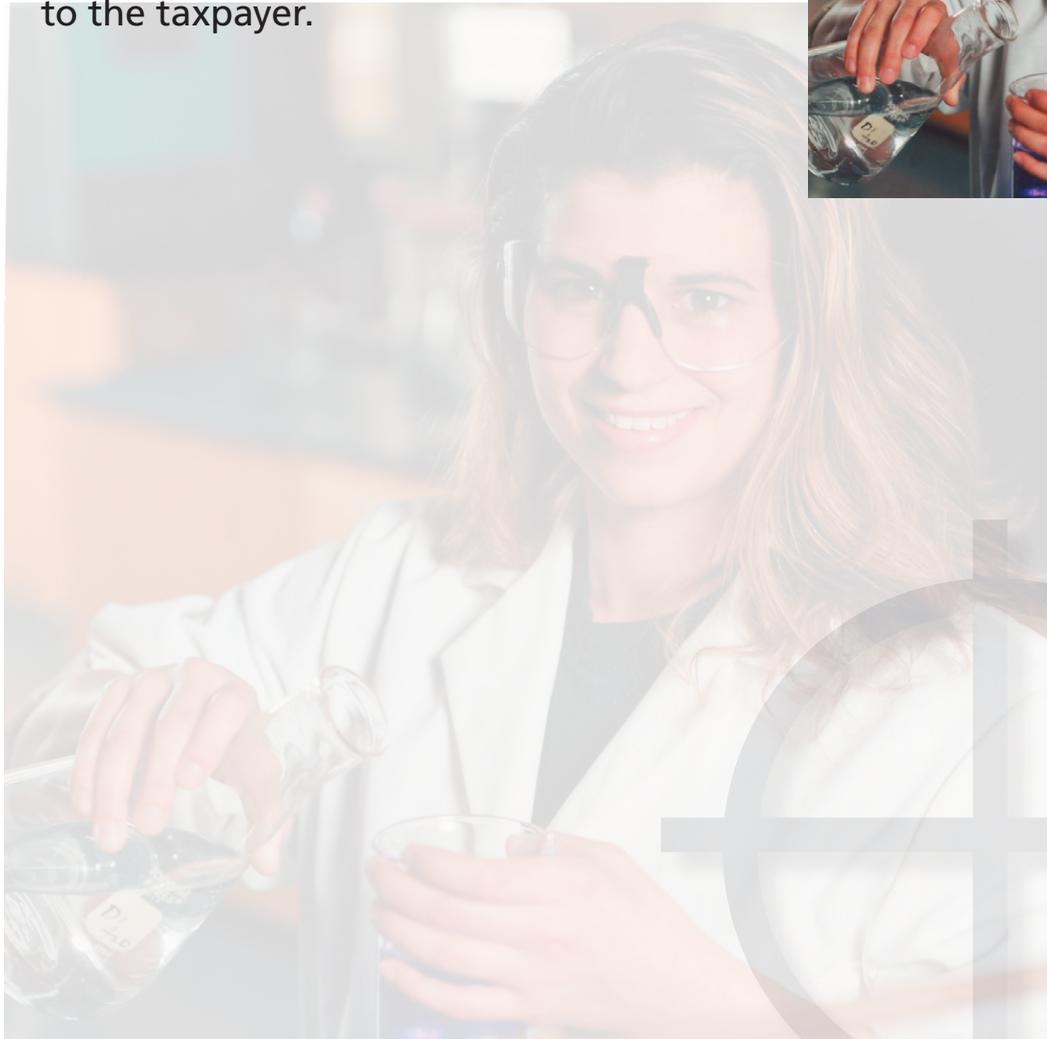

Innovative Transportation Solutions

*Tangible Result Driver – Mara Campbell,
Organizational Results Director*

MoDOT values innovation. The department empowers employees to generate innovative ideas. They are the ones that make concepts come to life so that MoDOT can serve its customers better, faster and at less expense to the taxpayer.



Innovative Transportation Solutions

Percent of innovative transportation solutions implemented

Result Driver: Mara Campbell, Organizational Results Director

Measurement Driver: Patty Lemongelli, Organizational Performance Administrator

Purpose of the Measure:

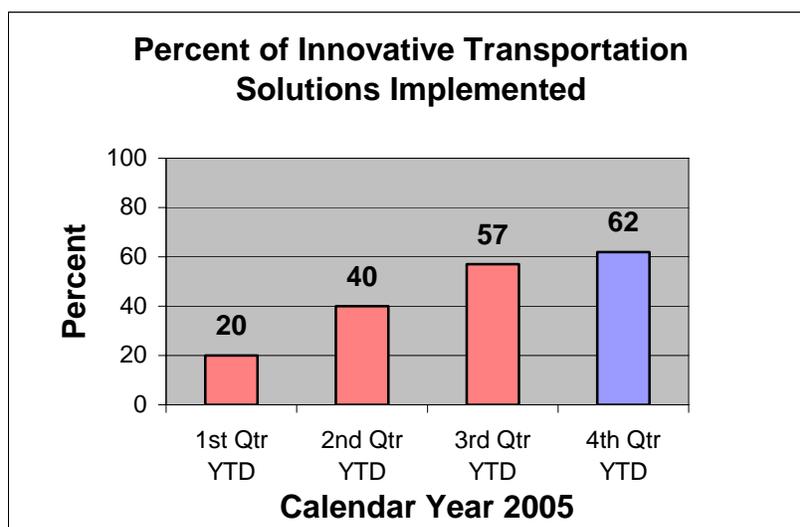
This measure tracks the percentage of new and innovative ideas, methods, or tools MoDOT accepts into practice as a result of its research program. MoDOT realizes the importance of supporting an aggressive research program driven to provide the department with the latest ideas, technologies, and solutions needed to deliver the most efficient, safe, and economical transportation system.

Measurement and Data Collection:

Innovative transportation solutions are recognized to be any new ideas, methods, policies, processes, standards, equipment, tools, etc. introduced for the purpose of improving the department's operation, services, or products. Such solutions are likely introduced as a result of a research project, study, or initiative managed through MoDOT's research program. "Solutions implemented" refers to the decision by MoDOT to use or apply into practice a new idea, method, policy, process, standard, equipment, tool, etc. for the purpose of improvement. Percent of solutions implemented is determined by dividing the number of research projects having results implemented by the total number of research projects completed during a six month time period. While many ideas and technologies are pursued through research and related efforts, not all produce solutions, which can be implemented by MoDOT. However, MoDOT's elevated emphasis on implementing new ideas and technologies should result in better and more economical transportation products and services delivered.

Improvement Status:

MoDOT continues to market new ideas and technologies, which are focused on addressing pertinent department needs or problems. The 22 percent increase from the beginning of calendar year 2005 for innovative transportation solutions implemented demonstrates MoDOT's aggressive pursuit to promote great solutions proven through research. While it's known that all research does not produce results or solutions that can be implemented, MoDOT's research program recognizes the importance of getting innovative transportation solutions "off the shelf and on the street". MoDOT Organizational Results is focusing on research that is more closely tied to the 18 Tangible Results, which will lead to more usable solutions in the end.



Innovative Transportation Solutions

Benefits of implementing innovative transportation solutions

Result Driver: Mara Campbell, Organizational Results Director

Measurement Driver: Patty Lemongelli, Organizational Performance Administrator

Purpose of the Measure:

This measure tracks the benefits of MoDOT's acceptance into practice new and innovative ideas, methods, or tools introduced through the department's research program. MoDOT maintains an active research program, which aggressively works to provide the department with the latest ideas, technologies, and solutions needed to deliver the most efficient, safe, and economical transportation system. Measuring the benefits realized through the implementation of new ideas and innovative solutions demonstrates MoDOT's continued efforts to deliver improved and more economical transportation products and services.

Measurement and Data Collection:

Innovative transportation solutions are recognized to be any new ideas, methods, policies, processes, standards, equipment, tools, etc. introduced through MoDOT's research program for the purpose of improving department operation, services, or products. Implementation refers to the decision by MoDOT to use or apply into practice an innovative transportation solution. The benefits to Missouri as a result of implementing innovative transportation solutions can be realized economically (time/labor savings, operations cost savings, construction/materials cost savings, user-cost savings, safety-related cost savings) or qualitatively (increased knowledge, quality of life, management and policy, environmental, lives saved). Benefits of implementing transportation solutions should be determined for each research project carried out by MoDOT. While the economical benefits are sometimes much easier to determine than qualitative benefits, MoDOT currently has no formal method for routinely calculating the benefits of implementation. A recent project initiated with the Missouri Transportation Institute should result in a model, which MoDOT researchers will use to identify and quantify the various benefits experienced by MoDOT and the State of Missouri as a result of implementing innovative transportation solutions.

Improvement Status:

There are numerous transportation research projects underway which will ultimately bring considerable benefits to Missouri, once their results are implemented. One project, Slope Stabilization with Recycled Plastic Pins, introduces a cost-effective and environmentally friendly method of stabilizing shallow sliding surfaces and providing the long-term resistance needed to maintain slope stability. Developed by researchers at the University of Missouri at Columbia this technology, when implemented, will save MoDOT over \$400,000 annually by reducing costs for maintenance and repair of "nuisance" slides along Missouri's roadways.



Typical shallow or "nuisance" slide along Missouri roadway.

