

Communicating Transportation Performance Needs in Colorado

Colorado DOT's Communication Challenge

For over a decade, the Colorado Department of Transportation (CDOT) each year published a voluntary performance report in addition to its annual budget and other documents required by statute. In 2009, the State of Colorado passed the Funding Advancement for Surface Transportation and Economic Recovery (FASTER) Act, which provided funding for critical transportation improvements and included requirements for CDOT to report on investments and performance for roadways, bridges, and maintenance. FASTER, as part of the State of Colorado's broader performance management push, added a required annual "Transportation Deficit Report" to CDOT's previous, mostly voluntary performance reporting. The report combines financial forecasts of CDOT's pavement, bridges, and maintenance needs 10 years into the future and ties the forecasts to performance outcomes for the three investment categories ([2015 Transportation Deficit Report](#)).

To conduct this outcome-based performance analysis, the CDOT Performance and Asset Management Branch examines the expected budget for each fiscal year and then estimates the cost to meet CDOT's performance goals in each of its major asset categories by working with the

KEY ACCOMPLISHMENTS

- CDOT effectively communicates future financial needs to achieve its target performance levels.
- CDOT concisely reports current and forecasted performance based on its fiscal constraints for its three major investment categories.

managers for roads, bridges, and maintenance. In performing this analysis, CDOT concisely communicates how much funding it anticipates receiving, how much funding it needs to meet its goals, and the gap between the two.

CDOT found the Transportation Deficit Report useful in that it compiled budget and performance information for its three largest investment categories into one succinct report. By having that information readily available in one place, the Performance and Asset Management Branch has reduced the number of data requests it would otherwise receive. Additionally, CDOT is able to use some of the analysis and results for other presentations to the public, lawmakers, and peer agencies.

CDOT's Needs Calculations

The Deficit Report includes three important outcome-based performance calculations:

- The estimated costs and resulting deficits or surpluses for **sustaining current conditions** over the next 10 years.
- The estimated costs and resulting deficits or surpluses for **achieving fiscally constrained performance goals** over the next 10 years.
- The estimated costs and resulting deficits or surpluses for **achieving aspirational performance goals (Vision)** within the next 10 years (these goals are outlined in an updated [policy directive](#) adopted by

the Colorado Transportation Commission in February 2015).

To develop these calculations, CDOT derives the 10-year budget estimate using five-year planning budgets developed for each of the asset program areas. Once the estimated combined 10-year budget is determined, CDOT then uses its asset investment management system and other models to calculate the anticipated level of investment against the inventoried condition of the assets and the costs of treatments to calculate its expected condition levels. CDOT's asset investment management system is built using a tool designed by Deighton called [dtims](#). It allows the agency to customize queries and to bring data on multiple asset types and from multiple sources into a single system.

CDOT then develops three results using its tool: "Budget vs. Cost of Achieving Asset Goal," "Budget vs. Cost of Achieving Vision," and "Budget vs. Cost of Sustaining Asset Condition." With the needs calculated, the Deficit Report also includes information on other factors that contribute to each asset's need results. For example, pavement treatment costs are affected by several external factors and trends such as rising construction costs or population growth and distribution. The report also includes examples of relevant projects and treatment types to provide further perspective on CDOT's investment decisions and needs.

Lessons Learned

After developing the Transportation Deficit Report for several years, CDOT has learned several lessons that help it report more consistently, transparently, and clearly on transportation financial needs:

- **Context** – it is important to tell the story carefully to minimize confusion and set realistic expectations for the audience. To that end, CDOT sets realistic/achievable performance targets in addition to "aspirational" targets.
- **Understand what is behind the numbers** – learning what goes into the calculations in

the report results in better storytelling and clarity for the audience.

- **Identify the customer** – make sure reports speak to the appropriate reader; spell out acronyms and make the points tangible to the reader. Adding visuals, such as photographic examples of pavement condition, can help tell the story in a way understandable to audiences with little familiarity of the assets and condition performance metrics being discussed.
- **Document and standardize all assumptions** (e.g. inflation rates) – there are a variety of ways to calculate deficits and needs so it is important to track how and why when making those choices.
- **Be adaptive and responsive to changes** - metric, models, and condition changes affect cost and budget estimates. Therefore, it is important to adapt and respond to changes that may occur although it compromises year-to-year comparability.

Contacts

William Johnson

Performance and Asset Management Branch Manager, CDOT

Will.Johnson@state.co.us

Toby Manthey

Performance and Asset Management Branch CDOT Performance Analyst

Toby.Manthey@state.co.us

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