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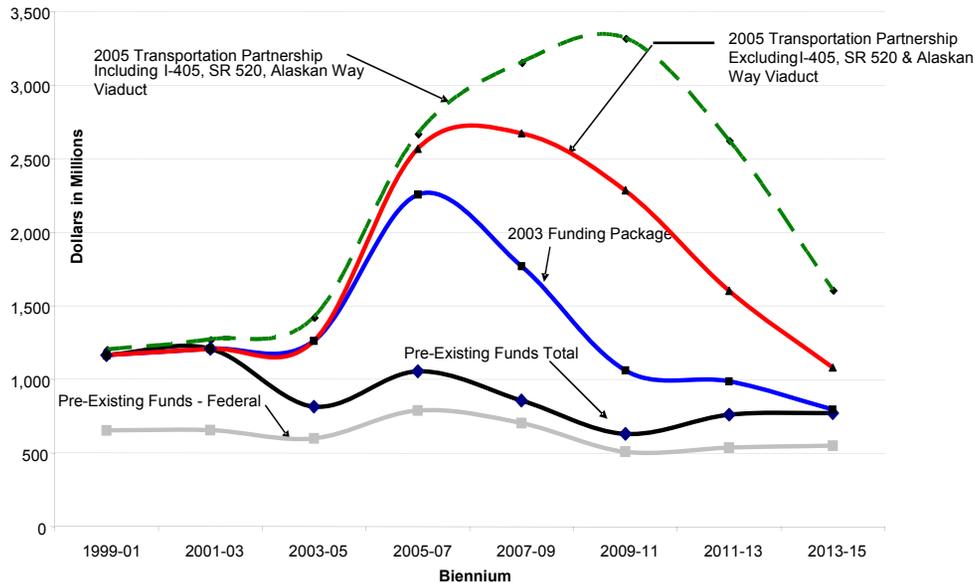
WSDOT Project Management and Reporting System

*Presentation to
The Washington State Information Services Board*

July 13, 2006

Program Delivery Challenges

2006 Supplemental Budget



Includes Preservation and Improvement Programs with two exceptions

Excludes expenditures for the Tacoma Narrows Bridge and expenditures in the Improvement Program reimbursed by Sound Transit

- Largest Capital Construction Program increase

- Over 400 new projects representing \$15 billion in 15 years

- Delivery and accountability emphasis

- Current systems incapable of handling load

- Adopting best management practices gains efficiency and effectiveness

Purpose

To request ISB approval of WSDOT's Project Management and Reporting System (PMRS) in support of delivering the largest capital construction program increase in WSDOT's history

Objectives

- Deliver Construction Projects On-time, On-budget and Within Scope
- Be Accountable
- Engage in Progressive Business Processes

Vision

Portfolio management of WSDOT's capital construction projects from a single set of base data which:

- Rolls up effectively from task level to project to program,
- Can be sliced and diced by geographic and organizational areas and
- Can be tracked and reported by functional responsibility

