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Team Building

New name reflects global reach of research and best practices at MDOT.



Team building exercise helps refine the structure and operation of ORBP.



Mission and vision statements articulate the purpose and direction of the office.

Peer Exchange

Focused effort yields valuable insights into administration of Michigan's Transportation research cycle.



Michigan's transportation research community is healthy and well-respected; retaining staff and communicating with stakeholders will keep it strong.

Results

ORBP team unveils process for implementing research results.



Peer exchange report, updated Research Manual, and new Web site will help maximize the potential of the ORBP.

Continuous Improvement

Team building and peer exchange efforts provide a clear vision and a refined structure for the transportation research cycle in Michigan

Team Building

In his book *Path of Least Resistance for Managers* (1999), author Robert Fritz introduces the notion of a structural tension that exists in every organization. He describes this tension as the difference between an organization's current reality and a vision of what is possible for the organization in the future. "Tension creates a state of nonequilibrium," Fritz writes. He goes on to explain that the structure of an organization naturally attempts to restore equilibrium. In other words, structural tension causes movement between an organization's current reality and a vision; either the vision devolves until it resembles the current reality or the current reality evolves to become more like the vision. Structure is the key to making a current reality evolve toward a vision.

Casting Vision, Refining Structure

In early 2005, MDOT's leadership created a vision for an office that would orchestrate and coordinate all of MDOT's research efforts, and monitor both transportation research and operational practices nationwide to make sure valuable innovations and best practices in other places would not go unnoticed. In pursuit of this vision, MDOT's Office of Research and National Best Practices (ORNBP) was established on September 26, 2005. The purpose of the new office was to lead the department's research efforts and to collect and disseminate transportation best practices throughout MDOT, within Michigan and across the country. In late 2007, "National" was dropped from the name. The new name, Office of Research and Best Practices (ORBP), expands the scope and extends the vision for the office. "The name

change will better position us to exchange best practices and innovations globally, not just nationally," explained office administrator Calvin Roberts. "It will also enable us to more easily share Michigan's extraordinary transportation research talent and expertise with the global transportation community."

Since 2006, Roberts and his team have been working to align research investments with the Michigan Transportation Plan, which presents goals, objectives, strategies, and policy recommendations to set the direction for decisions and investments on the state transportation system through the year 2030. "Our team was assembled to make the most of every research opportunity within the department," explained Roberts. "We've realized some success, but the diversity of the groups we serve has made it difficult to develop a cohesive strategy. I felt we were missing key structural elements that would enable us

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Peer Exchange

Business leader Andrew Carnegie once said, "The range of our collective vision is far greater when individual insights become one." It is perhaps with this in mind that the Federal Highway Administration (FHWA) established the peer exchange program with the Intermodal Surface Transportation Efficiency act of 1991. The program requires that each state department of transportation (DOT) agree to a peer exchange of its Research, Development, and Technology Transfer (RD&T) management process to be eligible for FHWA planning and research funds.

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Program (NCHRP) issued a report titled *Peer Exchange: a Value-added Program Management Tool* (2001). The report described the process for conducting an exchange conference, and it summarized the results of the first round of conferences. The program received wide acclaim from states that participated. Since then, several rounds of peer exchange conferences have been held with continued high levels of success and support.

Focusing the Efforts

The ORBP sponsored a peer exchange of MDOT's research program on December 3–6, 2007. In addition to four members from the ORBP team, the peer exchange panel (see Figure 1) included a representative from Pennsylvania State University, two representatives from the FHWA, and representatives from DOTs in Iowa, Louisiana, South Dakota, Utah, and Washington State. Leni Oman from Washington State served as chair of the panel. CTC & Associates, a technical communications firm from Madison, WI, that specializes in information design for public agencies and civil engineering firms, assisted the ORBP in facilitating the exchange.

The ORBP team assembled the panel based on expertise and experience in the following five focus areas:

1. Developing a research program
2. Identifying research needs
3. Partnering with universities
4. Managing research projects
5. Measuring and reporting performance

The focus areas address current needs within the MDOT research program. "We chose members whose programs followed a path of development similar to ours," Roberts explained. "We were encouraged to realize the great position we're in and we gained tremendous insights into making adjustments to refine our program."

