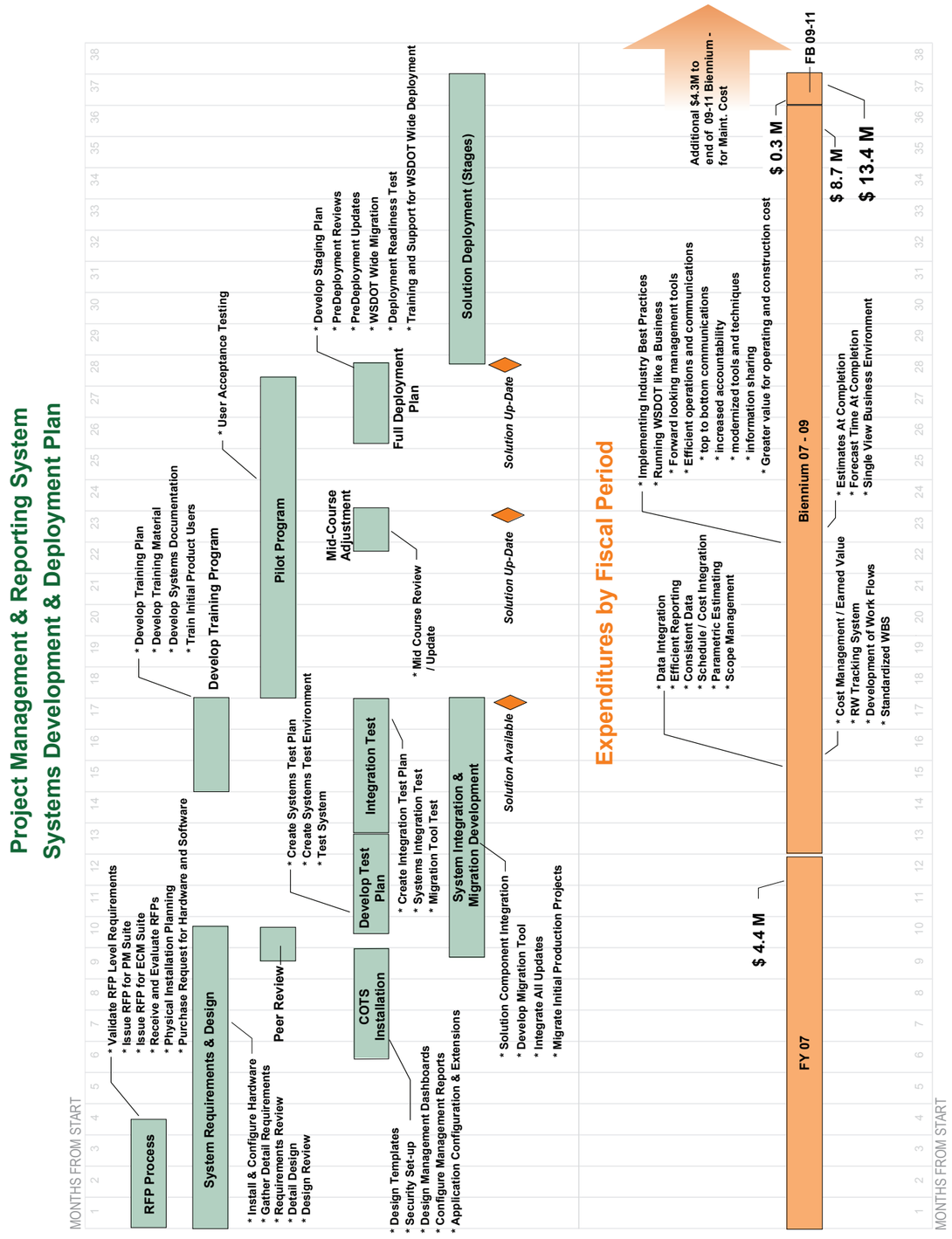
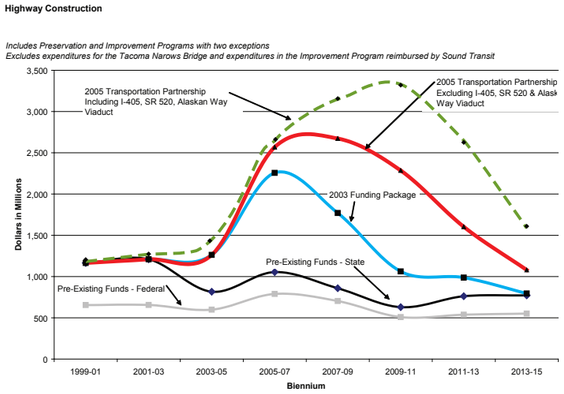


