Risk Management

Primavera Pertmaster is a full life-cycle cost and schedule risk analytics solution for Primavera and Microsoft Project. It provides quick and easy techniques for determining contingency and risk response plans as well as a comprehensive means of reporting confidence levels for project success.

What does it provide?

Pertmaster is a decision support tool for determining confidence levels regarding project cost and schedule success. Pertmaster provides an objective view of required contingency to account for cost and schedule uncertainty, as well as analyzing the cost effectiveness of risk response plans. These combined form the basis of a risk-adjusted schedule which is becoming the standard in the planning and scheduling process.

How does it work?

Pertmaster directly integrates with both project schedules and cost estimates to model risks and uncertainty. Projects are risk loaded through risk registers and risk templating before being analyzed through a Monte Carlo simulation. Confidence levels and risk drivers can be easily identified through reports such as risk histograms, tornados and scatter plots before the resulting risk-adjusted schedules are optionally published back into the schedule.

> *"We're able to look at the projects from a cost estimate perspective, schedule analysis, as well as event-driven risks and then merge the three variables together to give an overall assessment. To be able to see all sides of a projects is an incredible value."*
>
> Jim Christie, Manager of Project Controls at Marathon Oil Company
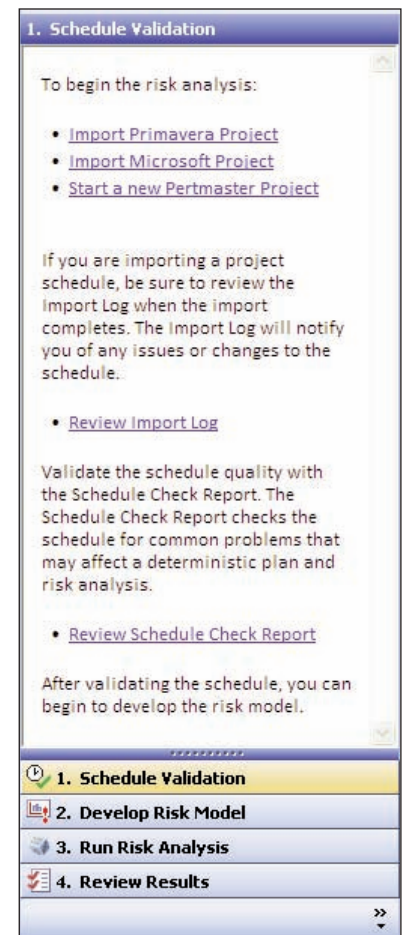
Features

Risk Analysis Guide

The Risk Analysis Guide outlines the steps in the risk analysis process to guide users through the process of preparing, modeling and running a risk analysis. The steps include Schedule Validation, Develop the Risk Model, Run Risk Analysis, Review Results. Each of these steps has links to the features in Pertmaster needed to complete each step.

Schedule Check

Quickly evaluate your schedule maturity and risk readiness with the Schedule Check Report. The Schedule Check Report looks for common scheduling problems that affect a deterministic schedule, but are more apparent during a risk

Risk Analysis Guide

analysis. Included in the report is the rationale of each check and how it can impact a risk analysis as well as a list of the activities identified.

Templated Quick Risk

The Templated Quick Risk allows uncertainty risk distributions to be assigned to tasks based on a template approach. Tasks are assigned risk distributions based on WBS, Activity Code, User Defined Field, or filter. As a more advanced way of executing quick risk, these templates overcome the common challenge of accurately modeling task uncertainty.

Risk Register Wizard

Quickly create new risk registers with the Risk Register Wizard. Define the risk scoring criteria, enter qualitative risk assessments and map the risks to schedule activities. Quantitative assessments and more detailed information can be gathered in the resulting Risk Register.

Risk Register

Integrate pre-developed risk registers as well as define new risk registers directly within Pertmaster. Model both qualitatively and quantitatively positive and negative risk events (threats and opportunities) together with associated response plans such as mitigation. Automatically integrate identified risk events into the schedule by creating a risk event plan. These risk event plans can then be analyzed to determine both key risk drivers as well as the cost effectiveness of the identified mitigation strategies.
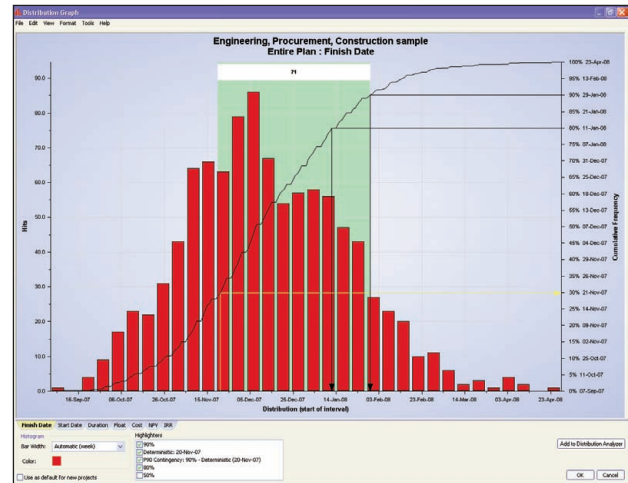

