

Desired Outcomes of WSDOT's Improvement to its Project Management Processes

WSDOT Project Delivery Vision, Goals and Objectives

The SPMG Phase 1 Strategic Plan performed an analysis that identified key areas of improvement in the agency's delivery methods to meet the needs of the rapidly expanding capital construction program. The Strategic Plan set forth a vision statement that guides these improvements. This vision statement was incorporated into the Phase 2 PMRS work plan and resulted in the establishment of an overarching vision as follows:

Vision: The PMRS will provide WSDOT managers with better tools to assist them in making effective and efficient business decisions based on management of project scope, schedule and cost. Project information will be easily accessible, transparent, consistent and accurate and will enable improved forecasting and proactive problem resolution.

Goals:

- 1. Define, implement and train WSDOT staff on industry-leading project management business processes.**
- 2. Define, implement and train WSDOT staff on industry-leading project management software to manage scope, schedule, cost & associated information.**
- 3. Provide the mentoring, support and cross-organizational communication needed to implement the processes and tools required to support industry-leading project management business practices.**
- 4. Provide Roll-Up Reporting needed to support program management at all levels within WSDOT (Project Portfolio Management) and to meet external reporting requirements for accountability regarding on-time/on-budget project delivery.**

The purpose of this working paper is to map the relationships of these goals to the next level of detail (objectives), defining the expected benefits that will drive the PMRS business process strategies, tactics and design as related to policies, procedures and implementation steps to assure that the PMRS provides the needed functionality to implement and support the desired goals and objectives. These are presented in the table on the following pages.



Goal #1: Define, implement and train WSDOT staff on industry-leading project management business processes.

Goal #2: Define, implement and train WSDOT staff on industry-leading project management software to manage scope, schedule, cost & associated information.

Goal #3: Provide the mentoring, support and cross-organizational communication needed to implement the processes and tools required to support industry-leading project management business practices

Goal #4: Provide Roll-Up Reporting needed to support program management at all levels within WSDOT (Project Portfolio Management) and to meet external reporting requirements for accountability regarding on-time/on-budget project delivery.

1A) Project Management Plan Development:

- Improve the use of PMPs on active projects to better plan and communicate the work that needs to be accomplished and to anticipate change for proactive project delivery.
- Conduct regional inventories of PMP completion and develop completion or update plan and schedule to determine improvements in training and delivery efficiency.

1B) Scope and Change Management Practices:

- Refine and enhance change and scope management business processes to implement uniform agency processes for control and reporting.
- Assess scope management training needs and materials as part of the implementation of the

2A) Primavera 6 Project Manager:

- The PMRS scheduling tool contains CPM logic that provides the primary means of assessing schedule achievement and improving on-time performance.
- Using the scheduling tool, Project Managers and Specialty Groups can manage resources and coordinate remote work activities with the regions.
- Use tools capabilities to assign task lead and support functions for clarity of accountability.
- Implement scalable scheduling requirements to project size to be efficient in use of limited resources.
- Adjust standard specifications to add requirement that contractors provide schedules for reporting purposes to verify milestone achievement and contract compliance.

3A) SPMG Tier 1 Support:

- Provide co-located specialists in program and project management to assist WSDOT develop and implement advanced industry practices and tools in program and project delivery improvement and workforce skills enhancement in project control, cost estimating and cost management, scheduling, workflow efficiency improvements, contract management and internal and external reporting functions.
- Assist headquarters and regional staff to refine the current PCRf process to provide clarity and documentation of approved changes to scope, schedule and budget to meet legal requirements.

4A) Portfolio Management and Rollup Reporting:

- Using the integration of Primavera P6 and Contract Manager along with the operational data store, the Work Breakdown Structure and the Enterprise Breakdown Structure, roll up reporting will be improved and expanded to meet the demands of the growing construction program in an efficient manner with limited staff expansion.

