EcoSys
TM
INTERGRAPH

Agenda

- About EcoSys
- The Current State of Project Controls
- Enterprise Project Controls
- EcoSys EPC
- Questions

About EcoSys

Company Overview

EcoSys

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

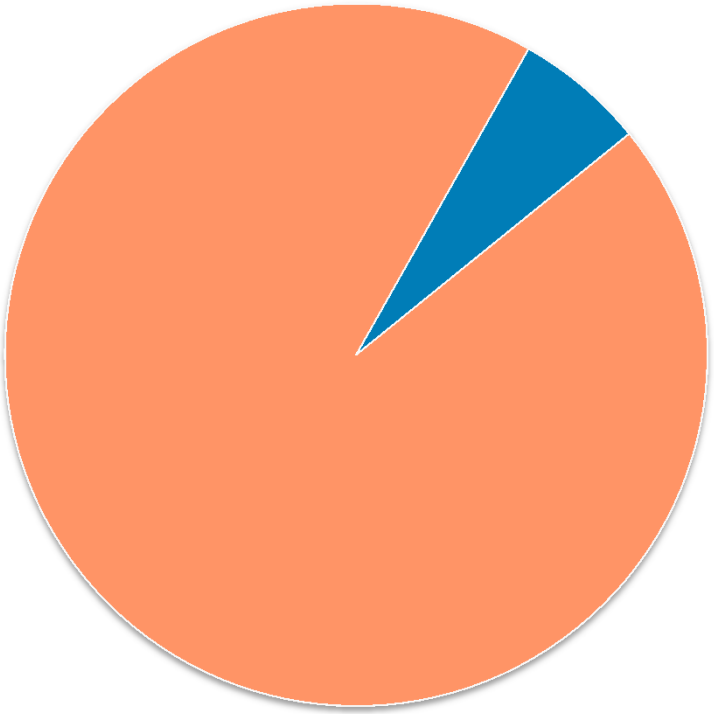
Loyal & Growing Customer Base

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

INTERGRAPH

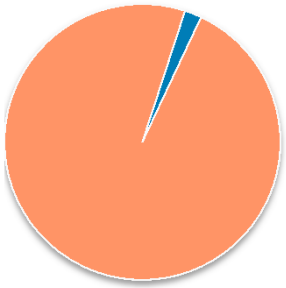
The Current State of Project Controls

Projects out of Control



<6%

of projects deliver planned financial returns

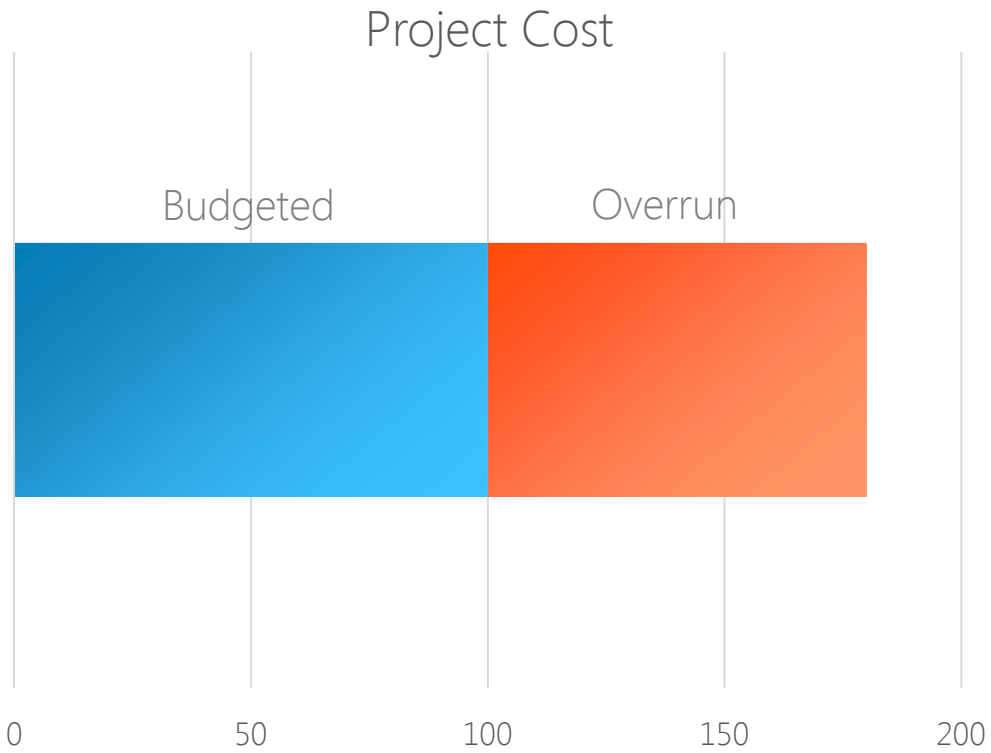


98%

of megaprojects see cost overruns greater than 30 percent

Construction Industry Institute
McKinsey: The Construction Productivity Imperative

Projects out of Control



Average megaproject cost overrun:

80%

Average megaproject schedule slippage:

20 months

McKinsey: The Construction Productivity Imperative

EcoSys

> Firms tend to use multiple software platforms that are manually monitored and disconnected, which severely compromises their effectiveness.

Geno Armstrong

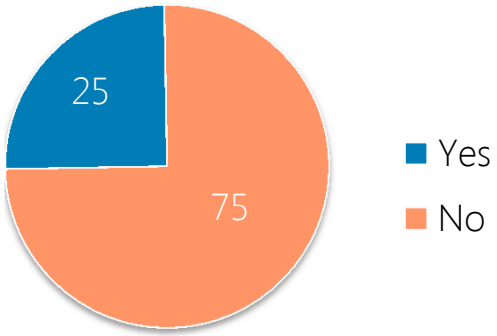
International Sector Leader,
Engineering and Construction
KPMG

Disconnected People & Systems

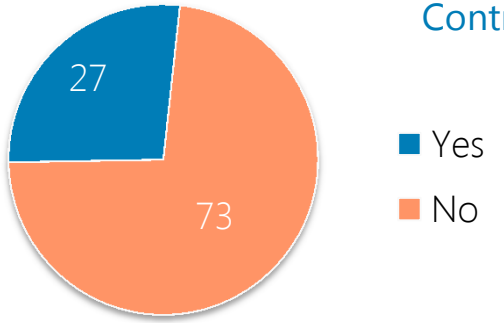
EcoSys

Access to Real-time Project Data?

