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Emirates Stadium, London

Best Practice Project Controls with EcoSys™
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Managing Director Zauber
About the Topic

More than just cost reporting, effective project controls help to deliver success throughout the entire project lifecycle, from the very earliest stages of project selection and planning through project execution.

In this presentation, we discuss the best practices in project controls that drive improved project performance.

Through standardisation of processes, integration of data, and automation of reporting, organisations realize a greater ability to:

- Improve efficiency, accuracy, and effectiveness of project controls
- Achieve visibility into project cost performance across an enterprise
- Predict outcomes and take corrective action sooner
Agenda

Brief Company Introduction

The State of Projects Today

Leveraging Technology for Best Practices

Live Demonstration

Where to find us
Company Background

• **Founded in 2000 – Enterprise Control Systems**

• **Enterprise Project Controls Software Experts**
  Designers & Developers of original Primavera P6 and EcoSys EPC

• **Implementation of Project Controls Best Practices**

• **Strong Technology and Implementation Partner Networks** including SAP, Oracle, Microsoft, GSI (Accenture, Wipro, PWC, DT..) and local partners

• **Enterprise Standard for EPC Leaders in our key Industries:** O&G, natural resources, petrochemicals, EPC, Utilities, Aerospace & Defense, Transportation & Public sector

• **Acquired in 2015 – Intergraph**
Process, Power & Marine

Leading global provider of engineering and plant design tools

No. 1 provider of design and data management software

High customer satisfaction and best-of-class solutions

Leading global provider of integrated design, measurement and visualization technologies

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Comprehensive Suite

Leading 3D Modelling & Visualization

Engineering & Schematics

Detailed Analysis

Procurement, Fabrication, Construction

Data & Document Management

Flexible, Seamless, and Integrated Workflows

Cloud Computing for Anywhere Access

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Extending the 3D model

3D model
+ schedule / time
+ cost
+ project lifecycle
250+ deployments of EPC
250+ deployments of EPC

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<th>EPC</th>
<th>Oil &amp; Gas Utilities</th>
<th>Chemicals Mining</th>
<th>Manufacturing A&amp;D</th>
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The State of Projects Today
What’s driving the industry?

- Globalization of competition
- Projects getting bigger
- Project complexity increasing
- Acquisitions and joint ventures requiring collaboration and integration of management approaches
The struggle to control projects continues

- < 6% of projects deliver planned financial returns (CII)
  - Almost 70% fail to deliver within +/- 10%

- Soaring budgets of megaprojects/capital spending at O&G Majors impacting underlying corporate financials (WSJ)

- 2013 PwC study found:
  - 6 nuclear plants had average cost overrun of 157%
  - 47 mega-projects reviewed had average cost overrun of 88%
  - One refinery budgeted at $4B; final forecast at $12B
  - Litigation counts too: project owner seeking €2.4B in damages for 3 year delay on turnkey €3B power project
Challenge to effective Project Controls

- Poor Planning
- Rigid systems and processes
- Information silos / Lack of integration
- Manual processes
- Poor visibility and reporting
- Poor communication
- Inability to act on the information
- Insufficient Project Controls resources and knowledge
Non-integrated Project Controls
61% of cost analysts’ time is “Wasteful”

- Manual Downloading: 30%
- Collating Internal & External Reports: 16%
- Correcting Labor Coding: 13%
- Fixing GL Issues: 12%
- Change Management: 6%
- Monitoring & Controlling Costs: 30%
- Analyzing Budgets & Actuals: 20%
- Forecasting & Trending: 2%
- Fixing GL Issues: 1%

Source: Internal Study by EcoSys Customer
BEYOND THIS POINT
YOU SHOULD ENGAGE
A GUIDE
The Project Controls System is much more than simply a “tool” or “data”.

- It keeps the wheels on
- It is vital
Key system considerations

- Standardization/Best Practices
- Controlled Flexibility
- Scalability
- Adoption
- Automation
- Predictive
- Visibility
- Integration
- Full Lifecycle
High performance approach

1. Get the entire company seeing and acting on the same information

2. Adopt and standardize project controls best practices across lifecycle

3. Align and integrate disparate processes, data to eliminate silos and disconnects

4. Evolve with the business
High performance approach

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4. Evolve with the business
EPC Platform

1. Planning & Controls
2. Integration
3. Reporting

- Capital Planning
- Project Portfolio Management
- Project Cost Controls
- Progress Measurement
- Earned Value Management
- Estimating
- Workforce Planning
- Shutdown / Turnaround / Outage Management
Aligning perspectives

