Utah Department of Transportation

The Roads Mostly Traveled

Better roads. Better bridges. Better safety. Limited funds. This is a familiar challenge for state departments of transportation (DOTs) across the United States.

As population increases have overburdened infrastructure, DOTs face the difficult task of allocating funds to projects that are equally important to those they affect. Adding pressure to the mix is Federal legislation including MAP-21 and the FAST Act, both of which have real implications on how money is spent. How do DOTs juggle the needs of their communities, state and federal lawmaker requirements, all while providing the best infrastructure possible? It isn't an easy task, but organizations like the Utah Department of Transportation (UDOT) are using technology solutions to gain better insights into the performance of their assets to get higher value returns on their investments.

> By combining their individual portfolios for a holistic view of their assets, UDOT can quickly understand the trade-offs needed to hit strategic performance goals.

Utah, while ranking 33rd in population, is the 9th most urban state in the U.S. and 12th largest by land area. This leads to some pretty unique challenges for UDOT. Because of their large urban areas, they fight major congestion issues. And for those that live in rural areas, combined with the heavy volume of visitors to Utah's five National Parks, access issues need to be tackled as well. With nearly 6000 miles of paved roadway to maintain, bridges, and other surfaces that must be cared for, UDOT needed a better way to not only see how their individual assets perform, but understand the performance impacts across their asset areas.

To meet their own requirements, plus those of MAP-21 and the FAST Act, UDOT is working towards cross-asset optimization with the Decision Lens Impact Dashboard. By combining their individual portfolios for a holistic view of their assets, UDOT can quickly understand the trade-offs needed to hit strategic performance goals. In real-time, adjustments to the funding of portfolios can be made to see the performance impacts to other portfolios. Changes can also be made directly to the individual performance metrics to see how much more money would be needed to hit certain performance thresholds.
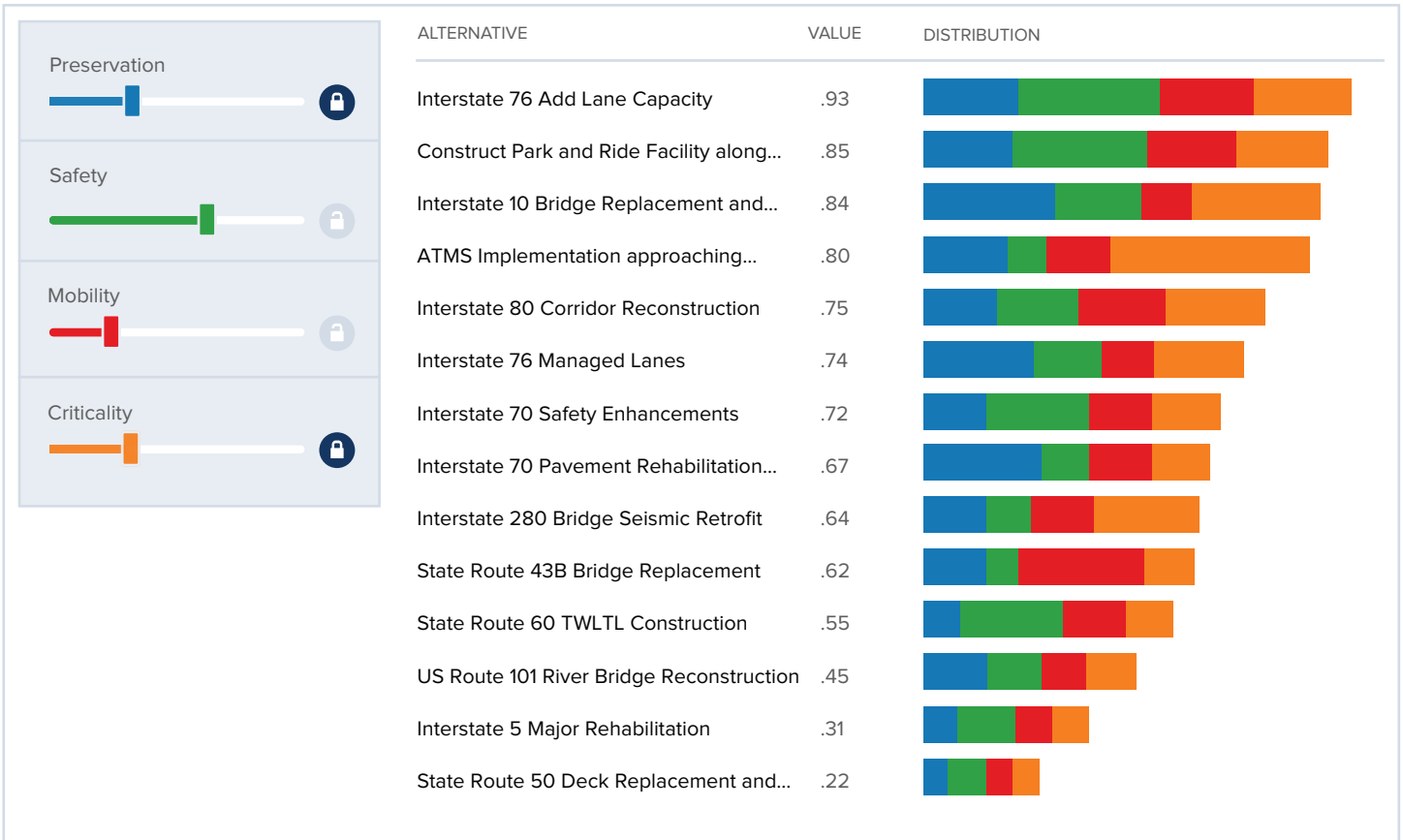
A New Path Forward

Prior to Decision Lens, UDOT gathered terabytes of data on their various asset categories including pavement, bridges, and other project areas like mobility and safety, and like many other DOTs, then they made lists.

