

# Measuring Transportation Investments

## The Road to Results



MAY 2011

This report is a joint project of the Pew Center on the States and The Rockefeller Foundation.

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Dear Reader:

Most states are entering their fourth year of the ongoing budget crisis, and policy makers around the country are making tough choices about where to devote limited resources. With states spending an estimated \$131 billion in 2010 alone on their transportation systems, it matters more than ever that every dollar delivers a strong return on taxpayers' investment.

This report by the Pew Center on the States and the Rockefeller Foundation identifies which states have the essential tools in place to make more cost-effective transportation funding and policy choices. We conclude that states generally have the goals, performance measures and data to help them measure progress on safety and infrastructure preservation. But in several other important areas—including jobs and commerce and environmental stewardship—policy makers and the public in many states need better and more information about the results they are getting for their money.

Growing interest at both the federal and state levels in measuring performance and outcomes is a sign of progress. And solutions exist: Across the country, state leaders have developed proven approaches to using results-based data to drive transportation spending and policies and to ensure their decisions advance economic growth and other important goals. This report profiles many of these approaches. Even states that are “leading the way” in our assessment, performing relatively better than other states, have room for improvement.

This study builds on the interest and experience of both Pew and the Rockefeller Foundation in providing federal and state leaders with the vital information they need to weather today's fiscal challenges. We hope this report will help guide their efforts to develop a transportation system that reliably serves citizens every day and advances states' prosperity well into the future.

Sincerely,



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# Executive Summary

In fiscal year 2010, states spent an estimated \$131 billion in taxpayer dollars on transportation.<sup>1</sup> Yet many policy makers cannot answer critical questions about what results this investment is generating. Just 13 states—California, Connecticut, Florida, Georgia, Maryland, Minnesota, Missouri, Montana, Oregon, Texas, Utah, Virginia and Washington—have goals, performance measures and data needed to help decision makers ensure their surface transportation systems are advancing economic growth, mobility, access and other key policy outcomes. Nineteen states trail behind, lacking a full array of tools needed to account for the return on investment in their roads, highways, bridges and bus and rail systems. The remaining 18 states and Washington, DC, fall someplace in between, with mixed results. Three of those—Colorado, Michigan and Pennsylvania—just missed earning the top distinction. (See Exhibit 1.)

These are the key findings of a study by the Pew Center on the States and the Rockefeller Foundation, based on a review of publicly available documents

and interviews with scores of state and federal officials and experts in the field.

State policy makers want to demonstrate they are delivering the most cost-effective services possible for the public. Today, it is more important than ever that every tax dollar spent on transportation generates the best results and advances states' short- and long-term economic interests. Most states are entering their fourth year of the ongoing budget crisis, with revenues far below pre-recession levels and expenditures rising—and policy makers around the country are making tough choices about where to spend limited resources. Meanwhile, some members of Congress are proposing that the next surface transportation reauthorization act, the law that governs the largest federal funding streams for states' transportation systems, move from a compliance-based to a performance-based approach and more closely tie dollars to outcomes.

The goal of this assessment of the 50 states and Washington, DC, is to identify which are doing the best in terms of having essential tools in place to make cost-effective transportation funding and



## SIX GOALS FOR STATES' TRANSPORTATION SYSTEMS

The Pew-Rockefeller research focused on six important and widely accepted goals for states' transportation policies and investments:

- 1. Safety.** The ability of the transportation system to allow people and goods to move freely without harm. Performance measures include fatalities and injuries from transportation-related incidents across all modes of transportation.
- 2. Jobs and commerce.** How well the transportation system facilitates or supports business development and employment. Performance measures include job creation, the movement of freight and estimates of the economic return from policies and investments.
- 3. Mobility.** The efficient movement of people between destinations by automobile, pedestrian, bicycle and transit modes. Performance measures include congestion levels, travel times, travel speed and volume, time lost to traffic delays and on-time transit performance.
- 4. Access.** The ability of the transportation system to connect people to desired goods, services, activities and destinations for both work and leisure, and to meet the transportation needs of different populations. Performance measures include availability and use of multimodal transportation options—including public and private transit and pedestrian and bicycle access—for the general public and populations with specific needs, such as elderly, disabled and low-income individuals.
- 5. Environmental stewardship.** The effect of the transportation system on energy use and the natural environment. Performance measures include fuel usage, transportation-related emissions, climate change indicators, and preservation of and impact on ecological systems.
- 6. Infrastructure preservation.** The condition of the transportation system's assets. Performance measures include the physical condition of roads, bridges, pavements, signs, culverts and rail systems.

systems to and measuring their ongoing performance toward these important policy goals.