Expected Benefits

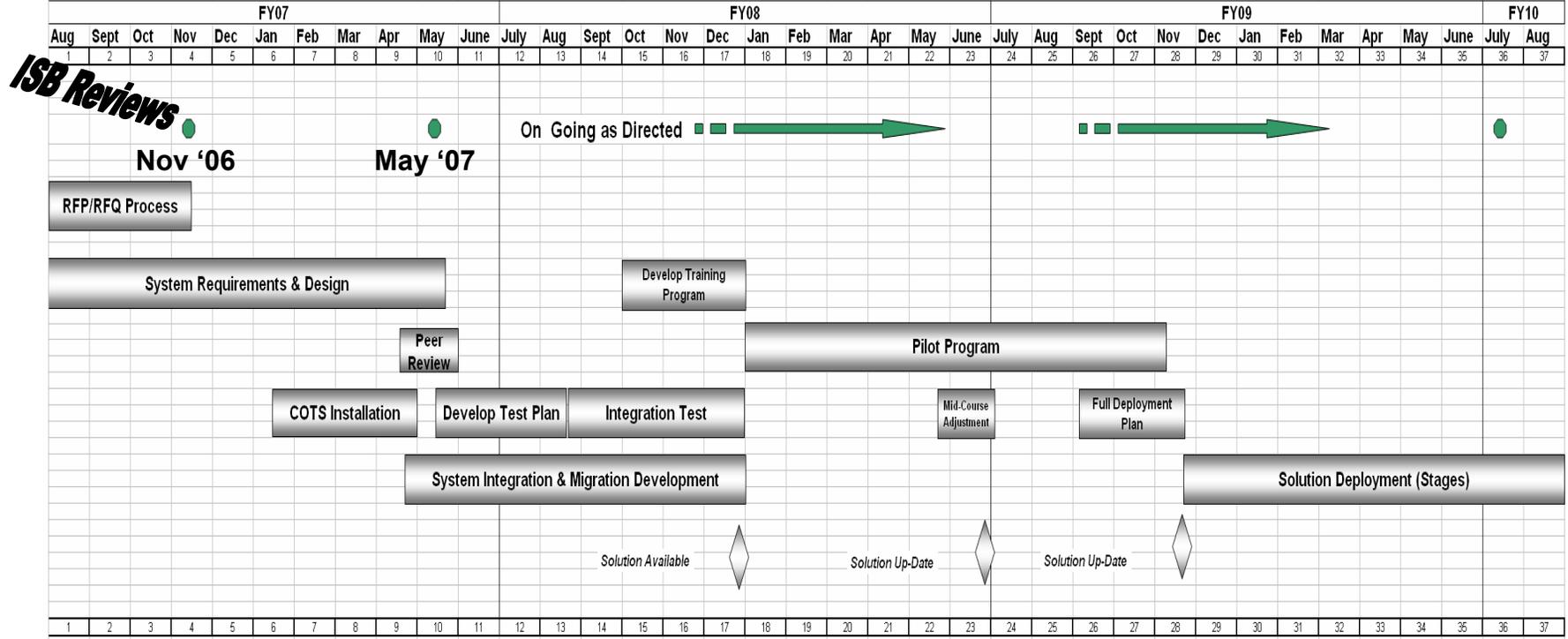
System supports:

- Implementation of industry “best management practices”
 - Earned Value
 - Cost-to-complete
- True forecasting supports goal of “no surprises”
- Improved reporting capabilities
- Better data for better decision-making
- Increased efficiency – essential to deliver large program

“Implementation of Best Management Practices (BMP), methods and computerized tools to enable WSDOT to anticipate changes and manage them proactively is the key to success.”

*Statewide Program Management Group (SPMG) –
Phase 1 Final Report*

Implementation Plan Summary - Single Staged - Systems Development and Deployment



Note : Start Date to be determined based on availability of funding - assumed August 1, 2006

Schedule increments shown in months from start date.

