ENGINEERING, PROCUREMENT & CONSTRUCTION PROJECT MANAGEMENT FORUM

Enhancing Predictability to Achieve World-Class Project Performance



About the Speaker



Degree: Civil Engineering



Experience:

Business Development EcoSys - Central Europe Director AACE International Benelux Section

More than 20 years of industrial experience in consulting various industries such as oil & gas, petrochemical, power, mining & materials, chemicals, construction and pharmaceutical





This is Hexagon PPM



Awarded Solutions Provider Ranked No. 1 12 consecutive years, 7 different categories recognized by the ARC Advisory Group



Global Presence More than 2,800 employees, with offices in 60 countries



R&D Focused 18% of total revenue invested in 2018



Innovative More than 100 patents issued worldwide

Hexagon PPM brings capital projects execution, fabrication, and operations. to the Hexagon portfolio

Our solutions are used by nearly all of the Fortune 500 Owner Operators as well as the majority of **EPC** companies within our industry segments



EcoSys 2

Solutions for the Entire Plant Lifecycle



Enterprise Project Performance





Company Overview

Market Leadership



- EcoSys founders were the original developers of Primavera P6
- First to market and industry leader in enterprise project controls
- Deep portfolio & project management expertise

Business Momentum



- Largest user adoption in project controls industry
- Global presence users in 20+ countries
- An Intergraph Company since 2015

Loyal & Growing Customer Base



- 500+ clients globally
- Strong partnerships: SAP, Oracle, SAP, Microsoft, Accenture, IBM, and more



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Global Customer Base



SV. AEP AMERICAN ELECTRIC POWER **Ameren** Thames 🔨 隆 ALSTOM **Tideway Tunnel** Creating a cleaner, healthier River Than Bruce Power LA DWP **edf** Mining AngloAmerican

HEXAGON

PPM

bhpbilliton

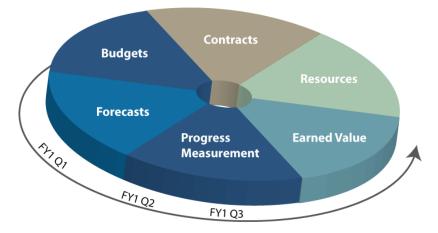
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EcoSys 🕿

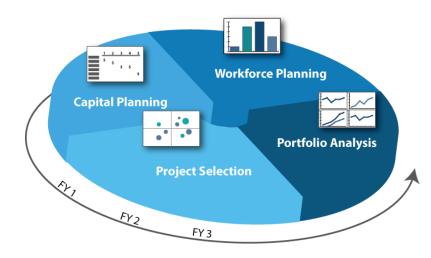
Utilities

Confidential 7

What is Enterprise Project Performance?



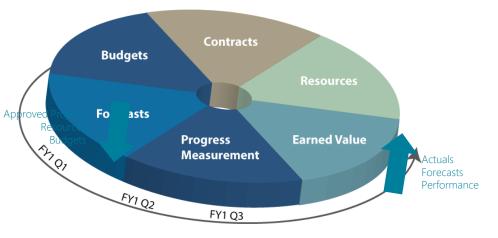
Comprehensive tools and processes for effective tactical project execution

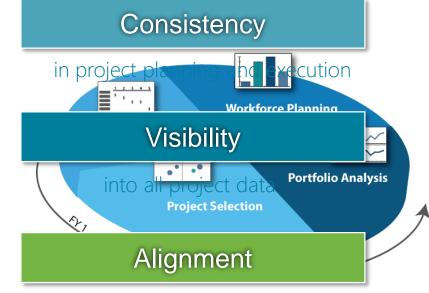


Controls for strategic planning and portfolio optimization



What is Enterprise Project Performance?