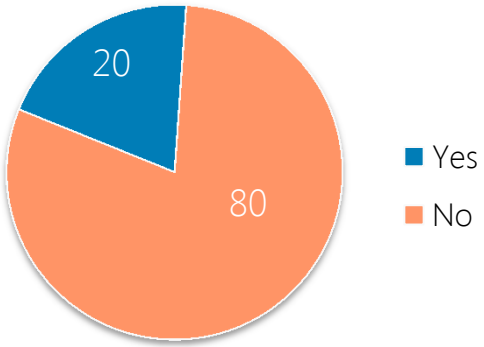
Owners

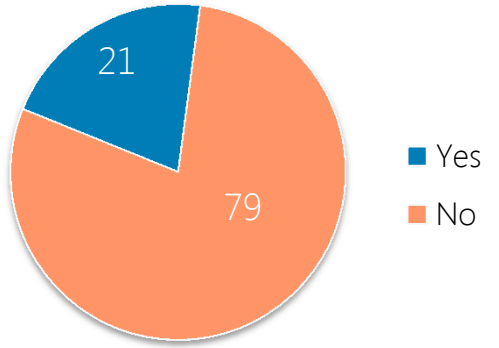


Contractors



Fully Integrated Project Controls System?

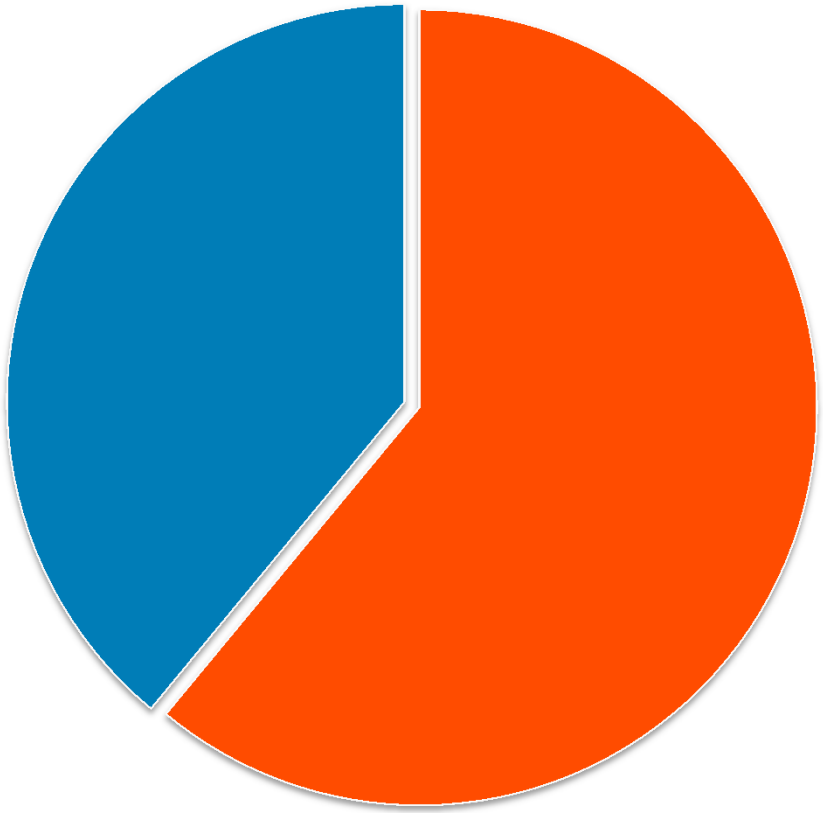




KPMG: Global Construction Survey

Disconnected Systems & Manual Processes

The Burden of Low-Value Work



Relying on Manual Processes:

61% Of time utilization

- Fixing ERP issues and Labor coding
- Downloading files and collating

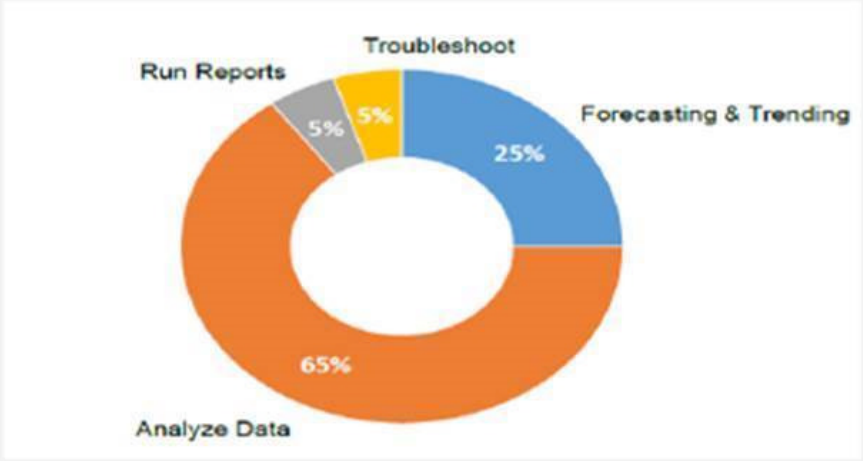
Internal study done by EcoSys client prior to implementation

Before and After EcoSys.