Project Cost Estimates

\$ 4.408 M

Total Systems Development Cost Estimate \$13.4M

\$ 0.327 M

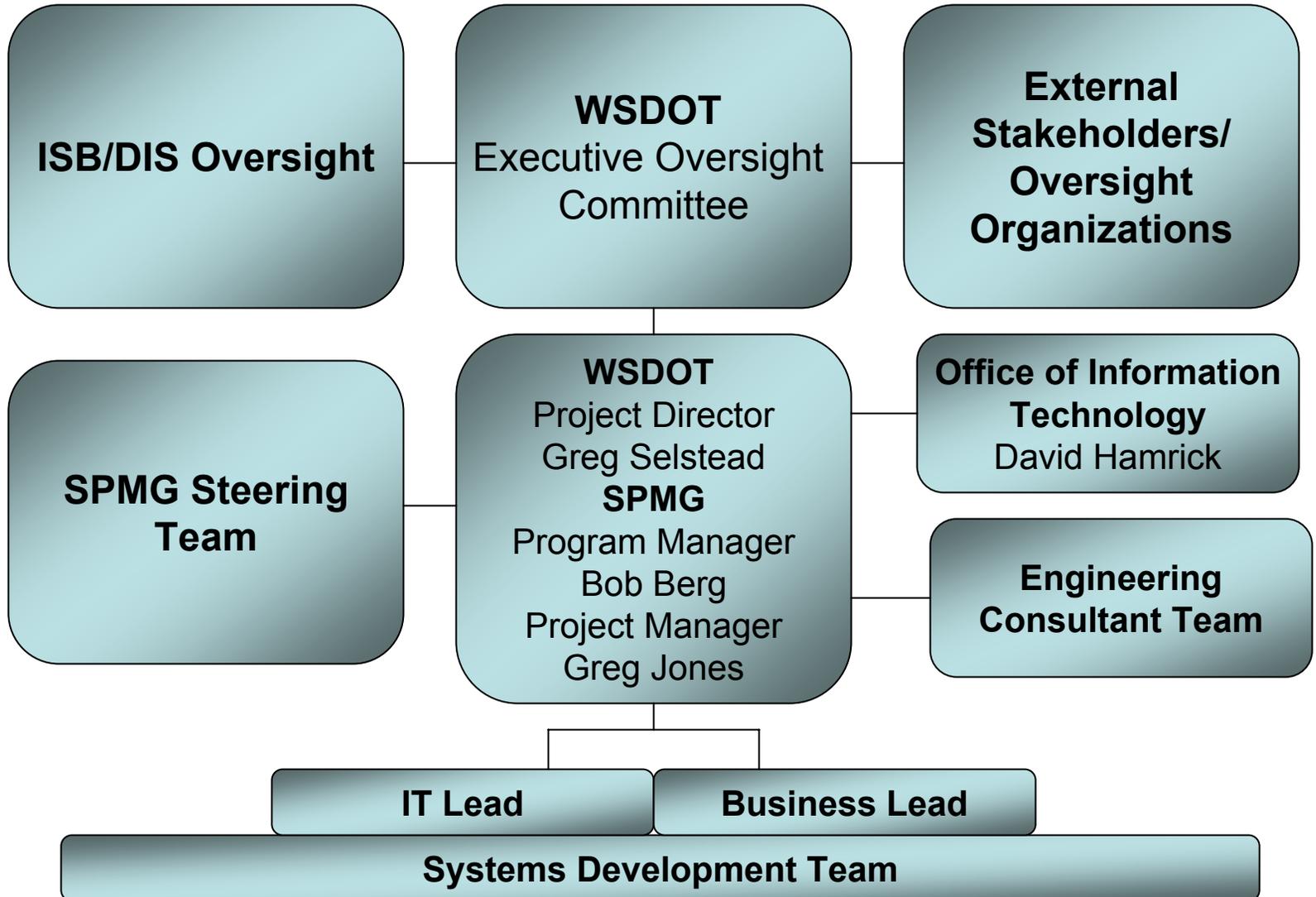


FY '07 Infrastructure \$1.5M
Agency Staff \$.4M
Software, Integration, Consultants \$ 2.5M

'07-'09 Infrastructure \$1.9M
Agency Staff \$ 2.5M
Software, Integration, Consultants \$ 1.0M

