"Why is research important? Because research spawns ideas and ideas foster innovation. Without innovation we cannot be good stewards of our highways and spend taxpayers’ money responsibly.”

These are the words of John Halikowski, Director of the Arizona DOT and current Chair of the AASHTO Standing Committee on Research. He was speaking at a recent meeting of the AASHTO Research Advisory Committee in a session featuring heads of state transportation departments discussing the value of transportation research. “The key values of Arizona’s transportation department are accountability, integrity, and respect,” said Halikowski. “Good research helps us fulfill all three.” Mr. Halikowski described a recent example of how research can help a transportation department save money and operate more efficiently. The Deck Park tunnel on Interstate Highway 10 in downtown Phoenix is a little over a half mile long, and electricity fees to light the tunnel are one of the agency’s single highest expenses. Mr. Halikowski asked his research office to look into the feasibility of solar power to light the tunnel. This led to a contract with a private firm that is poised to demonstrate a solar lighting technology that will save ADOT hundreds of thousands of dollars.

Halikowski stressed that research must be pervasive throughout the organization and throughout daily operations. When a highway agency makes important decisions, it needs to do so with the best available information. Research must inform the decision-making and problem-solving process.

John Njord, Executive Director of the Utah DOT, agrees. “Most DOTs today are facing significant funding constraints. We have to focus on making the most of what we have, and research plays an important role in finding effective and efficient solutions.”

The Utah DOT has been a leader in developing innovative technologies and solutions to improve the way they operate. The use of Accelerated Bridge Construction (ABC) techniques has resulted in enormous savings to the travelling public by minimizing traffic disruption. “At 354 feet the Sam White Lane Bridge was the largest ever moved in the western hemisphere using accelerated bridge construction techniques. We have now moved almost 40 bridges into place using ABC. Why? Because research showed us that the technique was feasible and would result in much shorter delays for the travelling public. We value people’s time and our goal is to minimize the impacts on the public.”

Utah’s population is still growing, far outpacing most of the country. Both population and vehicle-miles travelled are increasing with only a marginal expansion of the road network. Njord described the four key goals he has set for Utah DOT: to take care of what we have, make the system work better, im-
prove safety, and increase capacity. There are many examples of how research helped to achieve these goals. Express toll lanes in Utah average 10-15 percent faster than regular lanes and enable the DOT to guarantee predictable travel times. State-of-the-art traffic signal timing has reduced delays at key high-volume intersections as much as 75 percent. Based on research findings, Utah installed more than 77 miles of innovative cable barriers in 2010 that have proved capable of preventing heavy trucks from crossing the median and have reduced crashes and fatalities. These and other innovative techniques are saving lives, time, and money in Utah.

Njord understands the value that research can provide, and is committed to taking advantage of the best information from around the world. Utah sends more staff to the TRB annual meeting than to any other conference. Those staff have a mission: to bring back and implement new ideas that will benefit Utah. Njord puts it simply: “Research has made our DOT a better organization.” Njord has served terms as Chair of the TRB Executive Committee and President of AASHTO.

Susan Martinovich, Director of the Nevada DOT and current AASHTO President, has had a long career in the DOT before rising to the most senior position and learned the value of research early. However, Martinovich understands that research has no value until it is implemented, and for that to happen Senior Executives need to clearly understand how the DOT will benefit from it. “You may think we all suffer from Attention Deficit Disorder, but CEOs have incredible demands on their time and must deal with a vast range of issues and problems every day. We are generally not experts in any narrow field; we are interested in products and benefits, not the technical details.” She adds, “Explain research to senior executives the way you would explain it to your mother. Give them brief summaries; don’t give them long reports or links to websites.”

Halikowski agrees. “Be specific about the benefits of research to the organization and the stakeholders. Quantify whenever possible. CEOs are driven by short-term needs and goals. Show how research will benefit the internal operations of the Department. Bring credit to the agency and improve the quality of life for the agency and for taxpayers. Talk to me or show me, don’t give me a thick report or tell me to go to a website. Tell me what you can do, don’t ask me what you should do. If there are barriers, think about possible strategies to overcome them. Don’t present roadblocks without some ideas about solutions. Help the CEO and they will help you engage the other leadership.”

All three CEOs understand the value of research and are committed to finding new solutions to address their day-to-day challenges. As John Njord summed it up, “Good information makes for good decisions.”

The AASHTO Research Advisory Committee promotes quality and excellence in research and in the application of research findings to improve state transportation systems. Each AASHTO Member Department is represented on RAC. For more information, see http://research.transportation.org.