In fact, they're great at making those lists. Data is put into predictive models and studied, and eventually there is a decision made about the best place to invest funds. Programs are then reviewed, and again, the funding of projects is viewed by individual asset areas. Unfortunately, for UDOT and every other DOT, this siloed decision-making and asset prioritization method is becoming obsolete. MAP-21 and the FAST Act now require state DOTs to meet and report on mandatory performance goals. UDOT now needs to measure investments against performance goals and understand the impact that funding projects in one asset portfolio have across other portfolios. With limited funds, they must understand the trade-offs needed to reach those performance goals.

> Siloed decision-making and asset prioritization method is becoming obsolete.
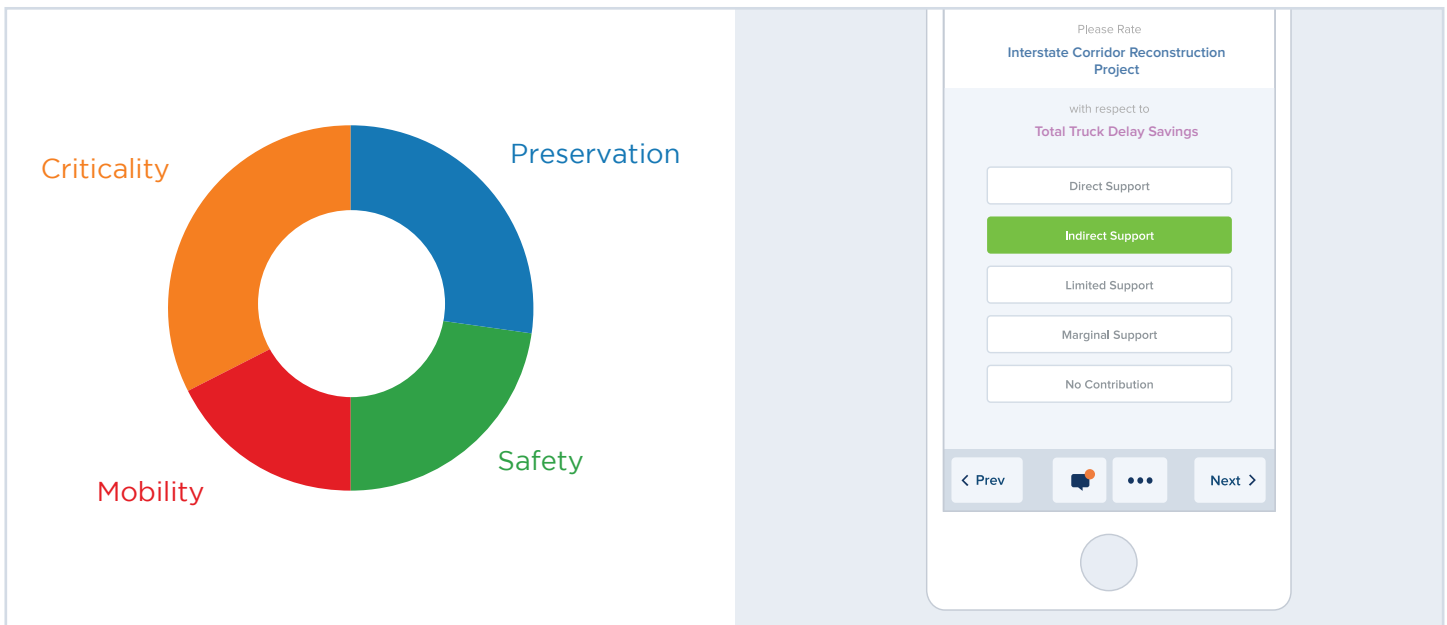
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You can establish priorities through a simple mobile optimized survey using the Decision Lens solution.

DECISION LENS

ALTERNATIVE	VALUE	DISTRIBUTION
Interstate 76 Add Lane Capacity	.93	
Construct Park and Ride Facility along...	.85	
Interstate 10 Bridge Replacement and...	.84	
ATMS Implementation approaching...	.80	
Interstate 80 Corridor Reconstruction	.75	
Interstate 76 Managed Lanes	.74	
Interstate 70 Safety Enhancements	.72	
Interstate 70 Pavement Rehabilitation...	.67	
Interstate 280 Bridge Seismic Retrofit	.64	
State Route 43B Bridge Replacement	.62	
State Route 60 TWLTL Construction	.55	
US Route 101 River Bridge Reconstruction	.45	
Interstate 5 Major Rehabilitation	.31	
State Route 50 Deck Replacement and...	.22	

Sliders: Preservation, Safety, Mobility, Criticality

This image is for illustrative purposes only.