\$ 8.655 M
\$ 13.405 M

Project Governance



Success Factors

<p>Executive Support</p>	<ul style="list-style-type: none"> •Fulfills direction provided via GMAP •Effective and engaged executive team •Strong involvement and support from OFM •JLARC, TPAB and JTC findings/direction support system upgrades
<p>User Involvement</p>	<ul style="list-style-type: none"> •Steering Team of 28 mid-level managers responsible for delivery of capital construction program •Established Operational/Technical Project Management User's Group
<p>Experienced PM</p>	<ul style="list-style-type: none"> •Project Manager responsible for the successful implementation of Louisiana's TIMED project
<p>Sound Technical Approach</p>	<ul style="list-style-type: none"> •COTS (w/limited customization) •Pilot installations provide firsthand knowledge of established COTS products
<p>Clear Business Objectives</p>	<ul style="list-style-type: none"> •Implements WSDOT's Executive Order re: Project Management •Requirements well understood
<p>Skilled Staff</p>	<ul style="list-style-type: none"> •Project team members •Contracted specialists

High Priority Issues & Risks

Description	Mitigation Strategy
Funding Availability/Timing	<ul style="list-style-type: none"> •WSDOT staff are currently working with OFM to fund project quickly to address the urgent need for deployment
Integration with Legacy Systems	<ul style="list-style-type: none"> •Engage WSDOT staff with years of experience/knowledge regarding legacy systems/databases in the project development process
Resistance to Cultural Change	<ul style="list-style-type: none"> •Demonstrate the benefits of using industry best practices with examples provided by the SPMG Peer Group and other industry leaders
Resource Availability	<ul style="list-style-type: none"> •Leverage executive and external stakeholder support to ensure that funding and human resources are available
Large Construction Project Starts Ahead of System Deployment	<ul style="list-style-type: none"> •Implement procedural changes and standard practices early in the project, that will facilitate system implementation •Develop and implement a standard work breakdown structure and master deliverables list in the early stages of the project •Identify standard software/hardware via an early RFP acquisition process •Train staff in soon-to-be-adopted project management best practices such as earned value