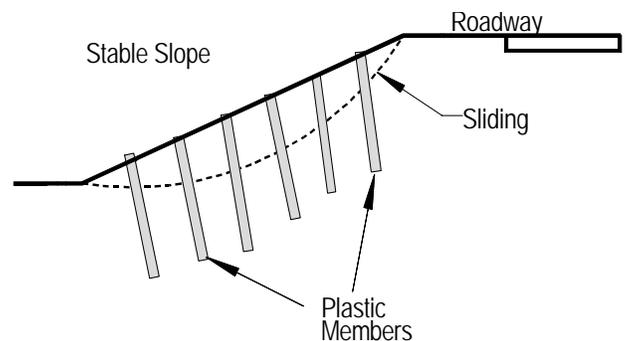


Illustration of recycled plastic pin technology.

Innovative Transportation Solutions

Annual dollar amount saved by implementing value engineering

Result Driver: Mara Campbell, Organizational Results Director

Measurement Driver: Kathy Harvey, State Design Engineer

Purpose of the Measure:

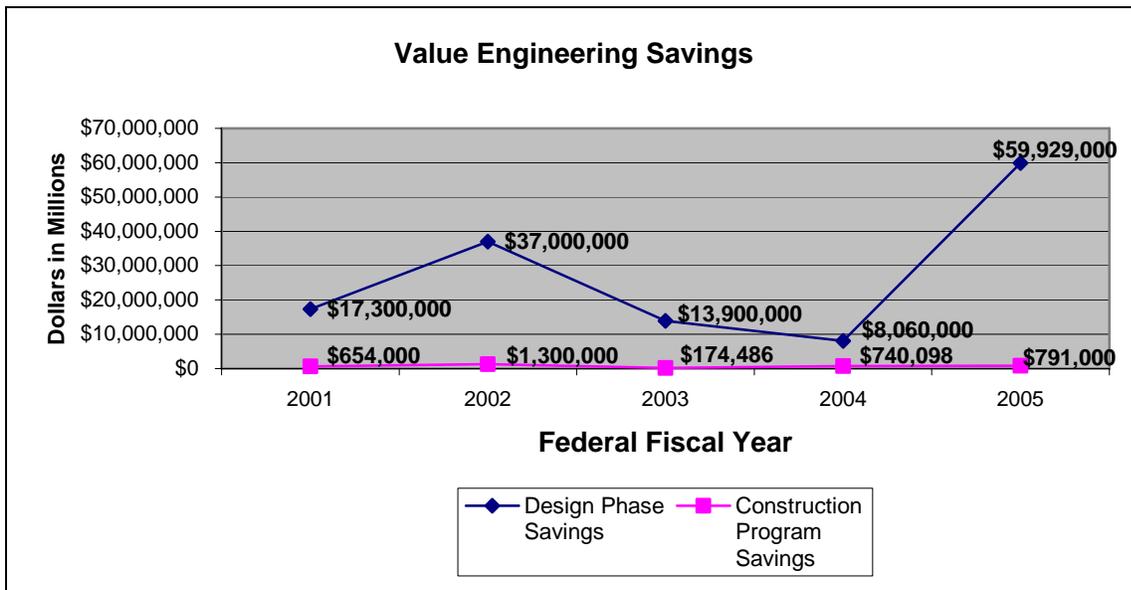
This measure tracks the amount of money MoDOT saves by implementing innovative engineering methods.

Measurement and Data Collection:

Value engineering (VE), which has saved MoDOT over \$230 million since 1988, is a valuable tool to use in the implementation of Practical Design. VE can achieve savings at the design phase and can also identify construction program savings. VE is the systematic application of known recognized techniques by multi-disciplined teams that identify the function of a product or service and identify cost effective alternatives using creative approaches to improve a project's quality and efficiency. VE savings are reported annually, based on the Federal Fiscal Year, due to reporting requirements to the Federal Highway Administration.

Improvement Status:

A recent emphasis on "Concept Stage" VE studies (CSVE) has proven to be successful at defining project scope and identifying basic functions of what the project must achieve. The focus has been to look at many concepts early in the project development process so that when a preferred concept is selected the design may continue with fewer challenges. By covering all the options early in the process, the design team gets answers sooner which saves on design time. Including external stakeholders on VE teams will continue to prove valuable at building consent.



Desired Trend:
 N/A

Innovative Transportation Solutions

Annual dollar amount saved by implementing practical design

Result Driver: Mara Campbell, Organizational Results Director

Measurement Driver: Kathy Harvey, State Design Engineer

Purpose of the Measure:

This measure tracks the amount of money MoDOT saves by implementing innovative engineering methods.

