

Taking Project Management and Risk Management to the Next Level

New suite of tools helps agencies manage all types of complex projects and build precision into their risk management process

Complex highway projects come in a variety of sizes, financing mechanisms, delivery methods, and duration. Work on such projects often involves navigating complex logistics, new construction methods, controversial stakeholder issues, and restrictive regulations that require careful planning and execution. Similarly, underestimating cost, schedule, or disruption can add costs, increase delays, undermine public confidence, and necessitate expensive changes.

Moving beyond traditional approaches requires stronger partnerships among transportation agencies, contractors, consulting engineers, and external stakeholders. Better strategic planning and execution must occur from startup through construction. These new guides developed by the second Strategic Highway Research Program (SHRP2) **provide practical tools and techniques to optimize innovation, minimize schedule and budget risks, and build better projects.**

Next Generation Strategies for Managing Complex Projects and a Guide for Managing Risk

The Solution

By using these new guides and tools to enhance project management, transportation agencies can accelerate sound decision making and better manage risk during rapid renewal projects.

New Strategies for Managing Complex Projects (R10) steps through a five-dimensional approach to project management that adds project context and funding mechanisms to the three standard factors of cost, schedule, and engineering requirements. **Methods for assessing complexity factors will help managers make rational resource allocations and guide planning and implementation tools.** The approach is fully scalable and can be used by all types of projects. It will also guide managers through a process to fully integrate project teams across the entire lifecycle, a foundation of project success.

Versatile, scalable tools help get the job done more quickly and with fewer surprises

FOCUS AREA:
Renewal (R09/10)

Proactive management methods fully integrate teams, anticipate and manage risk.

Save Money



- Earlier and more efficient coordination reduces the costs associated with construction changes.
- Reduces cost overruns through proactive risk management strategies.

Save Time



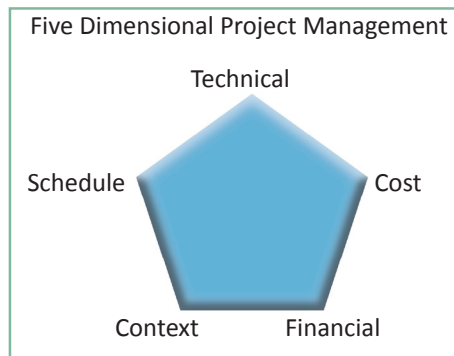
- Increases the likelihood of on-time delivery by anticipating and managing schedule risks.
- Saves on costs through better management of budget and schedules.



Guide for the Process of Managing Risk on Rapid Renewal Contracts (R09) **helps managers quantify risks and provides guidance on the level of risk management needed.** It presents a formal risk management process that helps optimize performance for accelerated reconstruction projects, offering practical methods for identifying, assessing, mitigating, allocating, and monitoring risk. Case studies, a risk/action checklist, implementation tools, and a training course are among the tools provided.

The Benefits

These methods represent an evolution in current project management practices. By applying these approaches to many sizes and types of complex highway projects, **project managers can proactively identify, plan for, and manage their projects to reduce the schedule and cost impacts that arise out of risk.** It changes the context for projects from linear to interactive; encourages innovation and relational partnering; and emphasizes that each complex project has its own distinct set of performance goals.



Who participated in the development of these tools?

The risk assessment workshop was piloted in Richmond, VA. Several representatives from state departments of transportation attended, including those from Washington, Minnesota, Nevada, and North Carolina.

Researchers investigated 15 U.S and 3 international projects as in-depth case studies to identify methods for delivering complex projects more successfully. Among them:

- ▶ Capital Beltway HOV/HOT, Northern Virginia
- ▶ Doyle Drive, San Francisco, California
- ▶ I-40 Crosstown in Oklahoma City, Oklahoma
- ▶ Louisville-Southern Indiana Ohio River Bridge

How can you learn more?

Research is completed on these products. The guides and the final research reports will be available in early 2013. For information, contact Jim Sinnette at FHWA, James.Sinnette@dot.gov; LaToya Johnson at FHWA, LaToya.Johnson@dot.gov; Keith Platte at AASHTO, kplatte@aaashto.org; James Bryant at TRB, jbryant@nas.edu or Jerry DiMaggio at TRB, jdimaggio@nas.edu.

About SHRP2 Implementation



The second Strategic Highway Research Program is a national partnership of key transportation organizations: the Federal Highway Administration, the American Association of State Highway and Transportation Officials, and the Transportation Research Board. Together, these partners conduct research and deploy products that will help the transportation community enhance the productivity, boost the efficiency, increase the safety, and improve the reliability of the Nation's highway system.

Strategic Highway Research Program

U.S. Department of Transportation | Federal Highway Administration
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