EcoSys project objectives

Before EcoSys EPC

After EcoSys EPC

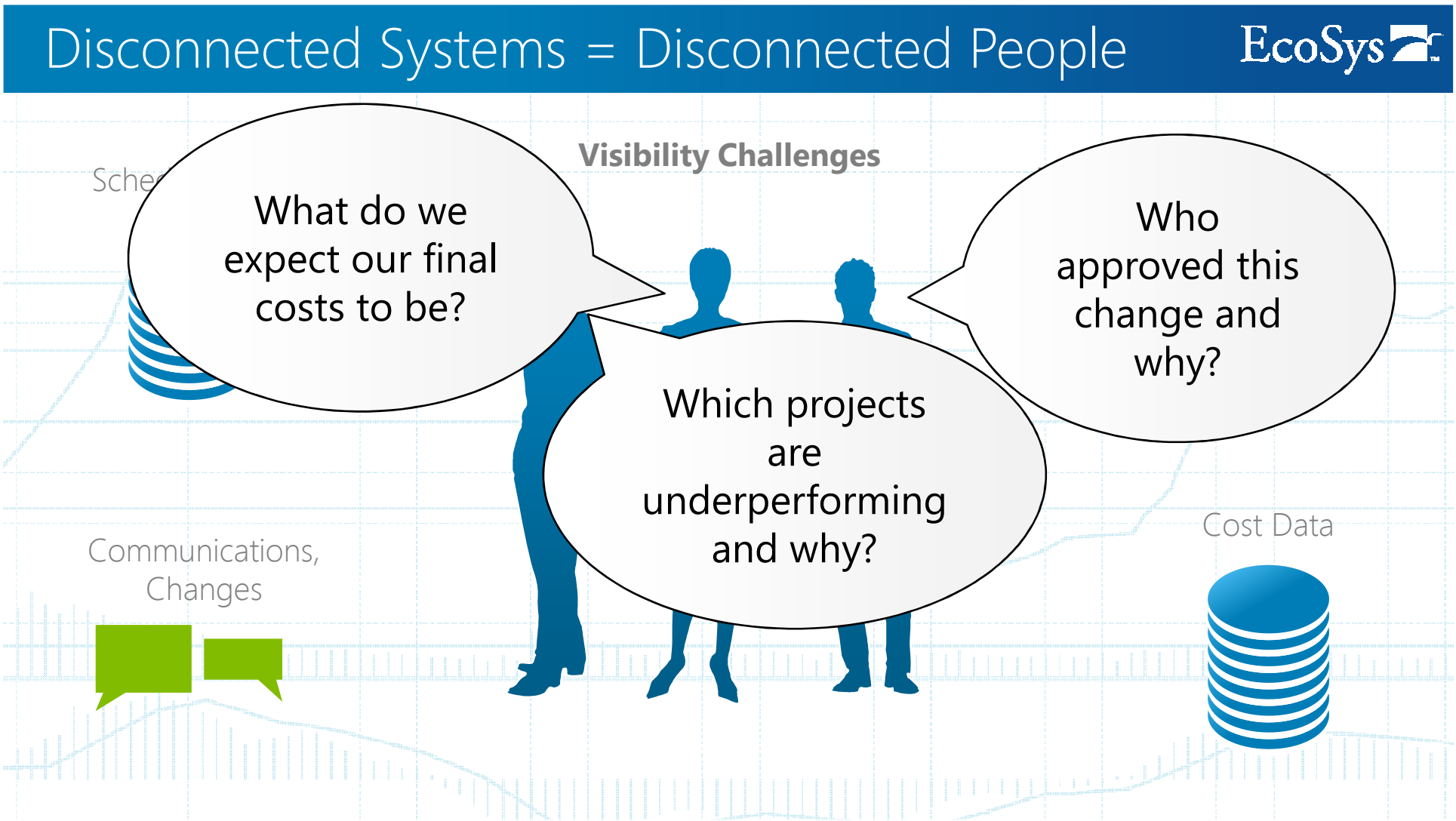


EcoSys Cost Improvements

- 13% Collating internal / external reports
- 12% Manual Downloads
- 15% Monitor and Control Costs (half of the 30%)
- 4% Labour Coding Corrections (quarter of the 16%)
- 15% Fixing ERP Issues (three quarters of the 20%)

✓ Man-hour effort reduced by 59%
✓ Existing resources can manage increase in workload

Disconnected Systems = Disconnected People



Disconnected People & Systems

EcoSys

Can't identify issues

Can't make adjustments

Can't anticipate needs

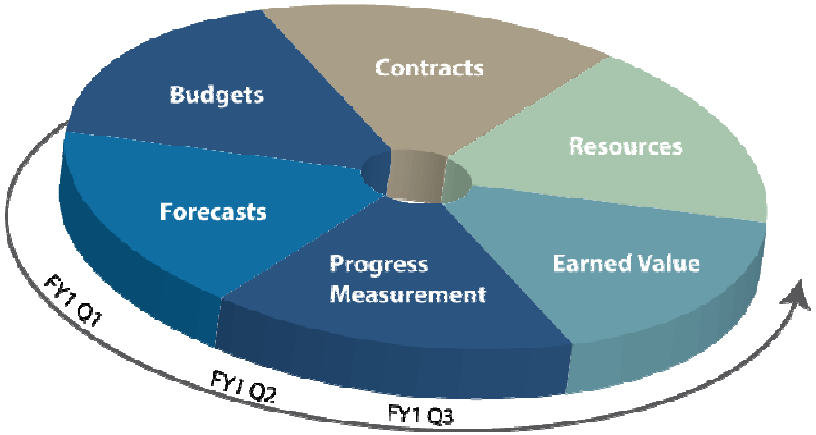
Can't plan effectively

Projects Cost More

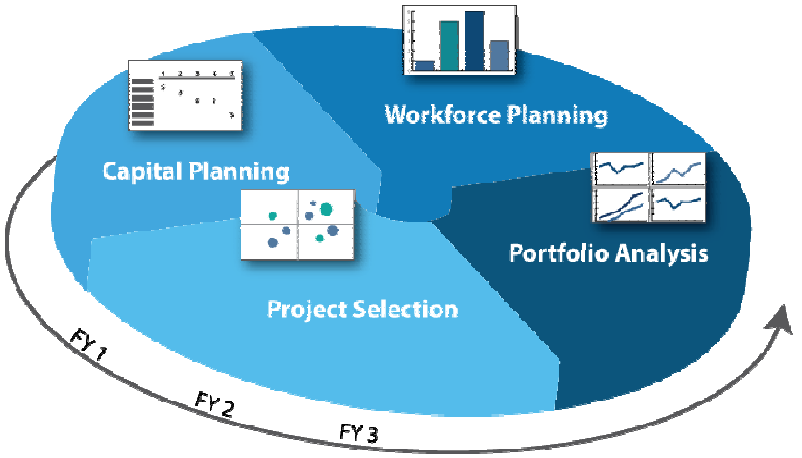
Projects Take Longer

Enterprise Project Controls

What is Enterprise Project Controls?