> "You can start to understand how these projects are affecting our performance towards our strategic goals."
>
> **John Thomas**
> *Asset Management Director, Utah DOT*

Using Decision Lens, UDOT established a set of criteria to measure projects against and gather feedback from stakeholders on those projects, resulting in a ranking of project values. More importantly, because their criteria are tied directly to their performance and strategic goals, Decision Lens shows the contribution of each project to all criteria areas. A picture starts to emerge of how an individual project can be attributed to the overall performance goals. Even more interesting, because dollars are earmarked for specific project types and can only be spent on those project categories, new conversations start to take place around how money is spent because the impact of something like "Safety" can be measured and understood across all projects.

DECISION LENS
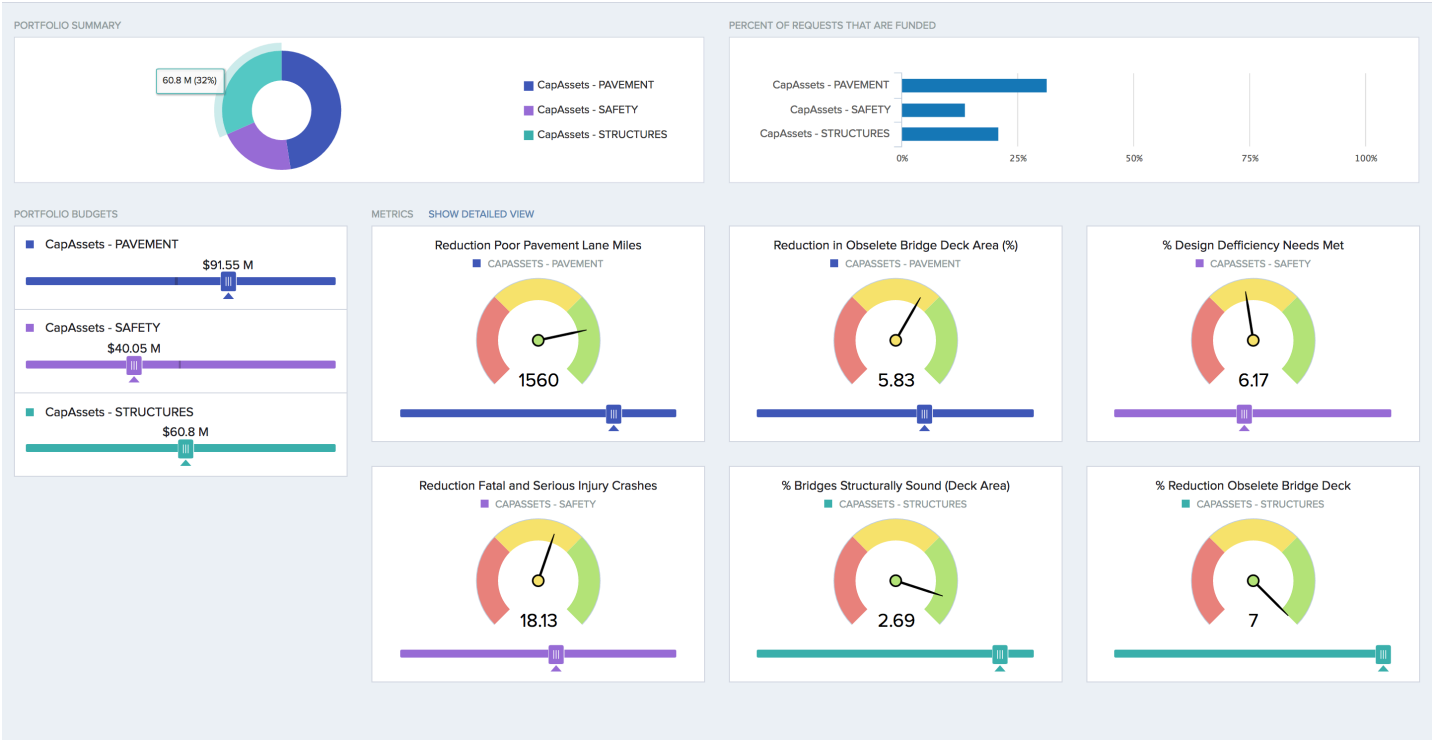
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The Future is Cross-Asset Prioritization

UDOT is on a path to cross-asset performance management and decision making to deliver safe and high-performing transportation solutions for citizens and visitors alike.

UDOT, along with many other state DOTs, are figuring out better ways to get the most out of every dollar spent while ensuring federal requirements are not only met, but exceeded. Decision Lens is the leader in cross-asset prioritization. Identify the highest-value projects in your portfolio with this easy-to-use, defensible, and transparent solution.

> "For the first time, we are able to look across our entire department and start to get an idea of how these (programs) are working together."
>
> **John Thomas**
> *Asset Management Director, Utah DOT*

DECISION LENS