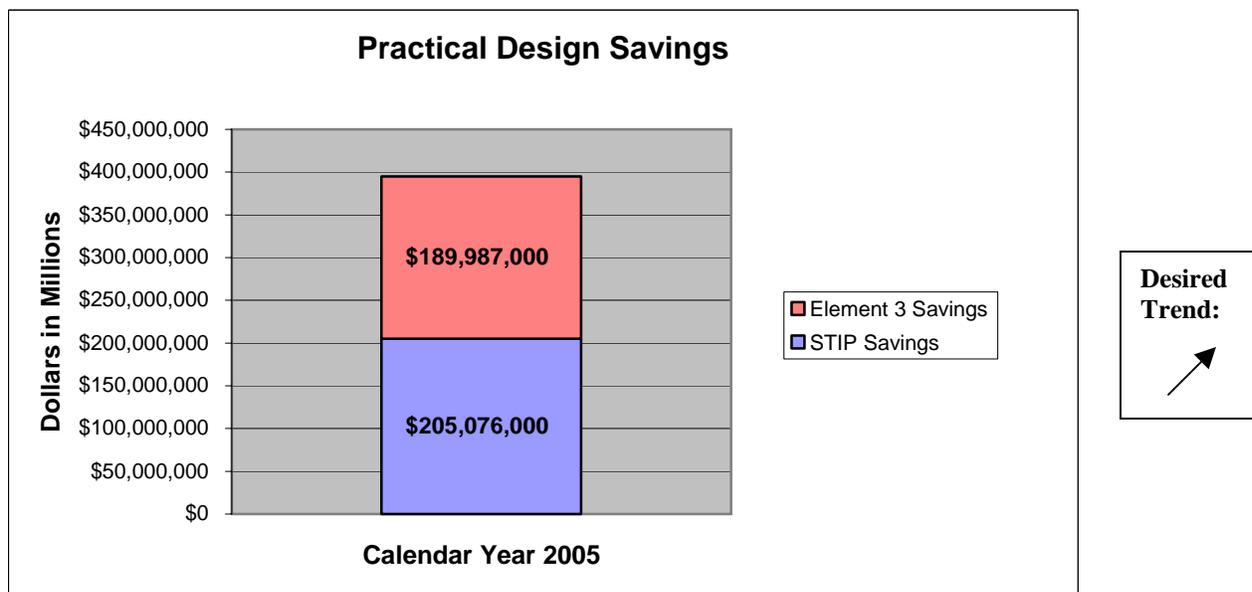
Measurement and Data Collection:

At the project level, significant innovations that should result in cost savings can be realized through design modifications. These are variations from standards to fit the individual characteristics of a specific project. In MoDOT's new design environment, "Practical Design" is the umbrella for a more widespread application of this process.

Improvement Status:

With the advent of Practical Design in late 2004/early 2005, nearly \$400 million in savings has been realized (as reported to the Missouri Highways and Transportation Commission in June). MoDOT's 10 districts examined projects that were already included in the 2005-09 STIP to see if they could reach an aggregate goal of 10 percent savings. The eventual total of \$205,076,000 represented a savings of 13.8 percent. Practical Design was also applied to the major projects that were considered within Element 3 of the Smoother, Safer Sooner program, which utilized funds made available by last year's passage of Amendment 3. The cost of 21 projects was reduced by 11.7 percent – or \$189,987,000 – that enabled the reprogramming of an additional five projects.

Additional Practical Design savings for projects that were already included in the 2005-09 STIP will be captured in June 2006, during the next programming cycle. For projects beyond 2009, it is expected that they will be designed and delivered with an application of Practical Design from the very beginning of the project development process. The new Engineering Policy Group, formed this summer, is working toward an early '06 rollout of formal practical design guidance that will affect change in MoDOT's design culture and create an environment for significant future project economies.



Innovative Transportation Solutions

Number of external awards received

Result Driver: Mara Campbell, Organizational Results Director

Measurement Driver: Rebecca Geyer, Senior Performance Analyst/Facilitator

Purpose of the Measure:

This measure tracks the number of external awards received by the department. Many of these awards relate to quality and therefore display the department's dedication to efficiency, innovation and quality throughout the organization.

Measurement and Data Collection:

Each district and division office tracks the awards presented to the department by external organizations, to include all awards presented to individuals, teams, districts, divisions and MoDOT as a whole. This data enables the department to measure progress and encourage further participation in award programs. It also provides opportunities for the department to increase public awareness of department activities. Data collection began for this measure on January 1, 2005.

Improvement Status:

Awards received in the first quarter of FY06 display an increase of three awards from the previous quarter. Significant awards won in this timeframe were: three Governor's Awards for Quality and Productivity in the categories of Technology in Government, Process Improvement, and Efficiency; two "People Saving People" awards sponsored by the Law Enforcement Traffic Safety Advisory Council for Missouri's work on the Blueprint For Safer Highways and District Three's "Highway Survivor" Program; and two awards from the National Transportation Public Affairs Workshop honoring the Kansas City Scout's technology advancements and a Work Zone Safety campaign featuring Director Pete Rahn's desk in a work zone.