EcoSys EPC

- Traditional Corporate Financial Planning
  - ORACLE
  - SAP
  - G/L

- Fiscal Year Budgeting
- Budgets, Forecasts, Commitments
- Actuals & Performance Reporting
- Change Management
- Closeouts, Adjustments & Audits

- Project/Resource Management
  - Primavera
  - MS Project

Visibility
Integration
Full Lifecycle
Project Controls hub

EcoSys EPC

Other Data Sources

Project Documents

WBS, Networks, Activities
Actual Costs & Revenue
Commitments
Timesheets
Planned Costs

WBS & WBS Status
Budgets, Forecasts

Budgeting & Forecasting
Change Management
Integrated Earned Value Mgt
Commitments
Project Cost Reporting
Portfolio Project Management
Historical Snapshots

Projects, WBS
Percent Complete
Dates
Labor plans
Codes, Attributes

SAP® Certified
Integration with SAP Applications

Oracle Primavera
Partner

Integration
Automation
Visibility
Predictive
Web-based advantage

- 100% Web Based
- Scalable
- Multi-User
- Multi-Project
- Run from Browser
- No Client Software to Install

EcoSys EPC

Visibility
Scalability
Adoption
High performance approach

1. Get the entire company seeing and acting on the same information

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4. Evolve with the business
Adopt best practices

Adopt and standardize best practices incrementally:

- Standardization of Project Structures
- Estimating, Budgeting based on history, comparisons
- Risk Management
- Contract and Commitments Management
- Progress Measurement
- Productivity Analysis
- Forecasting techniques
- Standardized Reporting
- Management of Change
OBS, WBS and CBS

Project 100

Level 1
- WBS A
- WBS B

Level 2
- WBS A1
- WBS A2
- WBS B1

OBS
- OBS X
  - OBS X1
  - OBS X2
  - OBS X3

CBS
- CBS 0
  - CBS 1
  - CBS 10
  - CBS 11
  - CBS 2
  - CBS 20

Example: 100.X.X1.B.B1.10.Civil

- project
- obs
- wbs
- CBS
- resource

Visibility
Controlled Flexibility
Standardization/Best Practices

Project Controls EXPO
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WBS and ABS

Level 1
- Task Order 1
- Task Order 2

Level 2
- Electrical 1.1.1
- Mechanical 1.1.2
- Civil 1.1.3

Level 3
- Electrical 1.2.1
- Mechanical 1.2.2
- Civil 1.2.3

Level 4
- Reports 1.1.1.1
- Calcs 1.1.1.2
- Specs 1.1.1.3
- Reports 1.1.2.1
- Calcs 1.1.2.2
- Specs 1.1.2.3
- Reports 1.1.3.1
- Calcs 1.1.3.2
- Specs 1.1.3.3
- Reports 1.2.1.1
- Calcs 1.2.1.2
- Specs 1.2.1.3
- Reports 1.2.2.1
- Calcs 1.2.2.2
- Specs 1.2.2.3
- Reports 1.2.3.1
- Calcs 1.2.3.2
- Specs 1.2.3.3

ABS
- Electrical
- Mechanical
- Civil
## Forecasting best practices

<table>
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<tr>
<th>Method</th>
<th>How it Works</th>
<th>When Used</th>
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<tbody>
<tr>
<td>Budget</td>
<td>Forecast equal to budget</td>
<td>At start of work package</td>
</tr>
<tr>
<td>Prior</td>
<td>Forecast equal to prior EACs, estimates</td>
<td>Leveraging historical trends</td>
</tr>
<tr>
<td>Manual</td>
<td>Specify total EAC/ETC</td>
<td>Early phases, Experience based</td>
</tr>
<tr>
<td>Time Phased</td>
<td>Remaining cost from cash flow/schedule</td>
<td>When detailed scheduling, analysis available</td>
</tr>
<tr>
<td>Indices</td>
<td>Projections based on Performance/Productivity</td>
<td>Most accurate approach during execution</td>
</tr>
<tr>
<td>Corporate Standard</td>
<td>Consistent business wide rules applied</td>
<td>Independent litmus test Combines multiple approaches</td>
</tr>
</tbody>
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Forecasting can be applied to cost, hours, and rates for analysis of various scenarios
High performance approach

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3. Align and integrate disparate processes, data to eliminate silos and disconnects

4. Evolve with the business
Test Drive
EPC benefits

✓ Project Controls best practices used by industry leaders
✓ Browser-based, intuitive UI, Excel-like familiarity
✓ Fully configurable views and business rules
✓ Vendor certified, pre-packaged, configurable integrations
✓ Unlimited versioning and snapshots of enterprise data
✓ Management by non-technical resources, low TCO
Greater value-add for cost analysts

Source: Internal Study by EcoSys Customer
Where to find us?