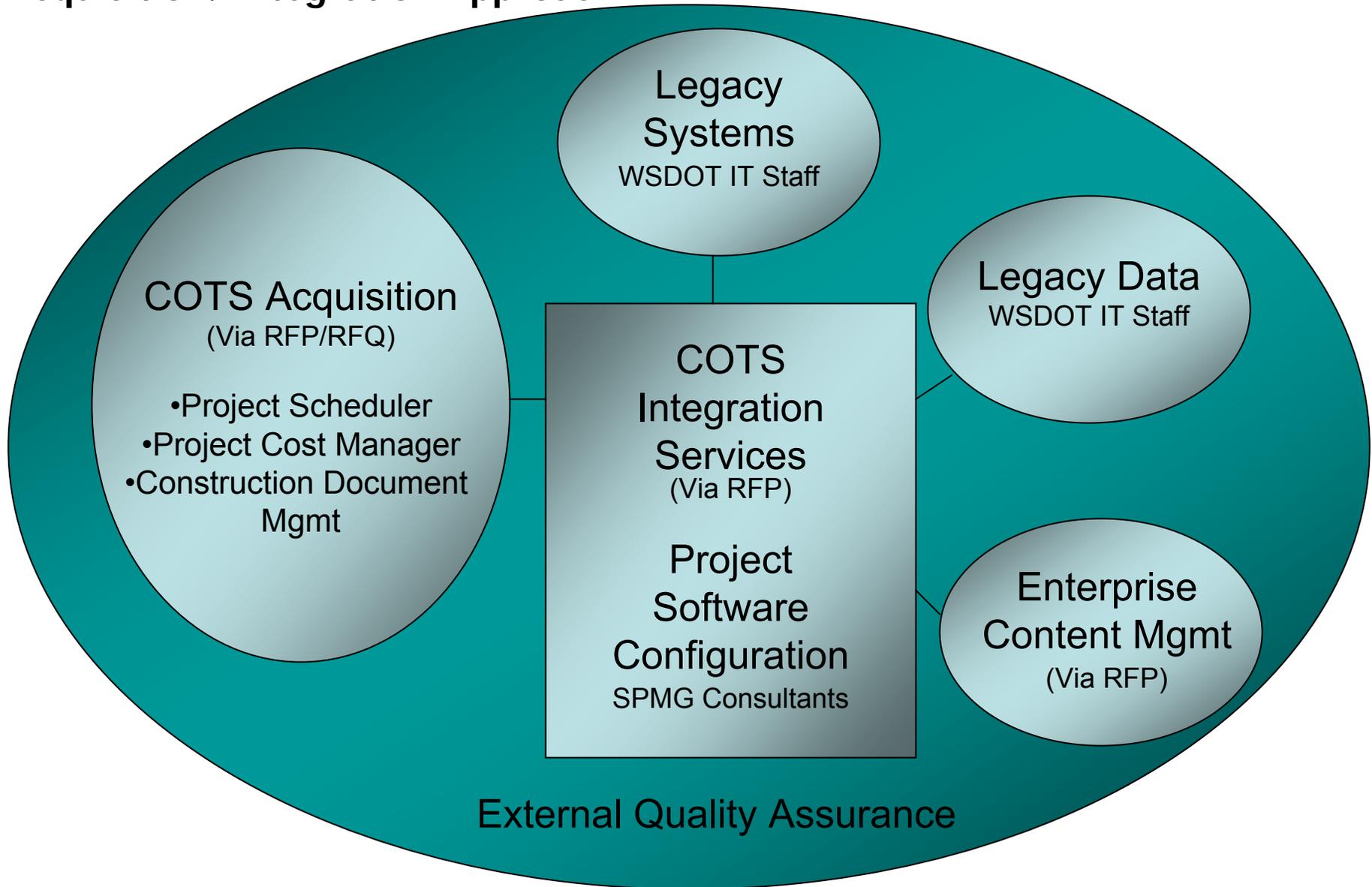
Backup Slides

Cost Estimate

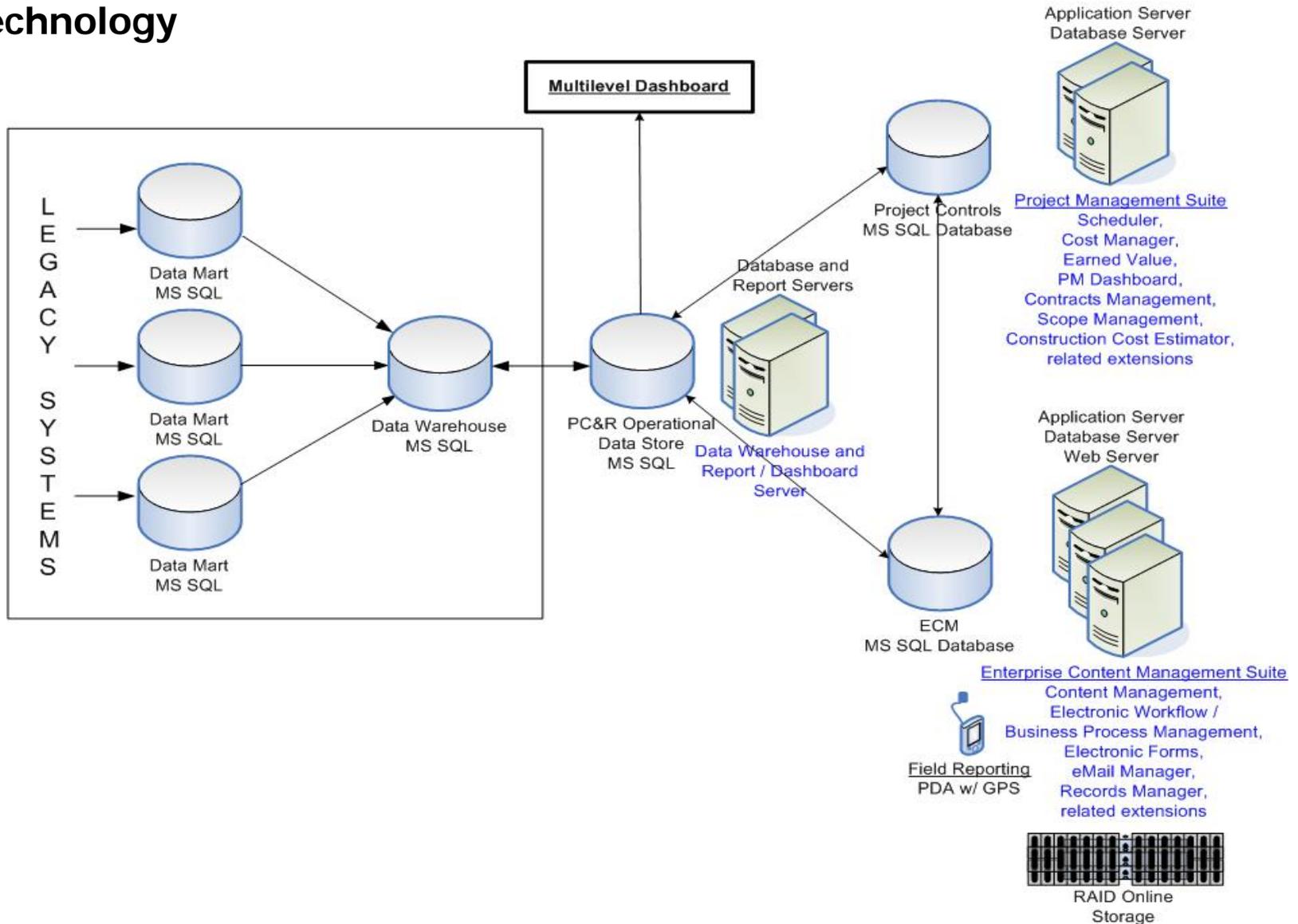
<p align="center"><i>Fully Implemented Commercial Off-The-Shelf Software Pilot with One-Time Agency-wide Deployment</i></p> <p align="center">Total Development Cost Estimate: \$13.4M</p> <p align="center">Biennial Maintenance Cost Estimate: \$4.3M</p>			
	FY '07	'07-'09 Biennium	'09-11 Biennium
Infrastructure	\$1.5M	\$1.9M	\$1.1M
Agency Staff	\$.4M	\$2.5M	\$2.5M
Software, Integration, Consultant Staff	\$2.5M	\$4.3M	\$1.0M
Total Estimate	\$4.4M	\$8.7M	\$4.6M
FTE's	6 FTE's	14 FTE's	14 FTE's

Note: Estimates assume an early FY '07 start

Acquisition/Integration Approach



Technology



Option Selected

Option 1 –
Unaltered COTS

Option 2A –
Hybrid COTS with Data
Integration

Option 2B –
**Hybrid COTS with Data
Integration and Web Portal**

Option 3 –
Custom Built

Factors	Option 1 COTS	Option 2a Hybrid COTS (Data Integration)	Option 2b Hybrid COTS (Data Integration + Dashboards)	Option 3 Custom Built System
Eliminates Conflicting Data Sources	No	Possible with Data Warehouse	Possible with Data Warehouse	Yes
Consistency of Process and Results	Yes	Yes	Yes	Yes
Efficient in Inputs and Outputs	Moderate	Better	Better	Best
Integration of Data	No	Yes	Yes	Yes
Real-Time Cost Accuracy	Fragmented	Able to provide	Able to provide	Yes
Simplifies Workflow and Preparation of Reports	Somewhat	Better	Better	Best
Provides Analytical Methods Based on Best PM Practices to Assess Risk and Forecast Cost and Time of Completion Reliably	Yes	Yes	Yes	Yes
Are easy to access and intuitive in use	No	Somewhat	Somewhat	Best
Can Be implemented in a relatively short time frame so as to benefit the startup of the major capital construction spending	Yes	Yes	Yes	No (Fatal Flaw)
Recommendation	Drop	Second Choice	Select	Drop

Introduction

Legislation requires a strategic plan for program and project delivery to manage Washington’s unprecedented \$15 billion capital construction program.