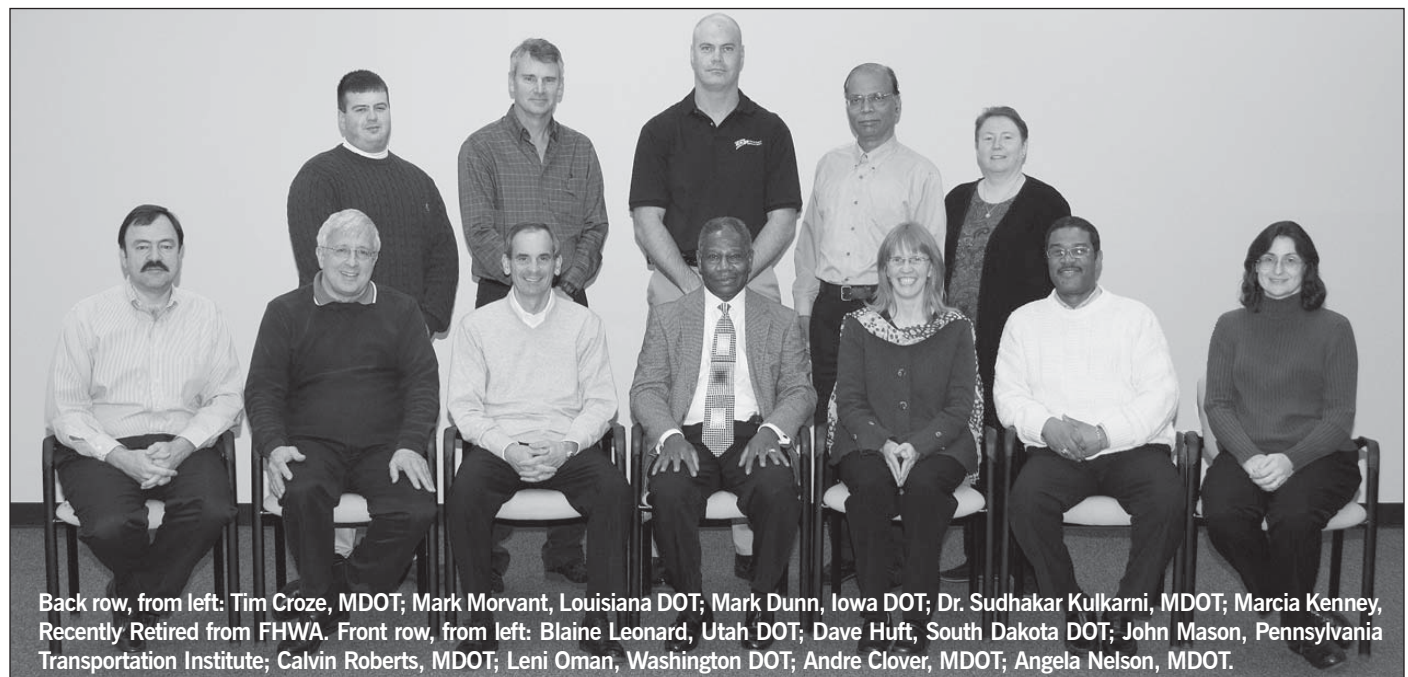
Research a High Priority

The structural integrity of MDOT's research program, as identified by the panel, can be attributed to the deep interest in research among technical staff throughout the department and among universities, consultants, and industry professionals across the state. Michigan is home to a vibrant transportation research community and MDOT has a reputation for credible research that is regularly applied in other states. With six internationally known universities in the state, including two University Transportation Centers (UTCs) and an effective Local Technical Assistance Program (LTAP), MDOT has access to a wide range of valuable research and technology transfer facilities, services, and capabilities. In addition, the FHWA division office in Michigan is very supportive of MDOT's research program; the program regularly capitalizes on federal funding opportunities.

The panel also identified cultural strengths of the ORBP. Specifically, support of research by the highest levels of MDOT leadership, and commitment among the core ORBP staff to align the program with the direction of the department as a whole is a strong foundation for continued success. The ORBP's emphasis on pursuing research topics that cover all areas of transportation research, not just materials and construction, is evidence of this alignment.

Retention, Communication and Relationships

Areas where the ORBP team could face challenges in the future include maintaining technical expertise in-house; collecting, tracking and communicating research results; and nurturing the relationships that are necessary to continue the success and expansion of the program.



Back row, from left: Tim Croze, MDOT; Mark Morvant, Louisiana DOT; Mark Dunn, Iowa DOT; Dr. Sudhakar Kulkarni, MDOT; Marcia Kenney, Recently Retired from FHWA. Front row, from left: Blaine Leonard, Utah DOT; Dave Huff, South Dakota DOT; John Mason, Pennsylvania Transportation Institute; Calvin Roberts, MDOT; Leni Oman, Washington DOT; Andre Clover, MDOT; Angela Nelson, MDOT.

Figure 1. Peer Exchange Panel.