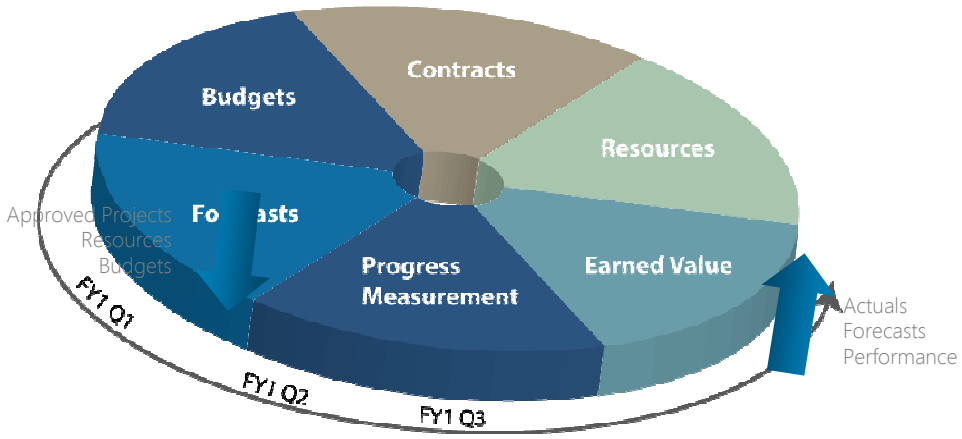


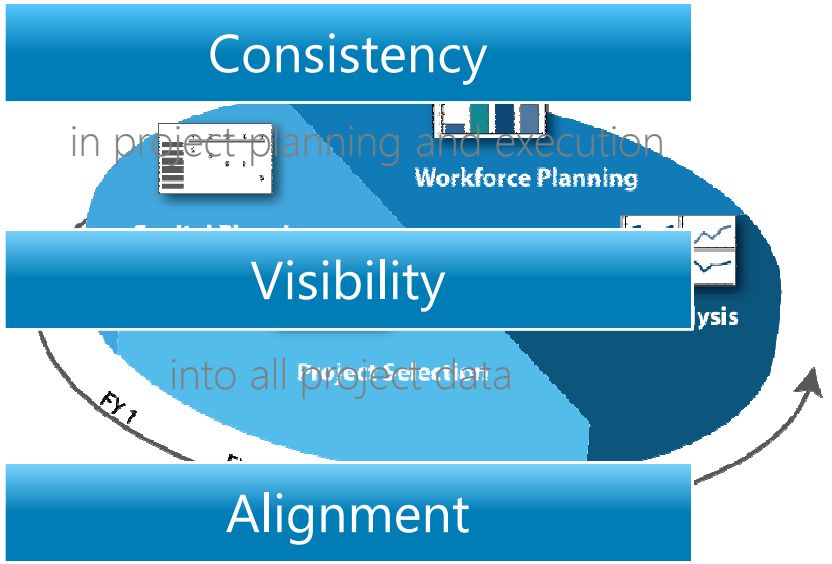
Comprehensive tools and processes for effective tactical project execution



Controls for strategic planning and portfolio optimization

What is Enterprise Project Controls?





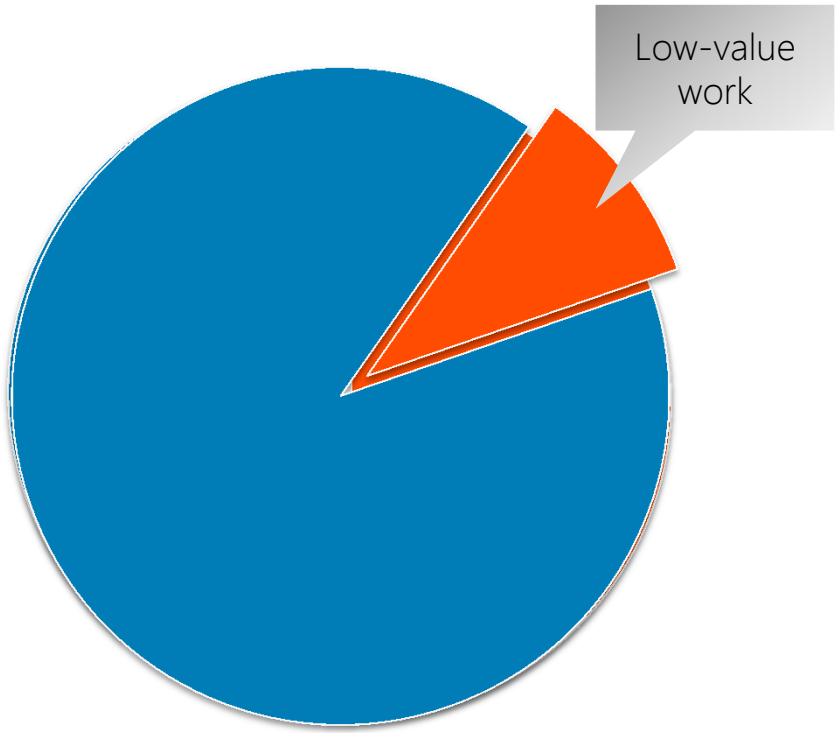
of enterprise level strategy and day-to-day execution

The Impact of Enterprise Project Controls

EcoSys

- Increased Efficiency
- Improved Cost Performance

Efficiency Gains



A Single Source of Integrated Data

Automated Reporting and Alerts

Right-sized Processes

Templates

70% – 80%

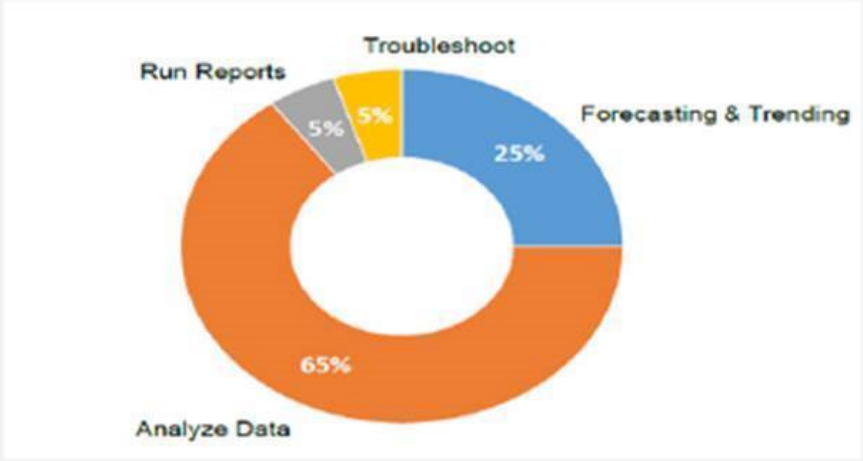
increase in productivity

Before and After EcoSys.