Executive Summary
A Strategic Delivery Plan for WSDOT's Capital Construction Program

ON MAY 9, 2005, THE GOVERNOR SIGNED INTO LAW the "2005 Transportation Partnership Funding Package." This major capital construction program provided a $7.1 billion increase in spending for highways, ferries and other multi-modal transportation projects over the next 15 years. When added to existing funding, the total program profile creates a "Mt. Rainier" peak in biennium spending, as shown below. Spending is programmed to rapidly increase from $1.5 billion in the 2003-2005 biennium to $3.3 billion by the 2009-2011 biennium. The total spending over the 15-year program exceeds $15 billion.

WSDOT Construction Spending



Legislation requires a strategic plan for program and project delivery to manage Washington's unprecedented $15 billion capital construction program. WSDOT retained the Statewide Program Management Group (SPMG) to assist in the plan preparation and implementation.

Statewide Program Management Plan Objectives

Identify what strategic actions are needed to:

- Enable WSDOT to deliver projects successfully and to
- Report on projects and programs properly.

SPMG conducted various needs assessments and gap analyses; then identified and evaluated options for improving delivery success. These assessments were presented in an *Interim Report*, published in March 2006. SPMG then conducted a Peer Review of the WSDOT delivery plan using national specialists in transportation program delivery. Additionally, in an effort to improve the efficiency of WSDOT's delivery of projects, an analysis of industry standard Best Management Practices (BMPs) was performed. The analysis compared and contrasted these BMPs with WSDOT practices and identified gaps between standards and practice. The findings and conclusions of these analyses fall into three major areas as described below.

Management Approach

Problem:

WSDOT cannot deliver this program on its own. Successful delivery will be the product of a collaborative effort among the Governor (OFM), the Legislature, the Department, and various groups who have statutory roles in overseeing and administering the program. Enabling legislation constrains WSDOT's flexibility to meet changing project needs.

Proposed Solution:

- Empower WSDOT, via the Legislature, to develop efficient processes for managing changes in a project's scope, cost or schedule that balance accountability and achievement of the public's trust while avoiding unnecessary delay or indecision.
- Establish reviews and decision-making authority at high enough levels to discourage unwarranted change and encourage innovative ways to keep projects on track while delegating authority to the lowest level appropriate for dealing with the consequences of the decision.
- Place more accountability on the Regions and Project Managers for early identification of potential changes.
- Provide documentation in advance of Quarterly Project Review (QPR) meetings that evaluates proposed changes in terms of content and specific action items proposed at QPR meetings.
- Delegate authority to the Department – and establish

thresholds similar to those for Pre-Existing Funds Projects – for approval of modest changes. Document and report modest changes to OFM of those actions taken at QPR meetings for consent approval.

- Revise upward the "dollar" thresholds established for cost and scope changes to recognize the dynamics of the marketplace in terms of escalation of construction and delivery costs. Index the thresholds, or at least revisit them, annually.
- Increase the use of contracting mechanisms that encourage control of scope, cost and schedule, such as lump sum, "design to cost," and schedule-based incentives and disincentives.
- Add programmatic-level contingency funds independent of specific project budgets that allow WSDOT at the modal, regional and headquarters level to manage within a range of cost, schedule and scope variables while committing to delivering every project in the programs authorized by the Legislature.
- Report all changes at the project and program levels.

Workforce Improvements

Problem:

The combined workforce needed (WSDOT plus consultants) to deliver the capital program during the current and next biennium is approximately 6,000 full-time equivalents as compared with a present workforce of approximately 3,000±.

Proposed Solution:

- Maximize the use of existing resources by clarifying core competencies and offering incentives.
- Expand recruitment and staffing to a national level with an emphasis on selling the state program to attract needed skills. Optimize recruitment and retention by becoming the "Employer of Choice."

"Technology is changing, the (WSDOT) program is growing, management issues are more complex, the challenge to the construction and engineering industry to deliver is enormous with the largest capital program in the country... There isn't a business in the world that would embark on a $15-$20 billion capital program without building a world-class system. We're moving there -- let's not lose the vision of where we need to go.... Don't lose this energy."