States were rated according to three levels—leading the way, having mixed results or trailing behind—for each of the six goals. Each state also was given an overall rating based on how it performed

across the six goals. The 13 states leading the way overall publicly report useful data on their transportation systems that policy makers can use to advance economic competitiveness, improve citizens' access to jobs, help residents and tourists move about more efficiently and mitigate the effects transportation can have on the environment, among other

outcomes. This information puts their lawmakers in a better position to make wise investments over the short and long terms, choose cost-effective policy options and ensure the likelihood of a strong return for taxpayers.

Most of the remaining states performed best in the areas of safety and infrastructure preservation, where both the federal and state governments have a long history of setting goals, using performance measures and collecting data (see Exhibit 2). Roughly half the states fared well in the areas of mobility and access—but only about a quarter

earned the top distinction in the areas of jobs and commerce and environmental stewardship because they do not measure their progress and return on investment in a comprehensive and effective way.

**Safety:** All 50 states and Washington, DC, earned the top distinction.

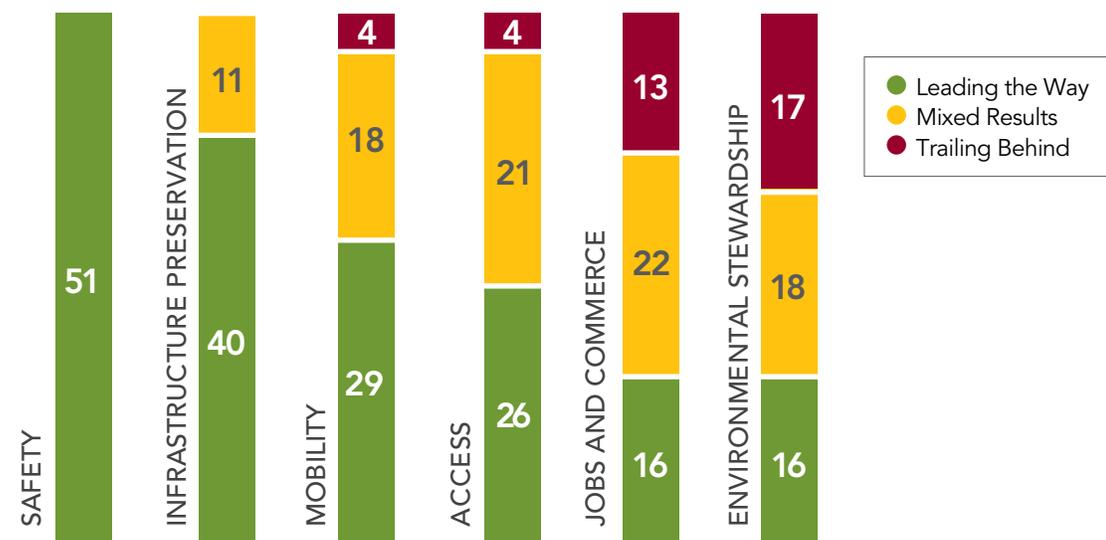
**Jobs and commerce:** 16 states are leading the way, 22 have mixed results and 12 states and Washington, DC, trail behind.

**Mobility:** 28 states and Washington, DC, are leading the way, 18 states have mixed results and four states trail behind.

Exhibit 2

## How States Stack Up

Most states and Washington, DC, have the tools in place to understand the impact of transportation investments on safety and infrastructure preservation. But many lack these tools in the areas of environmental stewardship and jobs and commerce.