4B) Internal Reporting:

- Use COTS tools' capabilities such as MyPrimavera to design and implement standard project management reports to provide accurate and timely information on project status for decision making purposes and change management.
- Generate standard and ad hoc,



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- scope management process for support by PMRS COTS.
- Develop scope management procedures and QA controls
- Develop and conduct skills training
- Develop and conduct related tools and process training

1C) Work Breakdown Structure:

- G) Develop a uniform WBS for use in PMRS for roll-up reporting and portfolio management.
- H) Applies across multiple projects effectively.

1D) Risk Management:

- Develop and conduct risk management awareness training about current WSDOT processes including CEVP and CRA. Deliver this training through the PM Academy, the capabilities of the agency's estimating software , and the business process refinement to better anticipate possible changes that impact project delivery.

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- Train staff to use tool.
- **2B) Project Cost Management:**
- The selected tool provides a uniform and fairly objective measure of communicating schedule and cost progress. It meets the need to effectively manage and report costs. To do this, the tool will be configured to have:

1. PM focuses on total project budget for effective accountability.
2. HQ focuses on funding source & biennium budgets to meet reporting and control needs.
3. To address multiple funding sources, funding can be allocated, attributed to a specific Control Account, or a specific line item within a Control Account.
4. Budgets, commitments, actual expenditures and forecasts all coded and entered consistently
5. Use of consistent as-of cut-off dates

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3B) SPMG Tier 2 and Tier 3 Support:

Train WSDOT Staff to use PMRS to achieve the following:

- Assess program expenditure planning and forecasting
- Strategically review regional program delivery
- Develop project and program level reports (web pages, QPRs, GNB, GMAP, etc.)
- Review project costs and schedules
- Work with WSDOT to implement scalable project management plans to develop and communicate project scope, schedule, budget and risks.
- Perform document management
- Perform claims analysis
- Develop resource loaded schedules, as needed
- Perform project cost recovery analysis
- Review and prepare consultant contracts
- Help incorporate new PMRS system to manage existing

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detailed, integrated and timely project reports. These reports include:

1. Project specific status reports
2. Corridor-level progress or cost and funding reports.
3. Area and regional management reports.
4. Executive level status and exception reports.
5. External stakeholder reports (see below)
6. Ad hoc reporting from either COTS capabilities or from the operational data store tied to legacy systems and the COTS.

4C) External Web Portal Reporting:

- Provide vehicle for external stakeholders to view project status data on a periodic basis to meet external reporting requirements and facilitate preparation of standard agency reports such as the Gray Notebook and Quarterly Project



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1E) Schedule Management:

- Build and maintain a CPM schedule for each project using uniform processes and efficient methods for effective change management. Schedule development is an essential part of planning and organizing the project. WSDOT will have up-to-date schedules for all its active capital projects.
- Establish periodic update policies and procedures using consistent cut-off dates for organizational accountability.
- Assign responsibility at task level for matrix organization accountability. Service providers will be responsible for input on their respective activities.
- Develop and use standard schedule templates for common assignments to achieve consistency and efficiency in project delivery.
- Use Project Master Schedules and departmental, organizational and service provider schedules for

6. Hold Project Management responsibility for project cost data throughout all phases of project delivery.

- Track internal costs by tying into TRAINS.
- Track WSDOT accruals based on input from consultants/contractors to account for gap in expenditure tracking.
- Track invoices using consistent cut-off dates
- Use consistent Control Accounts

2C) Project Cost Estimating:

- Use of consistent WSDOT-wide estimating processes provides for improving the accuracy and uniformity of estimates.
- Types of estimates for which procedures will be developed are:
 1. Construction cost estimates generated at specific design intervals and budgetary funding cycles.
 2. Parametric estimates prepared during system-

WSDOT processes

- Help to develop standardized templates/reports
- Provide training in use of system for project controls
- Provide communication link between WSDOT regional staff and PMRS development staff
- Use schedules in a matrix organization to facilitate communication and coordination of the work.
- Train WSDOT staff in building, maintaining and reviewing schedules to advance the skills of the department.
- Use updated construction schedules to help with communicating progress, resolving time based conflicts and aid in claims avoidance and control of extras.
- Build upon the WSDOT practice of providing construction cost estimates with the appropriate level of accuracy consistent with the detail known at a particular phase of project development

Report pages.