Russ East, WSDOT, June 2006

- Incentivize the contracts of major project General Engineering Consultants to emphasize efficient delivery and transparent accountability.

Project Management Processes, Control and Reporting Systems

Problems:

- Success is achieved when the scope of work is completed on schedule, within budget and meets quality standards.
- There is presently a lack of a systematic and consistent approach in the accumulation, management and reporting of project-related data.
- Outdated and disjointed management practices and systems are inconsistently applied throughout WSDOT.
- Systems don't have the scalable capacity to report program status effectively.

Proposed Solution:

- Implement BMPs, methods and computerized tools to enable WSDOT to anticipate changes and manage them proactively.
- Improve the efficiency of project delivery and create a set of standard operating procedures to facilitate the use of BMPs and allow for effective project controls and reporting tools.
- Provide a consistent status reporting environment throughout WSDOT by implementing recommended new applications and reporting styles.
- Procure commercial off-the-shelf software packages that can be integrated into WSDOT's current approach to data management and enhanced to provide web-based access for multi-level reporting and improvement of business workflows to implement modern Project Control and Reporting (PC&R) tools to improve Project Management (PM) reports.
- Implement Earned Value Cost Management processes and tools immediately on major and moderate-sized projects.
- Develop prescriptive reporting requirements applied to uniformity of reporting of budget and schedule status.

- Supplement and advance current WSDOT PM training courses geared toward existing processes and practices to include training in the proper use of the advanced tools and reports.
- Implement a PM Academy for PM certification and training.
- Adopt forward-looking management tools and practices.
- Focus on efficient operations and communications:
  - Top-to-bottom communications.
  - Increased accountability.
  - Modernized tools and techniques.
  - Information sharing.
  - More value for operating and construction costs.
- Recognize and manage cultural changes throughout.

"Finally, I don't think you can emphasize enough the importance of communications, training and shifting the culture to accept a new way of doing business. This is identified as the major risk to success...Managing the culture change and minimizing the production dip are assigned to the Steering Team. They will need significant tools, resources and guidance to accomplish this task."

Source: Marilyn Bowman, WSDOT, June 2006

Changes in the processes and procedures will be "hand-in-glove" with changes in the information and project management tools or systems.

Conclusions

All three areas of management focus must be driven home with a sense of urgency and speed. The next two biennia will measure the success of the program. Implementation of an integrated project management process using industry-proven tools, methods, and BMPs supports WSDOT's goal of enhancing the day-to-day control of overall scope, cost and schedule of the capital construction delivery program and maintains a strong WSDOT ownership role. Incorporation of transportation industry BMPs into project procedures and reports, as well as deployment of web-based PC&R systems statewide, is a critically essential solution to meet the rigorous demands of the program. This is not a silver-bullet solution though. Meeting the staffing crunch head-on and achieving flexibility to make changes in project and program cash flows are equally essential to success. WSDOT must move now to succeed.

Recent experience within the engineering and construction industry and other state governments and federal agencies show that the benefits of implementing modern project control and reporting systems coupled with industry BMPs far outweigh their initial implementation costs based on the overall program cost efficiencies realized by these organizations.

Systems Plan, Costs and Benefits

The cost of implementing an integrated project management environment using the processes and tools recommended herein is estimated at $13-$15 million to support the envisaged WSDOT capital construction program of approximately $15 billion in value. SPMG estimates that WSDOT can benefit in avoided capital cost increases ranging from $290 million to $370 million, an average benefit-cost ratio of approximately 10 to 1 (using discounted future benefits and discounted development and maintenance costs over a 15-year period).

The following is a list of additional benefits that would result from implementation of this program:

- Recognizing problems in a timely manner so as to resolve issues before they reach the crisis stage of damage control.
- Meeting needs for expanded capacity.
- Addressing workforce reality through increased efficiency to meet growing reporting demands with short staff resources.
- Improving recording capabilities.
- Improving data.
- Retaining productive processes and systems to the maximum extent possible.
- Resource planning, including cash flow, staff balancing and FTE forecasting, as well as milestone/change management tracking.

The recommended implementation plan and summary schedule are presented on the next page. ♦

Based on the estimated range of avoided costs over the remaining life of the capital construction program, the payback period for the systems investment is expected to be reached by the end of year four of the project or one year after deployment. The return on investment of the development and maintenance costs is estimated at over 800%.

Source: SPMG