Risk Register

Risk Analysis

Primavera addresses full life-cycle risk management through advanced Monte Carlo based cost and schedule analytics. Model Risk Types include: Estimate Uncertainty, Task Existence, Probabilistic Branching, Fixed Cost Uncertainty, Variable Cost Uncertainty, Resource Uncertainty, Conditional Branching and Weather Modeling. Risk analysis can be conducted both at the project and portfolio level. Make strategic decisions about project selection through portfolio models as well traditional project level risk analysis against individual or linked schedules.
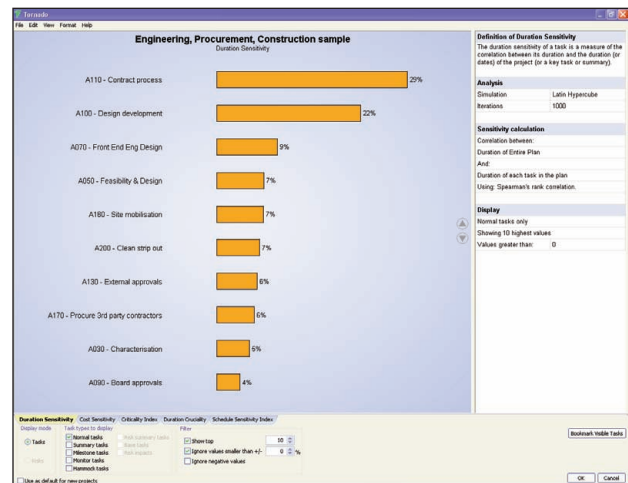
Risk Reporting

Distribution Graph

Determine confidence levels, P-schedules and schedule and cost contingency. Report confidence levels with regards to finish dates, costs, float, Internal Rate of Return (IRR) and Net Present Value (NPV). Drill down through the interactive report to identify confidence levels at multiple levels of the project including key milestones and stage gate review points. Quickly tab between cost and schedule based views with the ability to drill down and filter by task or resource through the integrated tree control.

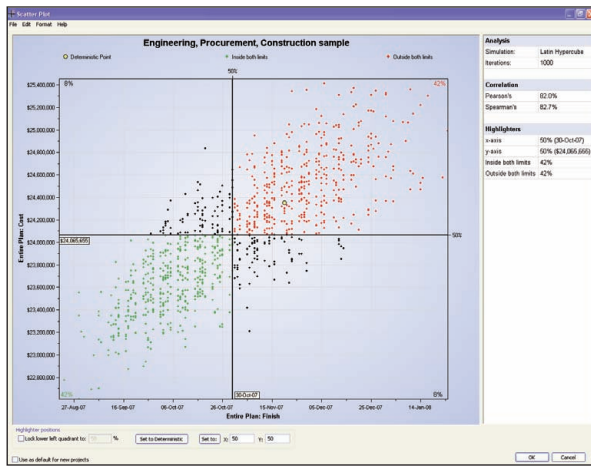*Distribution Graph*

Tornado Graph

Identify key risk drivers. Find out what task or risk event is causing your schedule to not perform as expected. Alternatively, Cost Sensitivity reports isolate which tasks or risk events are the most cost critical. Interactive drill-down risk tornados enable quick and easy risk driver determination to report on key risk drivers.
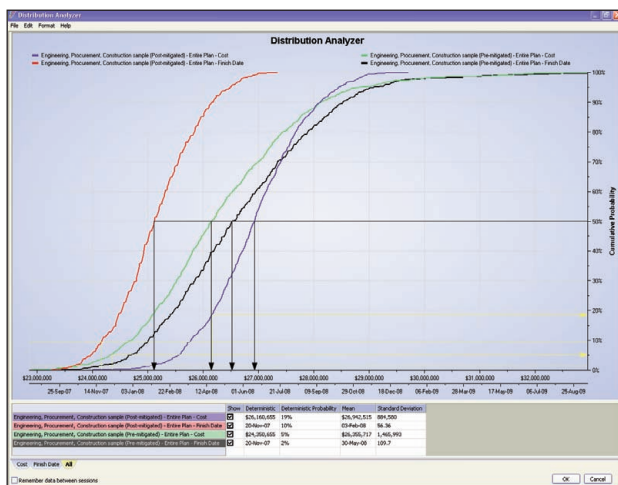