4D) Work Breakdown Structure:

- Develop and implement enterprise-wide structure for consistent roll-up tracking and reporting.
- Use consistent terminology and coding for application across business units to effectively manage projects in a matrix organization.
- Develop a process to control the addition of global activity and project codes in the PM tools as follows:
 1. Develop code structure for reporting across business units and roll up to highest level of the organization.
 2. Provide flexibility at the PM level to manage projects based on size and complexity.
 3. Users determine need for new codes and if they are global or custom.
 4. Global codes to be added by an administrator for



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<p>coordination in a matrix organization for effective reporting and early problem identification.</p> <ul style="list-style-type: none"> Implement policies and procedures to reinforce the objective of accurate schedule development and maintenance. WSDOT’s current training program will be expanded to reflect the business process of schedule building, updating and reporting for measuring performance and improving accountability. Require contractors and consultants to submit conforming and updated schedules for progress reporting and schedule adherence. <p><u>1F) Cost Management/Earned Value Management:</u></p> <ul style="list-style-type: none"> Implement effective cost management of their project delivery. Earned value is recognized as an industry standard for progress estimating 	<p>wide or corridor planning studies and program development.</p> <p>3. Definitive estimates prepared during project definition phase.</p> <p><u>2D) Primavera Contract Manager:</u></p> <ul style="list-style-type: none"> Use Primavera Contract Manager to effectively manage and collaborate on contract administration and change approvals within the DOT beginning with Region Program Management through possible OFM/Legislative approval. Changes identified by PM or Service Providers can be assessed and resolved. Cost & time impacts are included with description of and reason for change to objectively document reasons for proposed changes <p><u>2E) Open Text Livelink (ECM):</u></p> <ul style="list-style-type: none"> Use the ECM to manage documents and coordinate work effectively across regions and 	<p>and communicating these estimates with confidence to the stakeholders of the agency.</p> <ul style="list-style-type: none"> WSDOT’s current training program will be expanded to reflect the business process of cost estimating using the tool. Use WSDOT’s expanded training program to train staff to use time-phased budgets and earned value to communicate progress and help with early problem solving. Use Tier 2 and 3 SPMG staff to assist with the regional deployment and training. 	<p>consistency.</p> <ol style="list-style-type: none"> Provide for Code Control & Management <ol style="list-style-type: none"> Global Codes Custom Codes Provide cross-cutting organizational code types <ul style="list-style-type: none"> Use the ECM to allow for comprehensive search capabilities that will save time and meet increasingly demanding reporting requirements.



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- and early recognition of cost and schedule impacts.
- WSDOT will require the PM, Specialty Group leads, consultants and contractors to report progress using time-phased budgets and accepted earning rules and compare these to budgets and forecasted cost at completion and time to complete.
- Implement a process to collect all cost related data into the cost tool, revise the cost as needed, determine cost to date and generate a time phased cost to complete. This process will improve project management effectiveness and improve cash flow forecasts.
- Require actual costs to be reported in a consistent and timely manner so that, when added to an independent estimate of the cost to complete, provides an estimate at completion.
- Implement a process to determine an estimated cost to

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- between organizations and service providers.
- Use the ECM to enforce agency standard document retention rules.
- Use the ECM to implement high priority project management and reporting workflows.
- Use the ECM to support project collaboration among all project staff, specialty groups and stakeholders.
- Use ECM to provide comprehensive search capabilities that will save time and meet the demands of reporting on an expanded work load.

