

Risk Reserve Budgeting

at  **WSDOT**

CSVA 2009 Conference
Ottawa, Ontario
Nov 23, 24, 2009

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Overview

- *The WSDOT Risk Management Culture*
- *The Evolution of WSDOT Risk Management*
- *Risk Reserve Budgeting*
- *Base Cost and Targeted Budget*
- *Lesson's Learned*
- *Risk Reserve as “Silver Bullet” ???*
- *Expectations*

WSDOT and Risk Management

- *WSDOT requires all projects to have a project management plan which includes a risk management plan since 2005.*
- *WSDOT: employs project risk management and risk reserves to enhance the project value and maximize the use of available funds.*
- *Risk Based Estimates provide the fundamental data essential for quantifying the Risk Reserve.*

In the Beginning:

- When WSDOT started using Risk Based Estimating, the projects were funded at the 90% confidence level.
 - This generous budget minimized the incentive of good risk management and many “desired things” crept into projects.
 - This did not create an environment conducive to aggressive risk management.

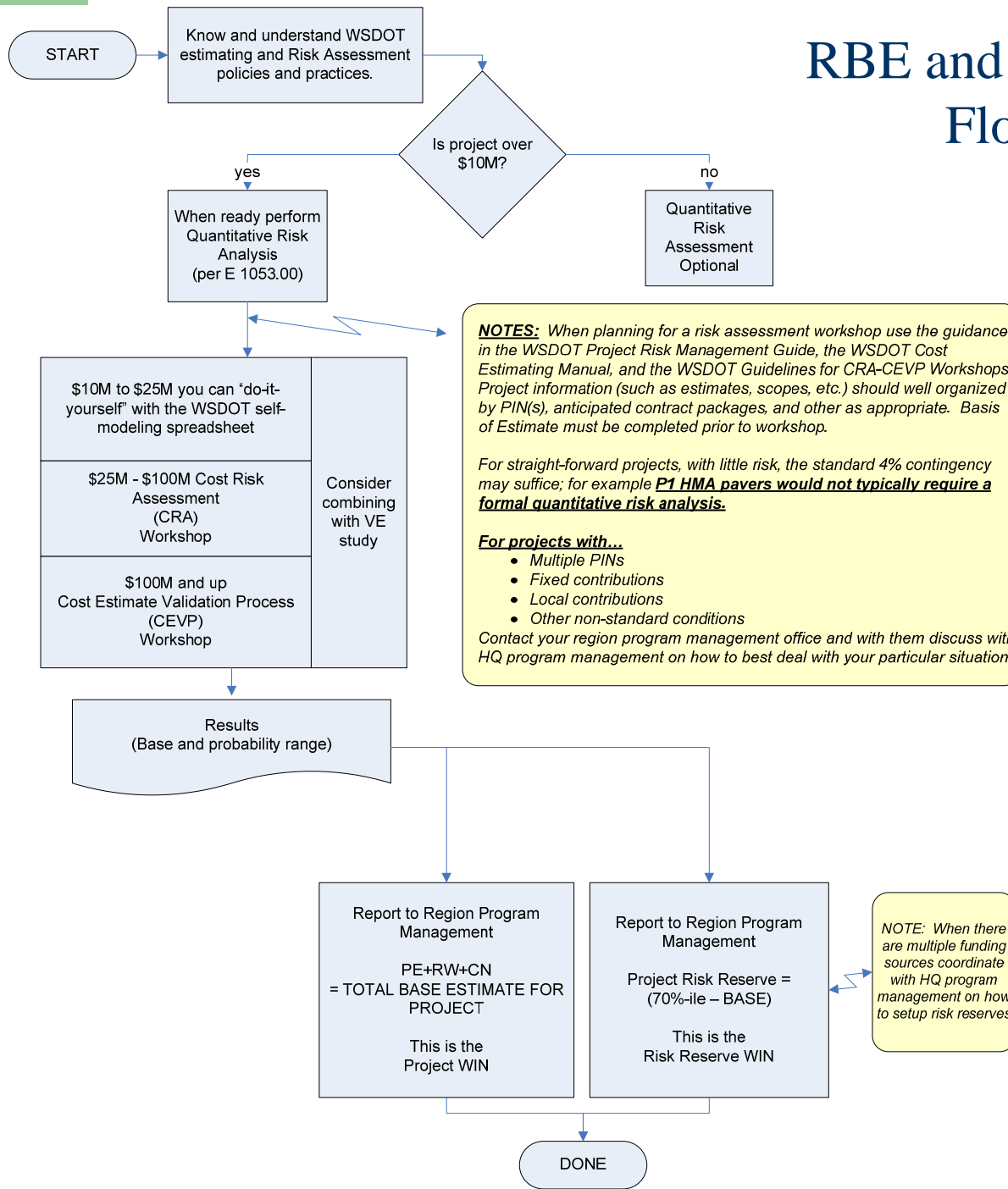
Evolution:

- We developed a systematic approach and defined a new budget process called “risk reserve” budgeting.
- We have lowered the total budget figure to the 70% confidence level.
- The Project Manager is expected to manage the project to the estimated base cost value.
 - Our experience shows that typically the base cost estimate falls in the 25% to 40% confidence level

Risk Reserve

- The Risk Reserve is defined by the difference between the 70% confidence level and Base Cost.
 - It is expected that the post mitigated 70% confidence level number be used.