EcoSys project objectives

Before EcoSys EPC

After EcoSys EPC



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Improved Cost Performance

EcoSys

- Portfolio Optimization
- Contract Management
- Change Management

"Choosing the right, combining and projects and eliminating contracts ends to 9% savings of 7.4% of project spend"

- Consistent Information Association of Contract and Commercial Management (IACCM)

"Without use of change management, average cost growth is 10.2 %

With high use of change management, average cost growth is -1.2%

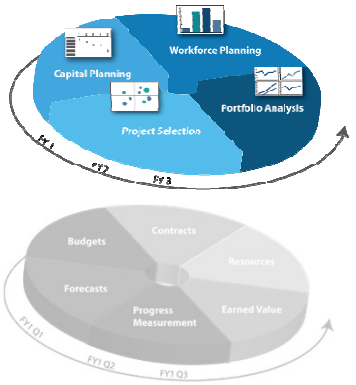
- McKinsey "Infrastructure Productivity: Practices Guide $1 Trillion Year" Perform 2013

Achieving Enterprise Project Controls

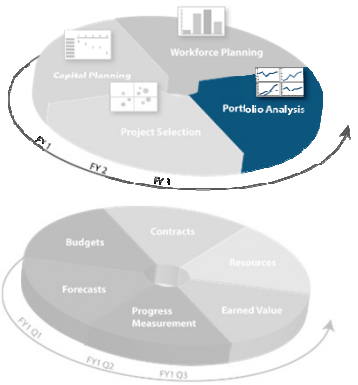
Traditional Commercial Solutions

EcoSys

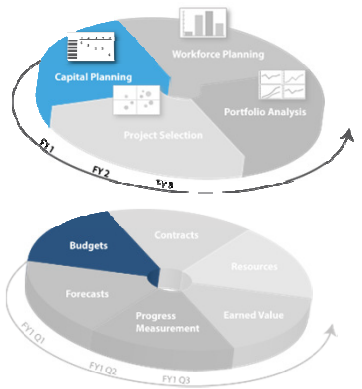
Portfolio Mgmt Software



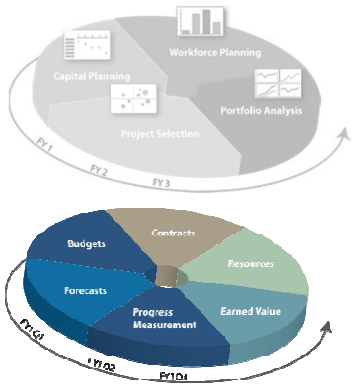
Business Intelligence/Analytics



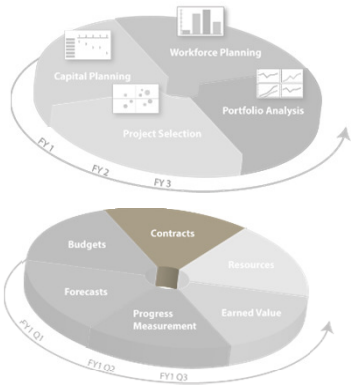