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date as of the end of the period. The cost to date is a combination of the invoice paid to date and the estimated outstanding expenditures. This process is focused on the project development phase

1G) Cost Estimating:

- Refine WSDOT’s process for the development of the construction estimate during the project planning, design and construction phases to be able to retain the record of estimates as they are updated and repeated throughout the lifecycle of the design. This process develops a base estimate which is the foundation for the CEVP process. This process is focused on the project development phase to provide the appropriate level of confidence for the preparation of project budgets.



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1H) Document Control:

- Improve efficiency of staff through use of COTS products and modern document control processes and procedures to take advantage of technology advances in enterprise-wide work delivery products to meet the demands of the expanded capital construction program.
- Facilitate receipt, logging, distribution, tracking, and resolution of issues generated by project documents

1I) Quarterly Project Reviews:

- To improve efficiency and provide uniform and timely information for internal, external stakeholder and general public reporting, develop internal processes, databases and reporting tools using the PMRS suite.
- See the Portfolio Management and Rollup Reporting Objective for more information.



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1J) Contract Administration and Agreements:

- To improve change management and control of scope, schedule and budget, refine WSDOT's processes and procedures to allow for efficient administration of changes to contracts. All work should be under a written contract, including internal (informal) assignments. To do this, WSDOT will:
- Establish scope, schedule and budget agreements with each responsible group.
- Contracts can be internal or external, informal or formal, all documented.
- Service Providers submit "proposals" of cost and time for specific deliverables.
- PM determines acceptability of proposals.
- Service Providers provide periodic feedback on contract status.



PMRS Major Deliverables	Linkages to Goals/Objectives
Implement policies, procedures, guidelines, tools and training for project scheduling. (Primavera P6 Project Manager)	1C, 1E, 1F, 1I, 1J, 2A, 3B, 4A, 4B, 4D
Implement policies, procedures, guidelines, tools and training for web access to Primavera P6 Project Manager and Primavera P6 Contract Manager data. (Primavera P6 Web Access, A.K.A. My Primavera)	1B, 1C, 1D, 1E, 1F, 1H, 1I, 1J, 2A, 2D, 3B, 4A, 4B, 4D
Implement policies, procedures, guidelines, tools and training for contract management including: <ul style="list-style-type: none"> ○ IDR's ○ Pay Notes ○ Cross-trend forecasting ○ Change Management ○ Issue Management ○ RFI's (Primavera P6 Contract Manager. and others)	1B, 1D, 1G, 1H, 1J, 2D, 3B, 4B
Manage agreements (Opentext Livelink, WORD or alternative)	1B, 1D, 1E, 1F, 1H, 1J, 2E, 3B
Implement policies, procedures, guidelines, tools and training for project cost management. (Software selection underway)	1C, 1F, 1G, 1I, 2B, 3B, 4A, 4B
Implement policies, procedures, guidelines and training for project cost estimating. (Bid Tabs Pro, EBASE, and others)	1D, 1G, 2C, 3B
Implement policies, procedures, guidelines, tools and training for enterprise content management and workflows. (Open Text Livelink, Adobe Life Cycle, Kofax)	1A, 1H, 1J, 2E, 3B
Implement a web portal (one-stop shopping) for access to policies, procedures, guidelines, tools, reports and training for WSDOT project managers.	1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1A, 1B, 1C, 1D, 1E, 2A, 2B, 2C, 2D, 2E, 3B, 4A, 4B, 4C,4D
Implement tools training and mentoring for project management staff.	3A, 3B, 3C
Implement a Project Control and Reporting System (PCRS) for external/internal project reporting (Gray Notebook, TEIS downloads, Executive reporting, etc.).	3A, 4A, 4B, 4C



Implement executive level project reporting for internal and external use via the internet. (Two-page, one-page, half-page, etc. executive-level reports)	4A, 4C
Implement replacements for legacy PDIS reports (Regional Confidence Report, Construction Status Report, etc.) to allow for conversion from PDIS to PMRS	4B
Improve use of Project Management Plans	1A, 3B