SOURCE: Pew Center on the States and the Rockefeller Foundation, 2011.

**Access:** 25 states and Washington, DC, are leading the way, 21 states have mixed results and four states trail behind.

**Environmental stewardship:** 16 states are leading the way, 18 states have mixed results and 16 states and Washington, DC, trail behind.

**Infrastructure preservation:** 39 states and Washington, DC, are leading the way, 11 states have mixed results and no states trail behind.

(See the “How Are States Doing?” section, Appendix A: State-by-State Ratings and individual state fact sheets for detailed results; see Appendix B:

Methodology for further description of the rating system and criteria.)

## Growing Momentum for Change

Historically, states have not made transportation policy or spending decisions based principally on data analysis or cost-benefit comparisons of different options. A December 2010 report by the U.S. Government Accountability Office (GAO) found that “only a select few states have made significant attempts to integrate performance measurement into their statewide planning process to inform investment decisions.”<sup>3</sup>

## CAVEATS OF THE STUDY

The study does not evaluate states based on whether or to what degree they actually have achieved these goals. We were not able to assess how individual policy decisions are actually made at the state level, including whether decisions are grounded in evidence, whether interagency cooperation is part of the decision-making process or whether policies are targeted at meeting agreed-upon goals. Instead, states are evaluated based on whether they have the essential tools in place to help them understand if they are making progress. This approach acknowledges that states are still in the process of learning how best to use performance measurement information in making policy decisions.

Readers should be cautious in interpreting the results; for example, states that are “leading the way” in our assessment are performing relatively better than other states, but in many cases still have room for progress. Given the fledgling state of the field in developing goals, performance measures and data, particularly in areas such as jobs and commerce and environmental stewardship, we assessed whether states could meet a baseline threshold in each of the six areas we examined. We did not comprehensively assess the quality or quantity of information in each area. (See Appendix B: Methodology for a complete explanation.)

Thirty states reported that political support was of great or very great importance in selecting projects; just 11 states said that economic analysis—the cost effectiveness or projected economic impact of a proposal, for example—was of great or very great importance, according to the GAO’s survey of state transportation planning officials.<sup>4</sup>

But states’ careful setting of priorities—with return on investment in mind—is growing increasingly important, for three main reasons.

First, taxpayer dollars are in short supply.<sup>5</sup> The key funding sources for states’ transportation systems are federal and state excise taxes on gasoline, but improved fuel efficiency has reduced gas use and thus lowered revenues. The federal excise tax on gasoline—currently 18.4 cents per gallon—is the same as it was in 1994, even as prices at the pump have risen dramatically. From 1994 to 2009, the federal gas tax declined 38 percent in real purchasing power.<sup>6</sup> And while states’ general funds contribute a very small portion toward transportation, the Great Recession has constrained that source from helping make up the difference in gas tax revenue. Some 15 states experienced midyear budget cuts in transportation in fiscal year 2010, and federal funding from the American Recovery and Reinvestment Act will continue to dwindle over the coming years.<sup>7</sup>

Second, policy makers increasingly are recognizing the essential role transportation plays in driving their states’ economies—and the consequences if it fails that role. “Job creation will not be sustainable without a transportation system that is reliable,” Virginia Governor Bob McDonnell (R) said in his state of the commonwealth address in January 2011. “Transportation helps drive economic growth.”<sup>8</sup> In Maryland, Governor Martin O’Malley (D) has expressed similar sentiments. “Our transportation network and infrastructure is the lifeline of our economy,” O’Malley says. “And it’s also our connection to the broader global economy. . . . Transportation is what allows the flow of economic oxygen.”<sup>9</sup>

Taxpayers also seem to understand the connection: 80 percent of voters agree that federal funding to improve the nation’s transportation system will boost local economies and create jobs, according to a February 2011 survey by the Rockefeller Foundation.<sup>10</sup>

Third, states increasingly are gathering information on outcomes across a range of issues. While more lawmakers need to use data in making policy and spending decisions, a growing number are acknowledging the importance of greater planning, accountability, evaluation and consideration of return on investment. Pew’s Government Performance Project tracked a significant improvement in statewide and agency strategic planning:

In 1999, relatively few states had agencies or departments specifically tasked with looking into the success or failure of programs. As of 2008, four out of five states did.<sup>11</sup>

States are showing momentum toward improving transportation results by tracking their progress through goals, performance measurements and better data. Among the examples identified by the Pew-Rockefeller study:

In **Washington State**, following a significant reduction in funding in 2000 and a voter referendum in 2002 that rejected allocating additional monies, the state's Department of Transportation (WSDOT) began scoring potential projects according to performance change per dollar spent, ranking the most cost-effective approaches to the state's transportation safety, congestion, environmental and economic goals. This performance-oriented practice contributed to the legislature's willingness to allow the state to sell bond issues by increasing the gas tax by 5 cents in 2003 and by 9.5 cents in 2005 (phased in over four years), and ultimately increased public confidence in WSDOT.<sup>12</sup>

**Missouri** has advanced tools in the area of jobs and commerce to develop state and regional estimates of employment, income and the economic return on transportation investments. Missouri also tracks trends in freight tonnage and includes detailed

information by mode, including port, motor carrier, aviation and rail.<sup>13</sup>

**Georgia** has initiated a performance-oriented strategic planning and project prioritization process as part of the lead up to a statewide vote in 2012 on increasing taxes to fund specific transportation needs. That vote will allow each of 12 special transportation districts in the state to decide on a list of projects and a 1 percent sales tax increase to fund them. Georgia adopted a business-case approach, assessing potential projects according to performance measures that relate to mobility and economic development, in an attempt to determine what types of projects provide the best return on investment. For example, the state is using projections of the impact that various funding levels and projects would have on the number of workers in the state who could reach their jobs within 45 minutes by car or public transit.<sup>14</sup>

**Minnesota** is using performance measures for 10 policy areas identified in its 2009–2028 Statewide Transportation Policy Plan. These measures include adjusting to the transportation needs of a growing and aging population and enhancing mobility by reducing congestion across the 9 percent of the highway system that carries about 50 percent of the state's roadway travel.<sup>15</sup>

**New Mexico** estimates the unserved need for public transit in rural areas, focusing on elderly, disabled and low-income

individuals. The results help state officials understand which parts of the state offer the least access to populations that most need it, and prioritize expanding or adding new transit routes to particular regions. New Mexico's Statewide Public Transportation Plan of January 2010 used this approach to identify rural communities in need and rank proposed transportation projects by estimated new ridership, cost per additional rider and improvements to accessibility.<sup>16</sup>

**Oregon** measures the number and rate of crashes in which large trucks were at fault. It focuses on commercial drivers because data show that of the 671 truck at-fault crashes that occurred in 2008, only 35 resulted from mechanical problems. Oregon has instituted more frequent inspections, safety compliance reviews and removal of drivers from service in the event of violations. 2008 data show mixed progress: The rate of large truck at-fault crashes increased slightly from .37 to .38 per million vehicle miles traveled (VMT). On the positive side, truck crashes resulted in 4.4 percent fewer injuries and 34.6 percent fewer deaths.<sup>17</sup>

## Policy Options

What can lawmakers do to improve taxpayers' return on investment in states' transportation systems, even in difficult fiscal times? Several policy options emerged from the research:

**Improve the information.** The most obvious step is to push for better

information—moving toward a heightened focus on results, improving the usefulness of performance measures and making sure those measures link to concrete goals that reflect a state's larger priorities, such as jobs and commerce. The federal government, states and localities can help each other by publicizing new approaches to measurement, establishing consistent measures for common benchmarking, and continuing to work on such areas as commerce and access, in which there is disagreement or uncertainty about the best measures to use.

**Enact or improve performance measurement legislation.** Laws at both the federal and state levels can make a significant difference. While the details vary, such legislation generally prescribes a consistent use of measurement, benchmarking against goals and evaluation; it also seeks to spur states to go beyond collecting information by mandating that they actually use the information when making important transportation policy and funding choices. For instance, in some cases, budget requests are tied to submission of performance data.