of enterprise level strategy and day-to-day execution



Best of Both Worlds

EcoSys 2

Excel-like Usability



Easy to Learn/Use Very Flexible

Powerful Analytics

Power of an Enterprise System **Standardization**

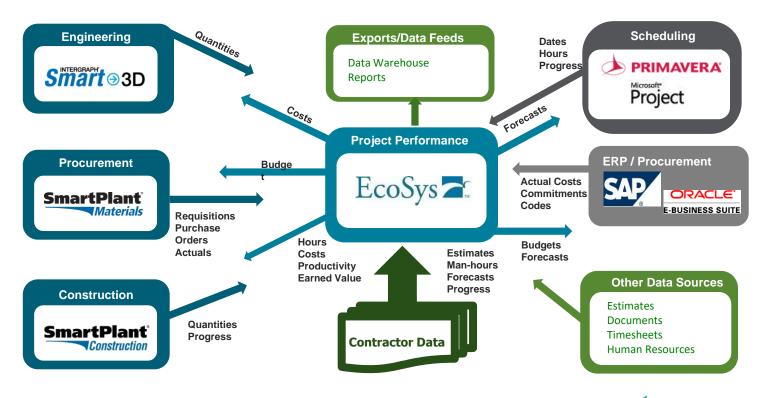
Enterprise Scalability

Role-based Security



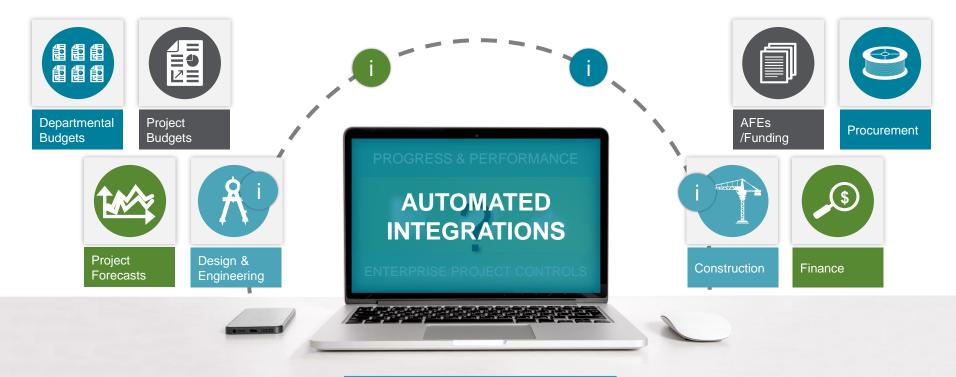


Integrated Solution for Enterprise Project Performance



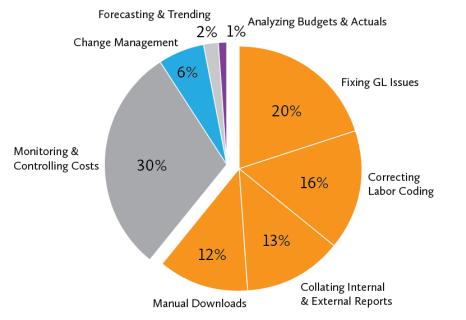


Fully Integrated Project Data



REAL-TIME VISUALIZATION

Project Controls Challenges - Inefficiencies

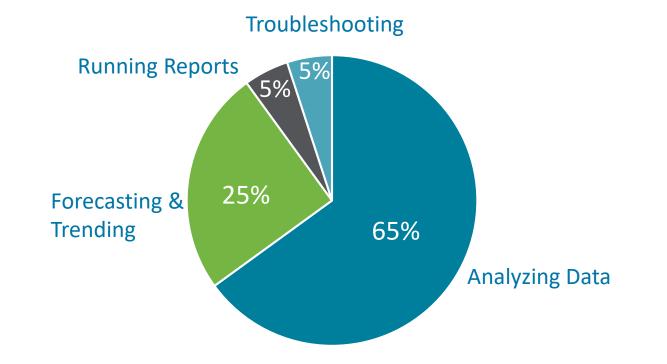


Cost Analysts Spent 61% of Their Time on "Wasteful" Activities

Source: EcoSys Customer Internal Survey



Client Case Study





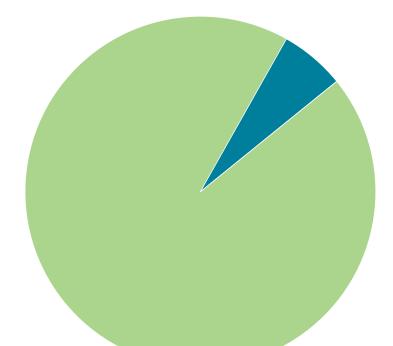
Source: Internal Study by EcoSys Customer



Introduction to Predictability



Poor Predictability Across All Sectors



of projects deliver planned financial returns



98%

of megaprojects see cost overruns greater than 30 percent

Sources:

* Construction Industry Institute

* McKinsey: The Construction Productivity Imperative

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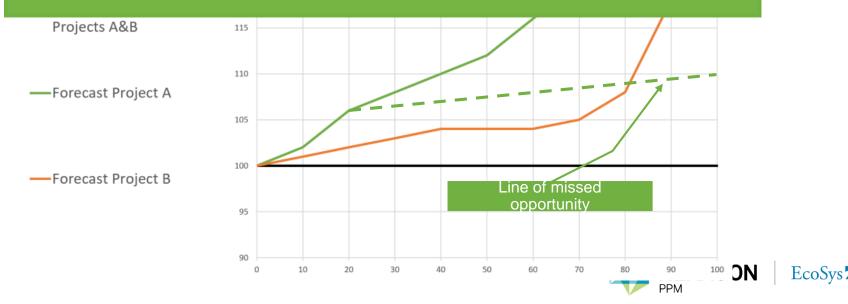


What is Predictability?