Tornado Graph

Scatter Plot

Determine the combined probability of achieving both given budgets and completion dates together. Perform "What-If" analysis by interactively varying cost and schedule thresholds to reveal the resultant chance of success.
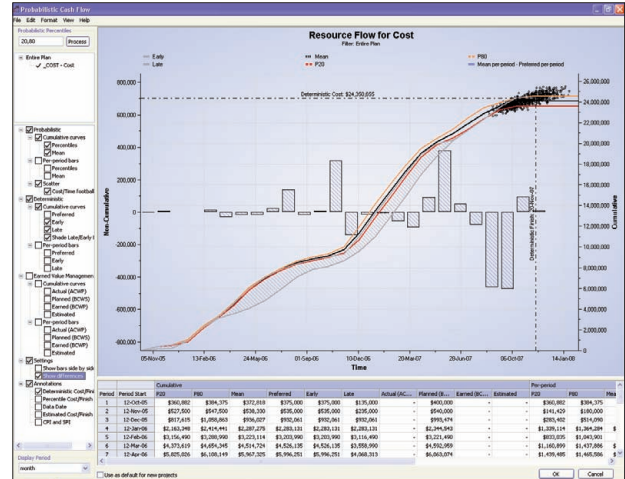

Scatter Plot

Distribution Analyzer

Compare scenarios and determine the cost-benefit ratio of selected mitigation plans. Overlay an unlimited number of cost or schedule risk distribution reports. Directly send risk distributions from the risk histogram view into the distribution analyzer report for risk scenario comparison and analysis. Standard and advanced cost modes enable quick and easy modeling of costs and resources while retaining optional advanced features.

Distribution Analyzer

Probabilistic Cash Flow

Probabilistic cash flow is critical for forecasting, long-term budgeting and Earned Value Management Systems (EVMS) reporting. In addition to reporting and overlay options such as percentile date shading, Pertmaster includes the ability to filter the probabilistic cash flow based upon specific resources and cost classes within the project plan. Cash flows can be generated for specific resource and cost types.

Probabilistic Cash Flow

Summary Risk Report

Quickly share the results of the risk analysis with the Summary Risk Report. Select the activities, risk inputs and risk outputs and Pertmaster creates an interactive report with links between the inputs and outputs included in the report and the activities in the schedule.

"Management, engineers, quality assurance and our customers now have faith in our increasingly realistic project schedules. Our project and risk models are considered to be an increasingly reliable source of business intelligence."

David Ashcroft, Risk Manager
in the Land & Joint Systems
Division at Thales UK

Integration

Pertmaster integrates with common scheduling tools and risk register solutions:

Schedule	Risk Register
Primavera • Primavera P3/Suretrak • Contractor • Primavera P6 (v4-v6) **Microsoft** • Project 2000 and newer • Project Server 2003 **Deltek** • Open Plan 3.1 **Safran** • Project 3.5 • Planner 2.01 **UN/CEFACT** (DOD Taxonomy)	**Primavera** • P6 Risk Log **Microsoft** • SharePoint (requires Project Server 2003) **Strategic Thought** • Active Risk Manager v2 – Excel export • Active Risk Manager v3 – Web Service API **Risk Decisions** • Predict! Risk Controller v3 – Direct database connection

About Primavera

Primavera is the world's leading provider of project, resource and portfolio management software. Our industry-specific solutions help project-driven organizations create a competitive advantage by making better portfolio investment decisions, improving governance, prioritizing project investments and resources, and delivering tangible results back to the business.

Projects totaling more than $6 trillion in value have been managed with Primavera by more than 75,000 customers around the world. Our employees, global partners, award-winning customer support and professional services teams are deeply committed to helping organizations achieve their vision and strategy.

We encourage you to learn how Primavera can help you meet your project goals and business objectives. For greater detail on Primavera solutions and real-world customer successes, visit www.primavera.com today.

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Business solutions for a project-driven world

www.primavera.com

AMERICAS HEADQUARTERS

THREE BALA PLAZA WEST
BALA CYNWYD, PA 19004   USA

P. +1.610.667.8600
   1.800.423.0245

F. +1.610.667.7894

info@primavera.com

INTERNATIONAL HEADQUARTERS

METRO BUILDING
1 BUTTERWICK
LONDON W6 8DL, UK

P. +44.20.8563.5500

F. +44.20.8563.5533

intlinfo@primavera.com