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High performance. Delivered.

Earned Value Prediction (Are we really on budget and on time?)

Practical Software and Systems Measurement (PSM) February Technical Working Group Meeting Nathan Shirley

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- Why High Maturity
- Quantitative Analysis Process
- Baseline
- Goals to Achieve
- Processes and Sub-processes
- Measures
- Earned Value Prediction Model
- Question and Answer

accenture Why High Maturity

- Continuous Process Improvement
- Reduce Cost (Testing and Re-work)
- Leverage Use of Existing Tools
- Quantitative and Objective Measures for Delivery and Quality
- Relevant Metrics to Improve Project Delivery
- Competitors

Quantitative AnalysisaccentureProcess



- 1. Establish Quantitative Analysis Baseline
- 2. Complete Goal Question Metric analysis (GQM)
- 3. Develop Measurement Processes and Tools
- 4. Implement Measurement Program at Project Level
- 5. Collect data
- 6. Analyze Data (cleanse data)
- 7. Determine Baselines and Models
- 8. Additional Analysis (subprocesses and hypothesis)

Quantitative AnalysisaccentureBaseline



- Customer Satisfaction
- Product Quality
- Schedule Management
- Cost and Effort
- Sizing and Stability







Select Processes to Examine



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Quality Review Process





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What is Quantitative Project Management

Quantitative Project Management (QPM) is the end result of setting quantifiable project levels goals for delivery and quality process performance, establishing baselines to determine if projects can meet those goals, and taking corrective actions when performance is outside those baselines.



Cost Performance Index and Schedule Efficiency Index

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Cost Performance Index (CPI) = Budgeted Cost of Work Performed (BCWP) / Actual Cost of Work Performed

Schedule Efficiency Index (SEI) = Budgeted Cost of Work Performed (BCWP) / Budgeted Cost of Work Scheduled (BCWS)



Earned Value Prediction Model



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Budgeted Cost at Completion (BCAC) = Budgeted Cost on the planned Finish Date

Estimate at Completion (EAC) = BCAC / CPI and Planned Days to Complete / SEI

Planned Days to Complete = Planned Finish Date – Project Start Date

Project Specification Limit = Limit set by project based on customer or project requirements

Organization Baseline = Control limits set by analysis of the delivery process performance

Actual Cost of Work Performed (ACWP) = Actual cost of tasks that are 100% complete



accenture Lessons Learned

- Don't under estimate the power of a sponsor
- Start with the measures the project managers are being measured against
- Start with the end in mind (high maturity begins at Level 2)
- Clear Link to Organizational Objectives
- Develop coaches and stay in contact
- Leverage other organizations (inside and outside)