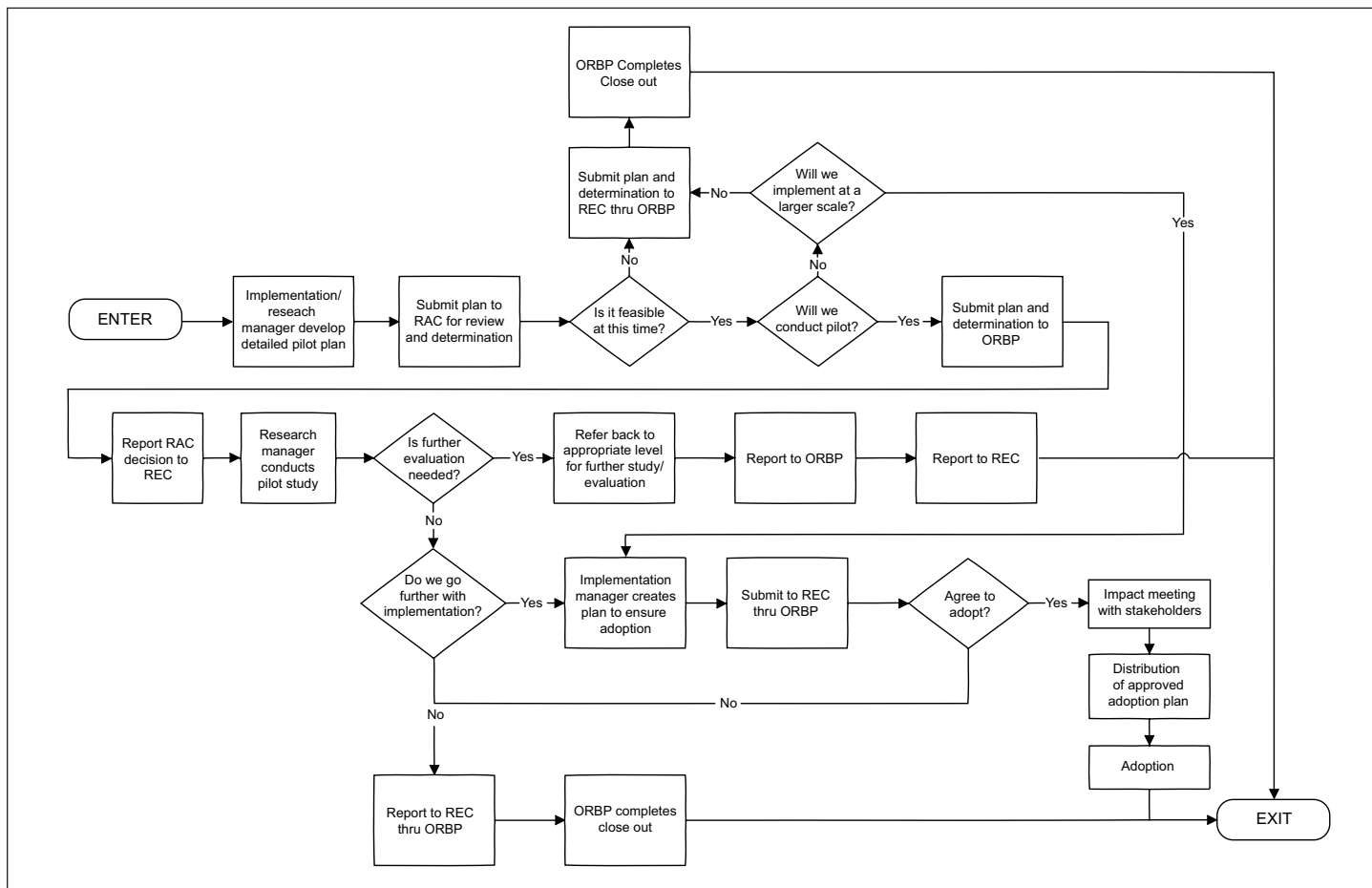


Figure 2. Overview of the Research Adoption Process.

Team Building + Peer Exchange = Results

Based on results of the team building effort and advice from the peer exchange, the ORBP team established a detailed plan for implementing research results (see Figure 2). This plan, referred to as the *adoption process*, will help principal investigators, project managers, and research managers develop implementation plans during the origination phase of a research project. “This piece of the transportation research cycle makes adoption of results a part of normal department operations, which will maximize the return on our research investments,” Roberts said.

Next Steps

To finalize this exciting period of self-examination and planning for the ORBP, and to take steps toward pursuing the full potential of Michigan’s research program, the team will complete three immediate projects. The first will be to publish a report that summarizes the peer exchange effort. The report will include specific observations and suggestions from the panel about how to achieve success in each focus area.

The second and third projects both address the need for good communication within the transportation research community. A research Web site is in development through the ORBP. The

Web site is currently available to the ORBP team; plans are in place to make it available outside of MDOT. An update of the department’s Research Administration Manual is scheduled to be released in February 2008. The manual was last updated in 2003, and does not reflect the new strategy for administering research in the state. “The new research manual will provide comprehensive guidance for all groups and individuals at all phases of the research cycle,” explained Roberts.

References

Fritz, R. 1999, *The Path of Least Resistance for Managers*. San Francisco, CA: Berrett-Koehler Publishers.
 Harder, B.T., 2001, *Peer Exchange: A Value-added Program Management Tool*. National Cooperative Highway Research Program, Project No. 20-7/Task 125, March 2001.

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