ERP



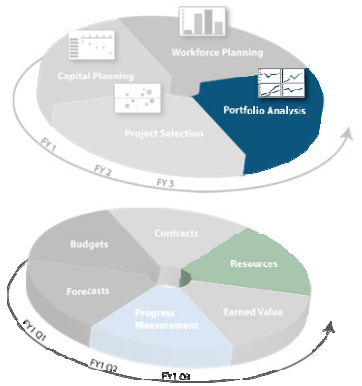
Cost Controls Software



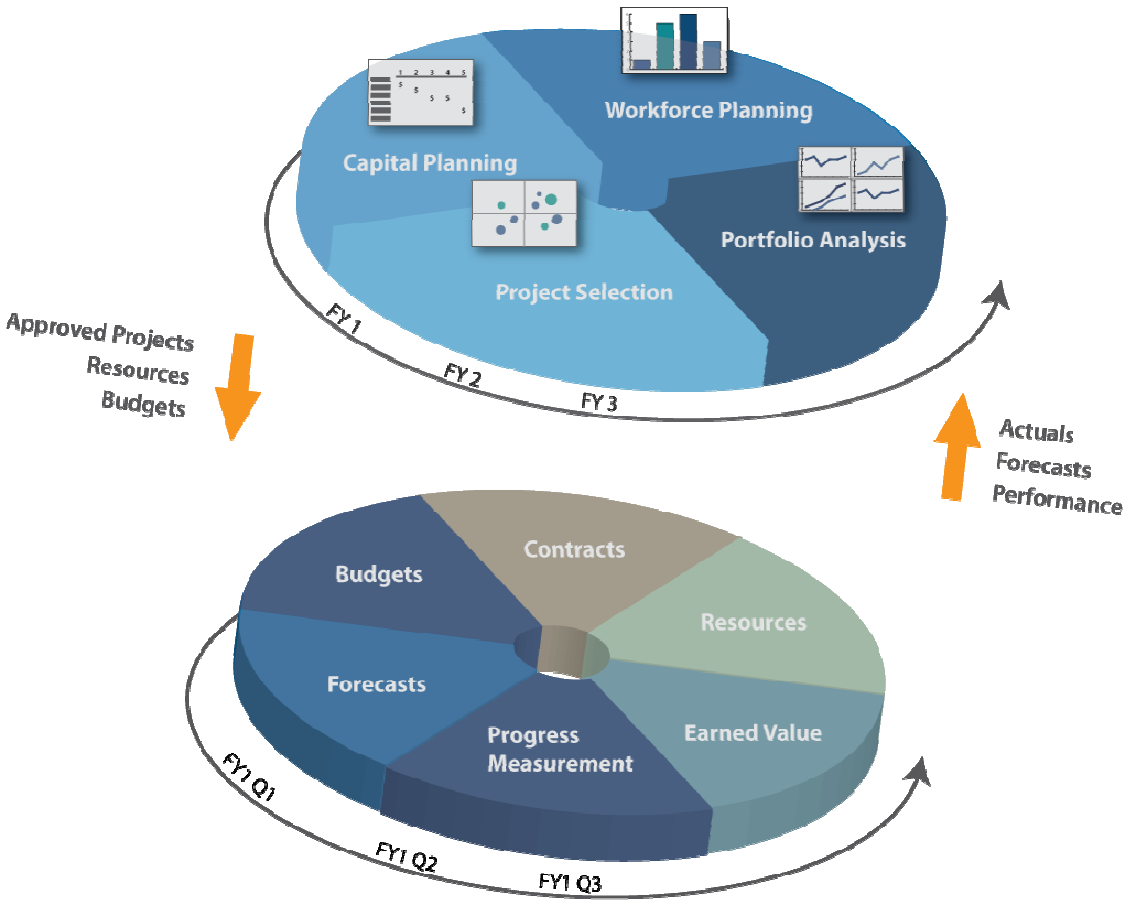
Contract Mgmt Software



Scheduling Software



EcoSys EPC

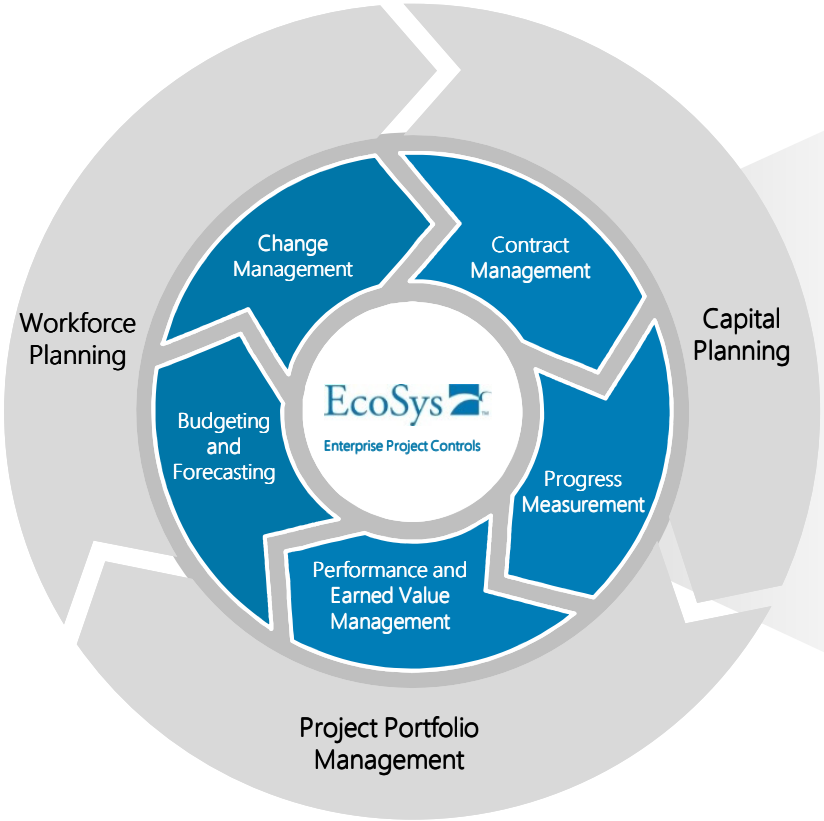


Tactical Project Controls

Strategic Enterprise-wide Planning

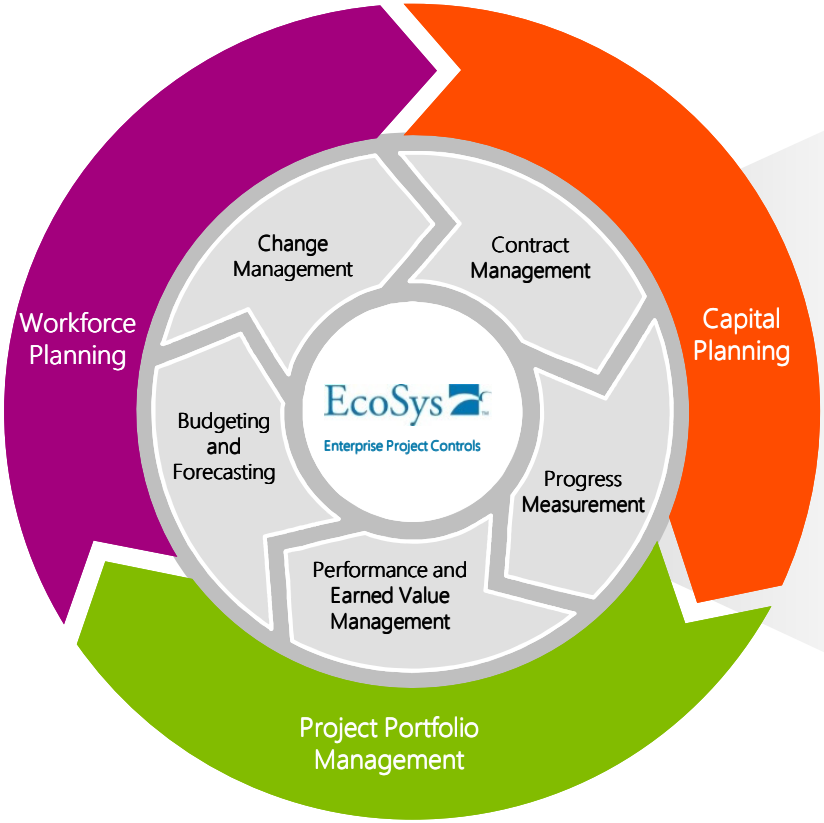
State-of-the-art Analytics

Tactical Project Controls



- **Budgeting and Forecasting**
- **Change Management**
- **Contract Management**
- **Progress Measurement**
- **Performance & Earned Value**

Strategic Enterprise-wide Planning

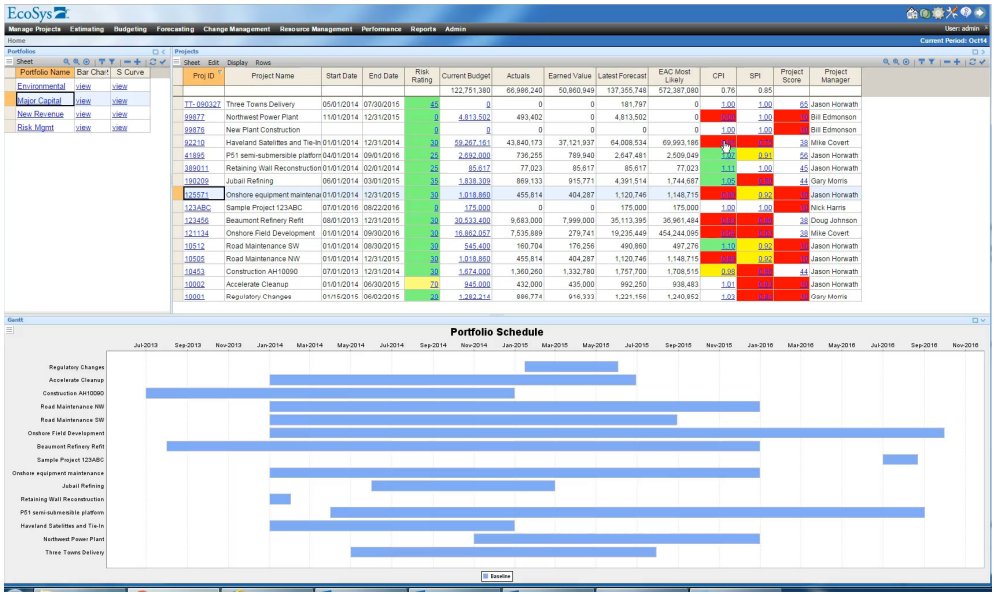


Capital Planning

Project Portfolio Management

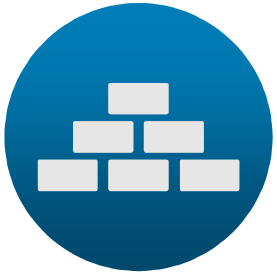
Workforce Planning

State of the Art Analytics



- Off-the Shelf, Configurable
- Graphical Charts & Dashboards
- Dynamic Business Intelligence
- Drill-Down to Any Level of Detail
- Output to Multiple Formats (PDF, Excel, Word, XML)
- Automated and User-Initiated Reporting

How is EcoSys EPC Different?



