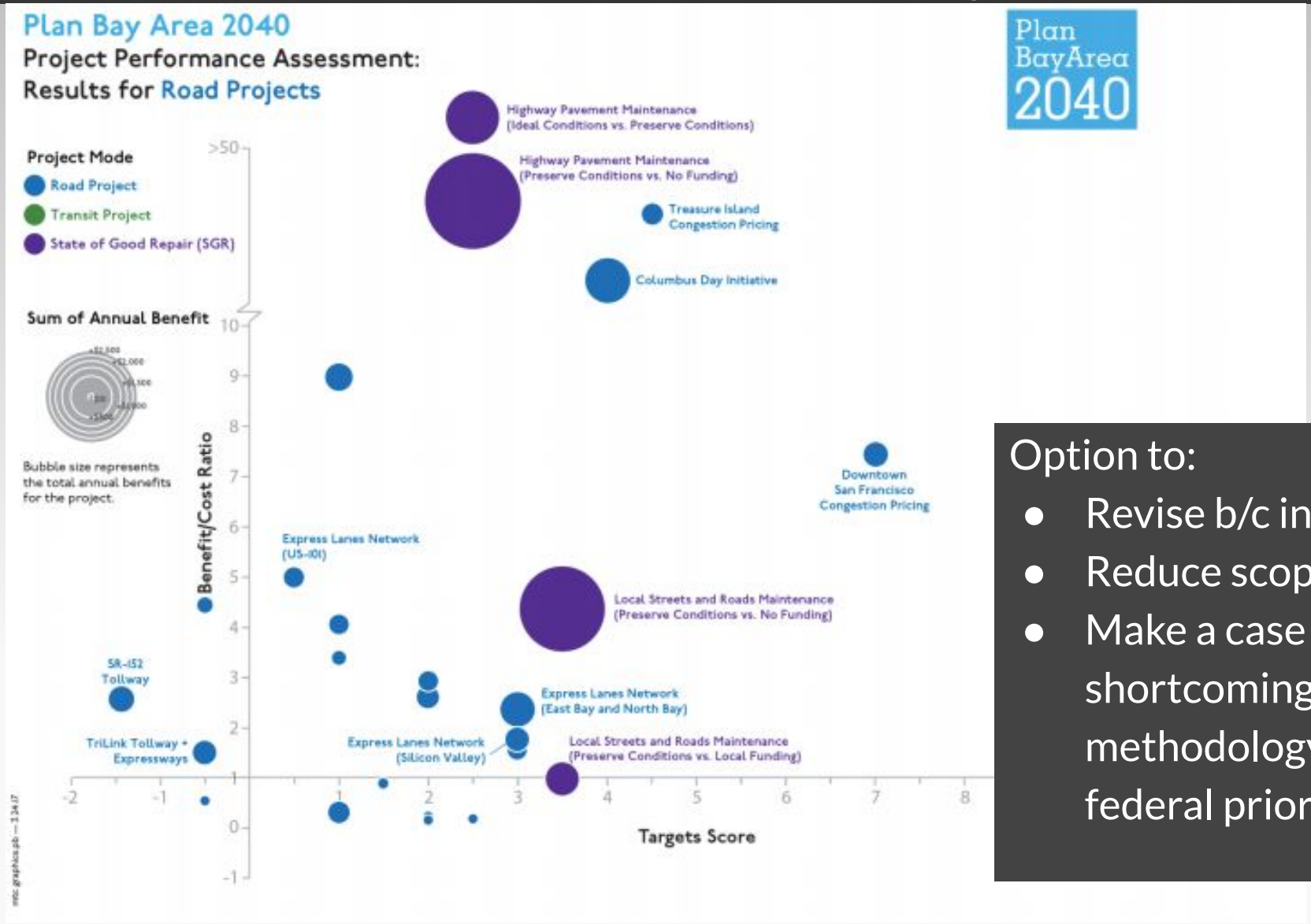
MTC's "compelling case" process for cost-ineffective projects



Option to:

- Revise b/c info
- Reduce scope
- Make a case based on shortcomings in b/c methodology and federal priorities

MTC results

Of the 18 projects with B/C less than 1.0:

- 4 converted to environmental studies
- 3 reduced scope to achieve b/c > 1.0
- 2 provided updated b/c data to achieve ratio > 1.0
- 5 successfully made a “compelling case” to be upgraded without b/c >1.0
- 4 dropped altogether

Process removed billions of dollars of low performing projects.