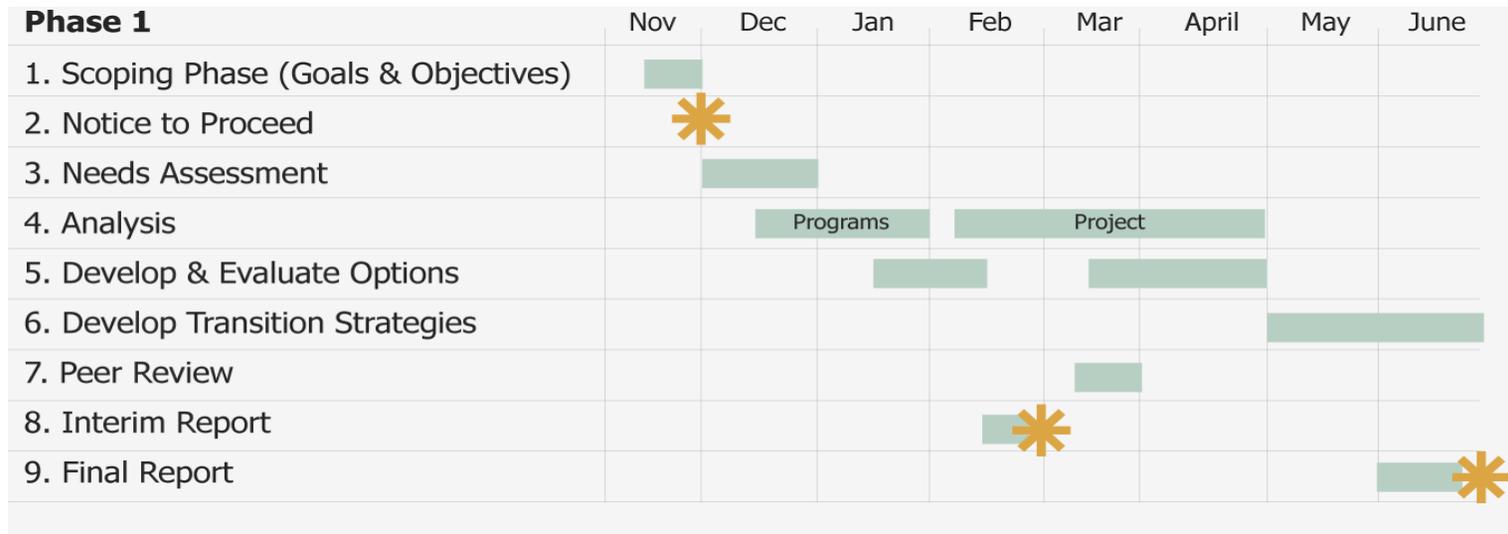
The WSDOT retained the Statewide Program Management Group (SPMG) in January 2006 to assist in the plan preparation.

Statewide Program Management Plan Objectives:

- Identify what actions are needed to enable WSDOT to *deliver* construction projects successfully and
- *Report* on projects and programs properly.

SPMG recommendations align with WSDOT’s goals to:

- Deliver
- Be accountable and
- Engage in progressive business practices



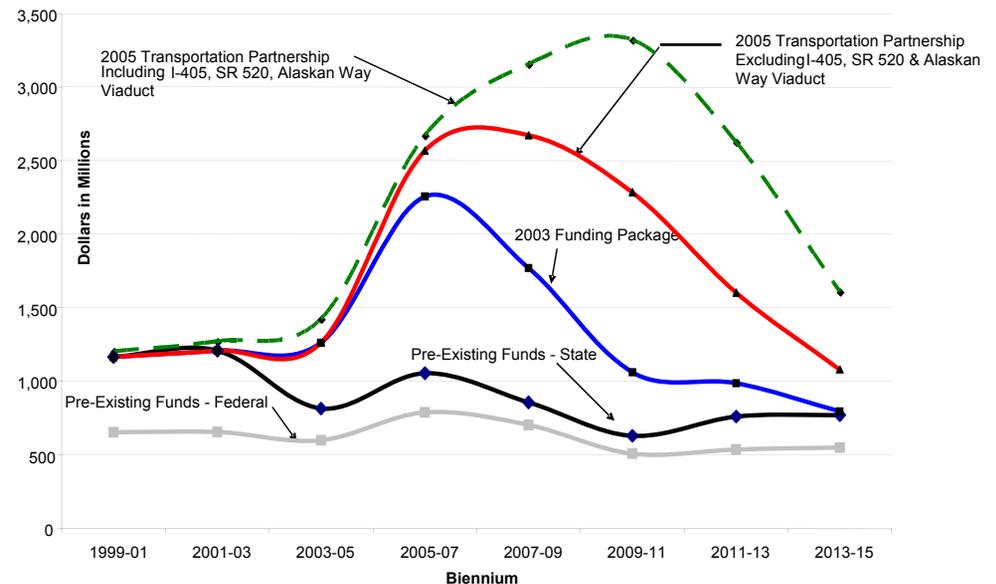
Program Delivery Challenges

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 16 years. When added to existing funding, the total program profile creates a “Mt. Rainier” peak in biennium spending as shown to the right. Spending is programmed to rapidly increase from \$1.4 billion in the 2003-2005 biennium to \$3.3 billion by the 2009-2011 biennium.

WSDOT has recognized that the delivery of a program of this size requires more than just working harder and longer; it needs the pragmatic leveraging of its own internal capabilities, use of available outsourcing resources, improvement in its project delivery management processes and systems, and the authority to make certain adjustments to project components in order to respond to changes.

2006 Supplemental Budget

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Options Considered

Options

Option 1 – Unaltered COTS

This option utilizes COTS applications deployed as purchased, without software integration or extensions.

Option 2A – Hybrid COTS with Data Integration

This option utilizes COTS products that are integrated and extended using Application Programming Interfaces (APIs) and database access tools.

Option 2B – Hybrid COTS with Data Integration and Web Portal

This option utilizes COTS products that are integrated and extended using APIs and database access. The option also provides a solution for reporting project information from multiple systems through a single web-based portal.

Option 3 – Custom Built

Complete custom and fully integrated implementation with consolidated and accessible data.

Comparison of PC&R System Enhancement Options				
Factors	Option 1 COTS	Option 2a Hybrid COTS (Data Integration)	Option 2b Hybrid COTS (Data Integration + Dashboards)	Option 3 Custom Built System
Support Enterprise Architecture	Poor	Very Good	Excellent	Excellent
Prevalence in Market	Excellent	Excellent	Excellent	Poor
Meet Functionality Needs	Poor	Moderate	Excellent	Excellent
System Adaptability - Future Needs	Very Good	Excellent	Excellent	Poor
System Adaptability - Advancements in Market	Excellent	Excellent	Excellent	Poor
Data Integration for Reporting	Poor	Very Good	Excellent	Very Good
Systems Supporting Optimum Processes	Poor	Moderate	Excellent	Moderate
Time to Implement	Excellent	Very Good	Very Good	Poor
Maintenance Costs	Very Good	Very Good	Very Good	Poor
Implementation Cost	Excellent	Very Good	Very Good	Poor
Technical Risk	Low	Moderate	Moderate	High
			Recommended	

Enterprise Possibilities

- Standardized Project Management Systems/Business Processes
- Coordination with OFM Roadmap Project
- Within Scope of Critical Applications Assessment
- Addresses Findings of JLARC and TPAB Reports re: Internal and External Usage of Project Information
- Enterprise Content Management

Conclusion

“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.”

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