At the federal level, congressional deliberations about a new, multiyear highway and transit bill—likely to be considered in 2011—are expected to focus at least in part on transportation's ability to help advance America's economic growth, mobility, environmental stewardship and other key goals. There is momentum from both the executive and legislative branches

to include in the legislation an increased emphasis on states' use of performance measures and data collection to make transportation decisions.

Although 39 states have passed some form of legislation prescribing some sort of performance-based budgeting process, the act of making use of such information is incremental and usually lengthy.<sup>18</sup> Some experts say the new version of the Government Performance and Results Act passed by Congress in late 2010 includes models for making greater use of goals and measures at the state level. For example, the law requires that states focus on how agencies collaborate to achieve goals and on what happens when goals or targets are not met.<sup>19</sup>

**Develop an appropriations process that makes better use of data.** States need to develop more comprehensive systems that ensure that policy makers are asking for and using solid information in their deliberations about transportation spending. For example, the Appropriations Committee of the Connecticut General Assembly is working to establish a “Results-Based Accountability” approach that might become a model. Report cards from agencies on past performance are embedded in subcommittee budget books, along with a set of questions that encourage legislators to delve into the quality of work and demonstrated

accomplishments before they make new funding choices.<sup>20</sup>

**Increase the use of cost-benefit and other types of economic analysis in making transportation decisions.** As noted above, only about 20 percent of states reported to the GAO that economic analysis of projects was of great or very great importance in deciding what to include in their statewide transportation plans.<sup>21</sup> States such as Washington, however, show that these efforts can save money and even lives. For example, Washington's research indicates that center-line rumble strips prevent serious crashes. Based on the cost of the strips and an assessment of the cost of crashes prevented, the state has determined that these infrastructure improvements provide a return on investment of approximately 25 to one.<sup>22</sup>

**Better connect goals, measures and plans.** States benefit from a holistic approach that combines setting goals, measuring performance and progress, and planning.<sup>23</sup> In Georgia, for instance, a recently released long-term strategic plan contains performance metrics linked to goals and a discussion of previous performance and investment. Several sections discuss performance metrics in direct relation to allocated funds and estimate the performance that could be achieved given different levels of funding.<sup>24</sup>

**Track citizen feedback on transportation.** The Pew-Rockefeller research found that most states do not measure citizen satisfaction with their surface transportation systems across the spectrum of the six goals studied. Yet Delaware and a few other states have found that citizen perceptions can yield important information for policy makers, informing decisions on such issues as road safety, transit service availability and project prioritization.<sup>25</sup>

**Improve intergovernmental and interagency coordination.** Transportation is a complex, joint partnership among the federal, state and local governments. Coordination between the federal government and states is crucial, given that Congress provides funding for more than 30 percent of state spending on transportation.<sup>26</sup> Equally important, federal coordination of state efforts has helped accelerate progress dramatically in areas such as safety. Meanwhile, greater collaboration among state, county and local officials can help improve outcomes—such as creating more consistent road condition information—and give policy makers better tools to make decisions based on need and effectiveness.<sup>27</sup>

## Conclusion

Some Americans may think of the nation's roads, bridges and transit systems as ends unto themselves. In fact, they are instruments that can influence broader societal goals—from strengthening our economies and giving citizens better access to jobs to creating a cleaner environment.

Slowly but surely, federal and state policy makers are beginning to realize this. Still, in many states, this process is in its early stages, and states vary enormously in how well they are tracking transportation's impact on key policy goals. As this study has found, a majority of states now have comprehensive measures for transportation in the areas of safety and infrastructure preservation. Far fewer measure performance comprehensively or effectively in the critical areas of mobility, access, environmental stewardship, and jobs and commerce—all vital for states' economic well-being.

Our research demonstrates that when it comes to transportation policy and spending, even states most thoroughly guided by results-based decision making still have a distance to go before they can declare victory. But the growing appreciation among policy makers of the value of such efforts is a reason for cautious optimism.



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