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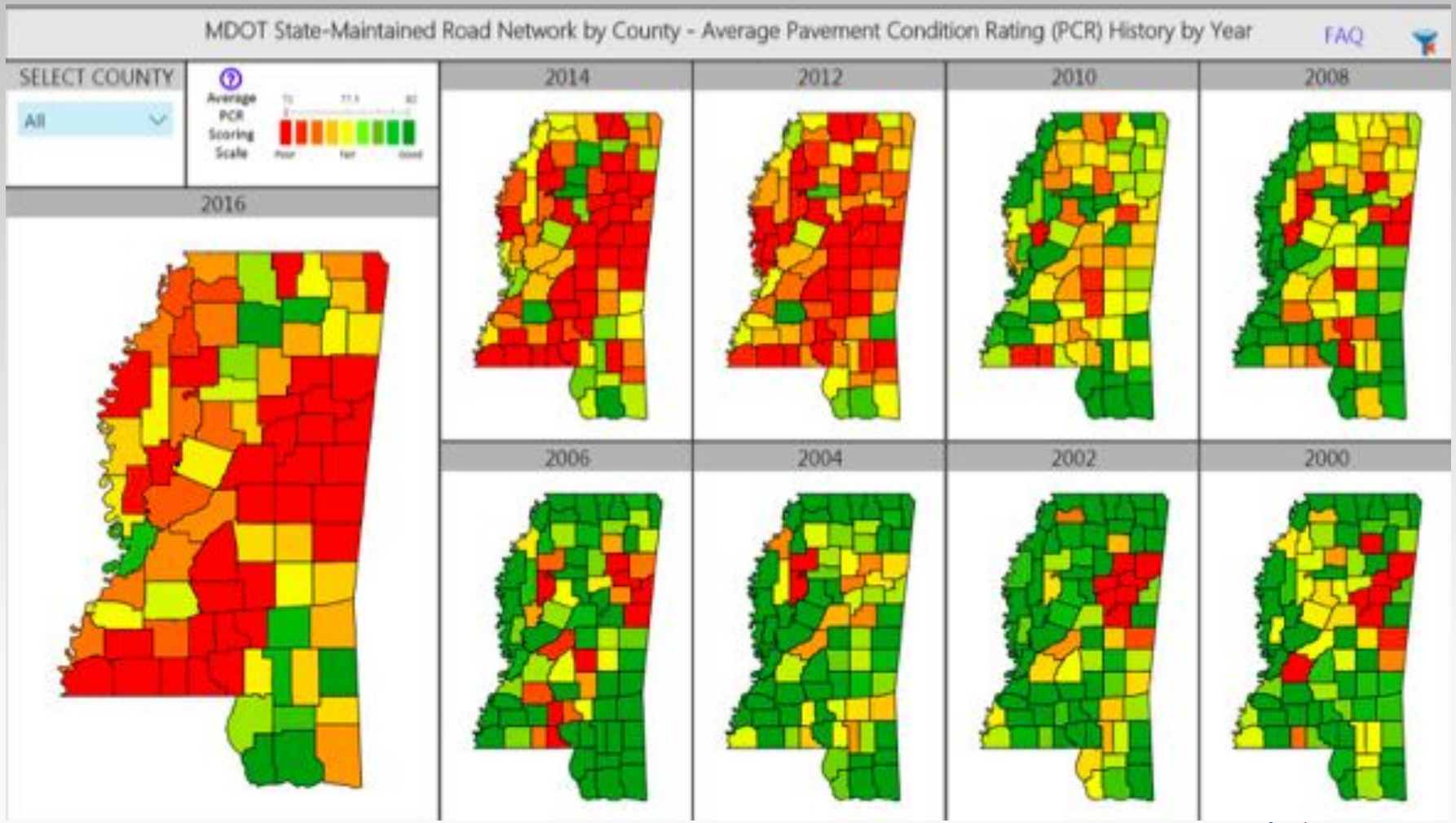
Why have a formal process to address cost increases?



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How Virginia handles cost increases

- Rescored for significant changes to cost OR scope (benefits)
- Board must approve scope/cost change if project falls below funded threshold for its district (vs. static b/c ratio)
- Could revoke funding
- **Project proponents usually *overestimate* costs upfront for fear of losing funds**

Total project budget	Cost threshold for rescoring
Less than $5M	Funding request increased 20%
$5M-$10M	Funding request increased more than $1M
Greater than $10M	Funding request increased 10% (max $5M)

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Making the process more transparent

- Have a scoring process everyone can understand
- Have results presented in a clear way
- Ensure criteria are closely connected to regional goals
- Update your process every round
- Help applicants with your process
- Score once and fund fully

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Discussion

- What elements of these approaches would be helpful to you in making project selection decisions?
- What elements concern you?
- Are you interested in pursuing an approach that considers cost increases and/or includes rescoring of projects after programming decisions have been made?
- What are the biggest barriers to implementing a cost-effectiveness approach in project decision-making?
- What questions or issues do you want staff to explore further on this topic?

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