True Enterprise Capabilities

Powerful Business Intelligence

Extraordinary Flexibility

Comprehensive Functionality

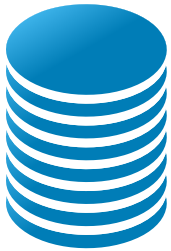
Best of Both Worlds

EcoSys EPC™

Excel-like Usability

+

Power of an Enterprise System



- Easy to Learn/Use
- Very Flexible
- Powerful Analytics
- Standardization
- Enterprise Scalability
- Role-based Security

EcoSys - Applies to all industries.

EcoSys

Engineering & Construction

ch2m: JACOBS BLACK & VEATCH BECHTEL WorleyParsons resources & energy McDERMOTT Petrofac BURNS McDONNELL SBM OFFSHORE JGC SNC·LAVALIN Technip

Oil, Gas & Chemicals

MARATHON ExxonMobil DOW ENBRIDGE Husky lyondellbasell Williams Columbia Pipeline Group noble energy SUNCOR ENERGY TESORO

Utilities

DUKE ENERGY AEP AMERICAN ELECTRIC POWER Ameren Thames Tideway Tunnel ALSTOM ONTARIO POWER GENERATION Bruce Power TVA EDF LA DWP

Aerospace & Defense

Sikorsky A United Technologies Company Los Alamos NATIONAL LABORATORY JPL Sandia National Laboratories IRVING Irving Shipbuilding Inc.

Transportation

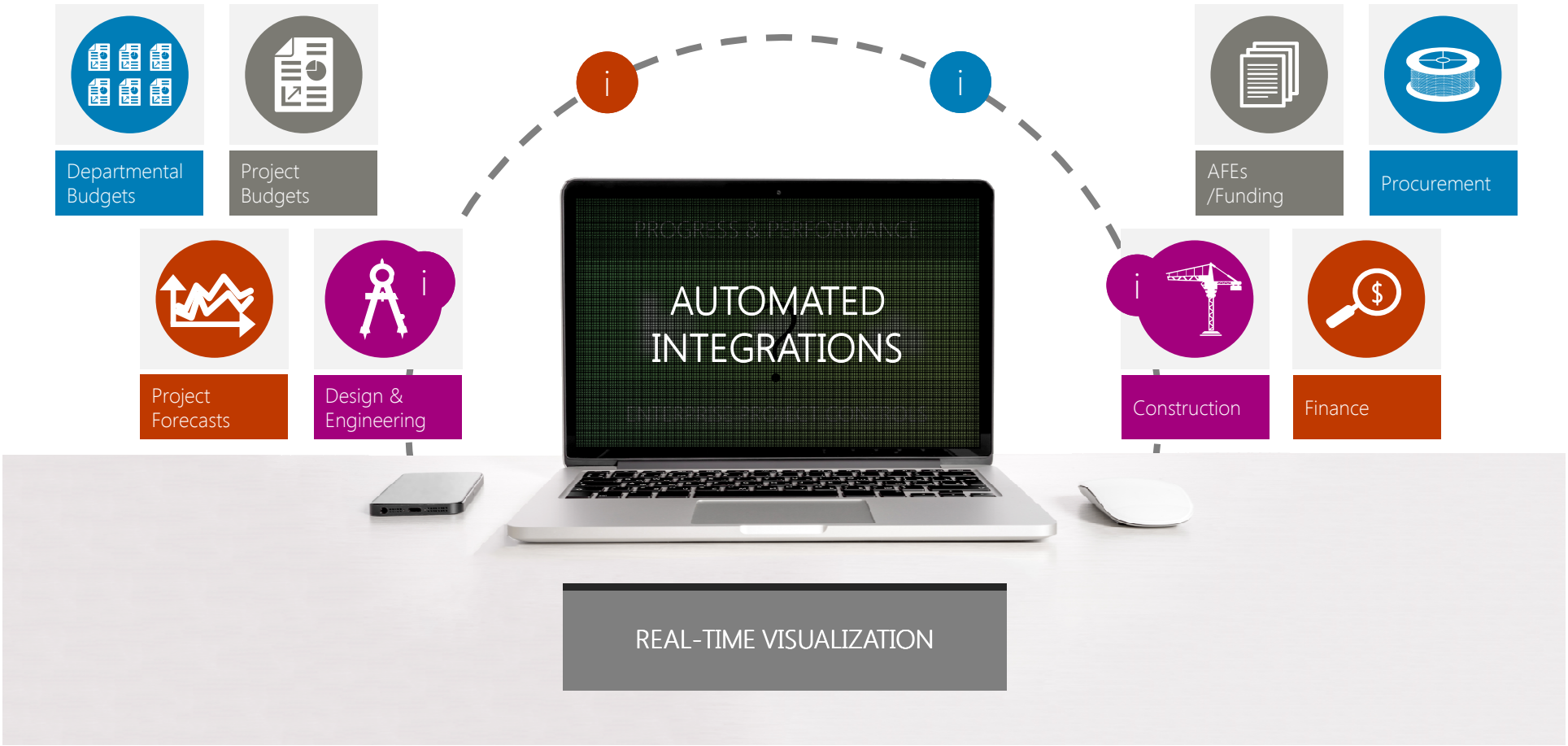
FEDERAL AVIATION ADMINISTRATION Governments SANBAG Working Together SFMTA METROLINX An agency of the Government of Ontario CALIFORNIA High-Speed Rail Authority Illinois Railway CONTRA COSTA transportation authority Metro