Both Projects have \$100M Original Budget and \$120M Actual Cost

Which is better and why?

A: The average point in time at which the project forecast becomes accurate



CII RT 291 Conclusions and Recommendations





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Early predictability adds value by enabling the proper response to surprises and changes.

Construction Industry Institute

70% of Projects

report ZERO budget variance prior to 50% project duration

On average, variance reporting starts at 65% duration

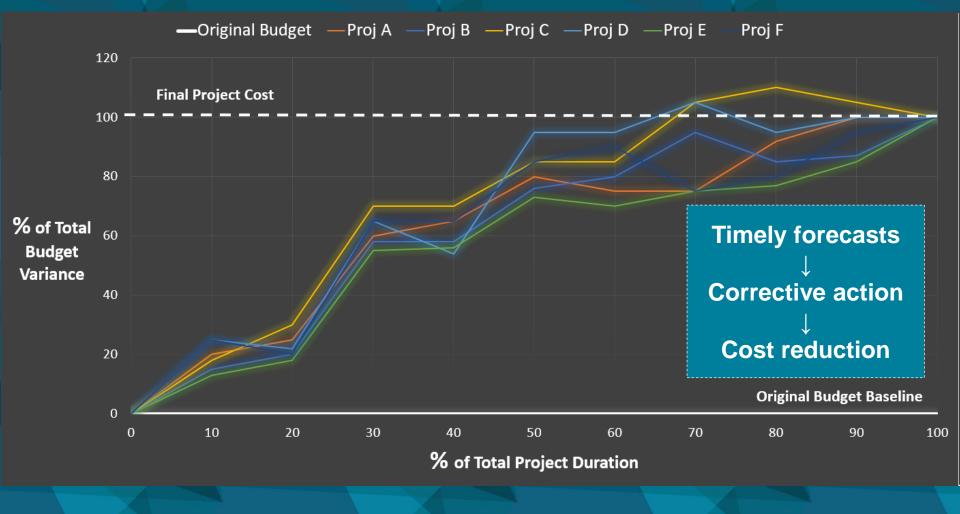


Common Causes of Low Predictability

Insufficient Effort or Attention	Low Maturity
Identifies areas for ad people, processes	
	platform (rife use of Excel)
Optimism Bias	Poor Transparency and Accountability
Identifies issues with organizatio	

Benefits of High Predictability

Proactive/Corrective Decision-Making	Cost and Schedule Reduction
 Early warnings of overruns stimulates corrective action: Value engineering De-scoping Modifying the business case Killing the project 	 Early corrective action or scrutiny can and should reduce overall cost and schedule Avoids opportunity cost
Management Confidence/Trust	Heightened Capital Efficiency
 Increased likelihood of retention / promotion Award of future projects 	 Optimized ROCE and fiscal year performance Avoids finance charges due to poor cash management and surprises
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Portfolio Management Performance **Predictability Project and Contract Project and Contract** Management Controls Management Measurement **Opportunity Scoring /** Time-Phased Iterative Planning / Native and Automated **Predictability Indices** Ranking Estimating Integration Performance Baselines Integrated **Multi-Source Progress** Incentives Based on **Options Analysis** Communication and **Cash Flow Management** Measurement Predictability Collaboration **Integrated Change Currency Variance** Multi-Dimensional Concept Estimating / **Productivity Analysis** Benchmarking Management Workflow Analysis and Trending Analysis Financial / Resource Secure End-to-End Integrated Risk / Issues The "Living Forecast" **Corrective Actions** Optimization Management Transparency **Timely Reporting and Project Development Integrated Claims** Multi-Method Continuous Stage Gate Workflows Forecasting Management Communications Improvement **Enterprise Productivity Platform** Flexible Setup **Real-Time Analytics Enterprise Standards** HEXAGON EcoSys a

PPM

Pillars of Predictability – People, Processes, Technology

Conclusions

<u>World-Class</u> Enterprise Projects Performance can only be achieved by:

Adopting ALL of the Pillars of Predictability, enabled by an Enterprise technology platform Combines out-of-the-box best practices with customercentric data and business processes Automate integration and predictability analytics **Promote transparent, proactive behaviors**