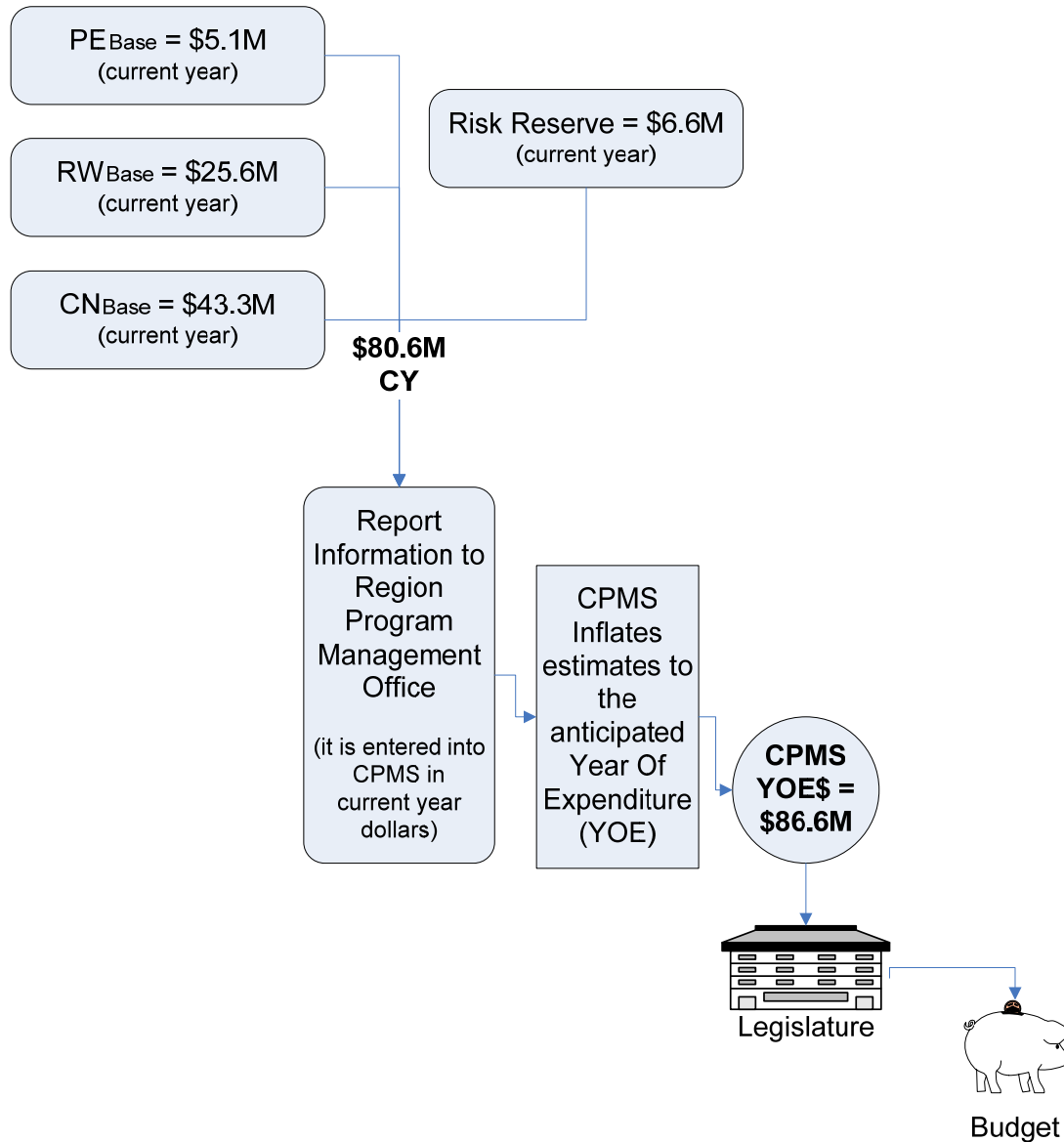
RBE and Risk Reserve Flowchart



RBE and Risk Reserve

<i>Project Estimate</i>	Total Project Cost (CY) \$M	Total Project Cost (YOE) \$M	<i>Use of risk based estimating results.</i>	
Base Cost (no risk)	74.0	80.0	<i>Project manager target figure</i>	
Percentiles			<p><i>Risk reserve = 70%-ile – Base</i> <i>= \$80.6 M – \$74.0 M</i> <i>= \$6.6 M</i> <i>The risk reserve may be used if approved by higher management.</i></p>	
10%	69.2	73.8		
20%	72.0	76.9		
30%	74.0	79.2		
40%	75.7	81.1		
50%	77.3	82.9		
60%	79.0	84.7		
70%	80.6	86.6		<i>Budgeted figure</i>
80%	82.8	89.1		
90%	85.8	92.5		

Budget Figure using Risk Reserve



Base Cost & PM target budget & RR

Base cost includes a “ construction contingency” that the PM will use first to cover adjustments during construction.

The Risk Reserve may be used only with approval by Region Program management.

The risk reserve is monitored and as risks are retired, the amount will be adjusted.

Challenges with implementation...

- Provide opportunity for all regions to review and comment on drafts of this new policy
- Obtain upper *and* mid-level management support
- Provide implementation guidance
- Do not make it burdensome for project managers to implement
- Highlight the benefits
- Applying it to existing projects
- Allow a process for flexibility

Risk Reserve is not a “silver bullet”



Very Low probability 2%
Impact 20 \$M to 80 \$M



Occured 200 \$M

Helpful hints...

- Develop a risk-aware culture within your organization
- Have a standard process for estimating and quantifying project risk
- Look for a path that naturally integrates creation of project risk reserves into the budgeting process
- Invest in development of a risk assessment program

Expectations (benefits and outcomes)...

- Better use of program funds
- Moves towards working within a estimate range
- More aggressive project risk management
- Tighter control of scopes
- Budgeting reflects risk and uncertainty
- More consistency
- More transparency
- Better documentation and tracking

Contact and references

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- [wsdot.wa.gov](http://www.wsdot.wa.gov) > cost risk assessment
<http://www.wsdot.wa.gov/Projects/ProjectMgmt/RiskAssessment/>

Questions