Mining

AngloAmerican GOLDCORP bhpbilliton FREEPORT-McMoRan

Fully Integrated Project Data

EcoSys



Business-Friendly Design

- Role-based dashboards, information, and permissions for simplicity and security
- State-of-the-art, built-in analytics operating from any data/dimension; configurable by end-users
- Easy-to-use Excel-like environment
- Drill down and roll up to any level
- Accessible from anywhere

Business Friendly Design

Construction Manager

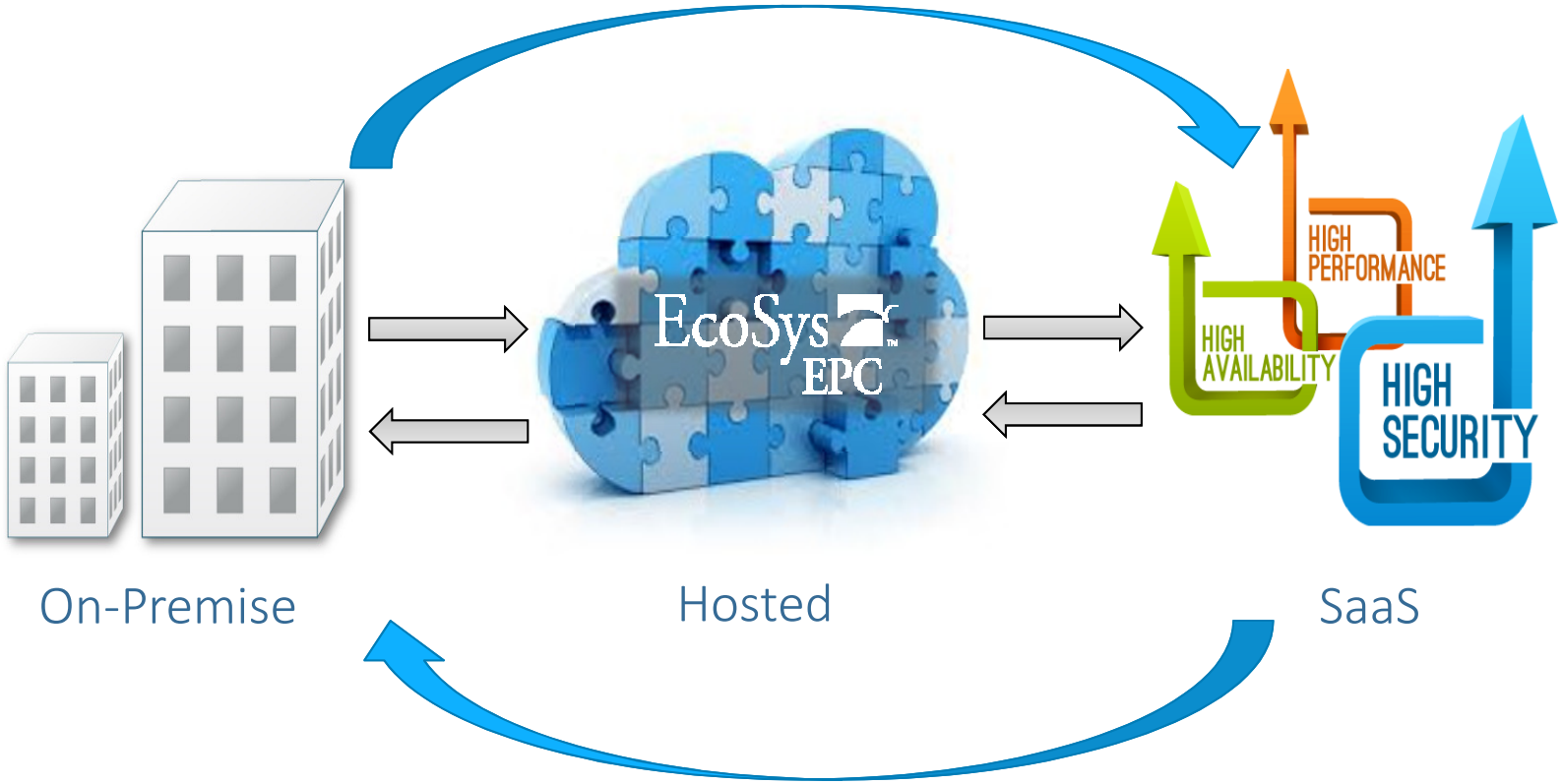
Portfolio Manager

Tailored User Experience

Collaboration

Filtered Information

Flexible Software Deployment Methods



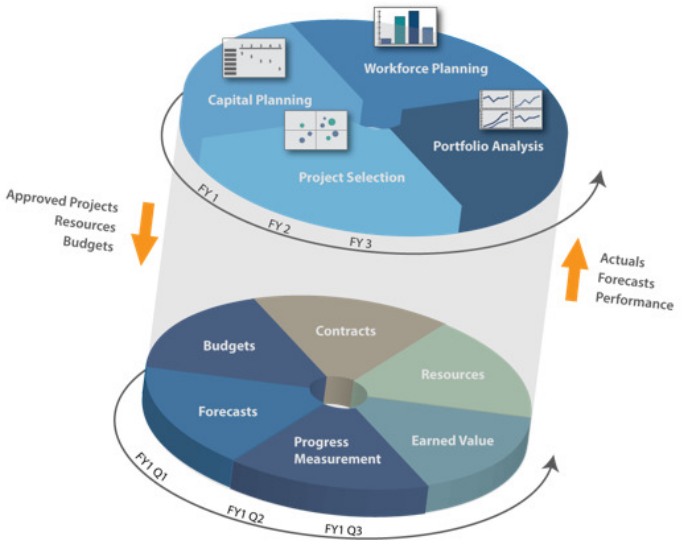
Successful enterprise project controls systems

EcoSys

- Centralized repository for all projects
- Standardized data structures with project-specific flexibility
- Single integrated process and system
  - Portfolio Management
  - Capital Planning
  - Budgeting and Forecasting
  - Change Control
  - Contract Management
  - Progress Measurement
  - Performance Management
- Easy-to-use software
  - Optimized for each role
  - Tailored for the organization's processes
  - Interactive drilldowns

Successful enterprise project controls systems

- Scalable for large enterprises and capital programs
- Robust, flexible reporting
- Go beyond tracking actual costs and perform forecasting based on past performance
- Maintain visibility into costs by WBS/Work Package and any number of alternate structures, like CBS, OBS, RBS, JV, Client, Discipline & more.
- Standardize project performance measures
  - Earned Value
  - KPIs
  - Milestones
- Dynamically re-plan and analyze from different perspectives



EcoSys

Questions?

Thank You

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Mario.paglia@Intergraph.com
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