

#### Project Controls Expo – 16<sup>th</sup> Nov 2016 Emirates Stadium, London

# Project Controls Best Practices with EcoSys





#### **About the Team**





Mervyn George
Solution Consulting Manager
Europe, Middle East, India & Africa
mgeorge@ecosys.net



Iain Graham
EcoSys Sales Director
Europe & Israel
igraham@ecosys.net



**Darren Metherell**VP International Business
Development & Partner Channels
<a href="mailto:dmetherell@ecosys.net">dmetherell@ecosys.net</a>



Federico Rota
Inside Sales Manager
Europe, Middle East, India & Africa
igraham@ecosys.net

#### **About The Company**



Market Leader



- 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
- ·Acquired by Intergraph in 2015

Loyal & Growing Customer Base



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

#### Representative customers



#### **Engineering & Construction** Ch2m **JACOBS WorleyParsons** SBURNS MSDONNELL Petrofac P Technip JGC

SNC·LAVALIN











#### **About The Platform**

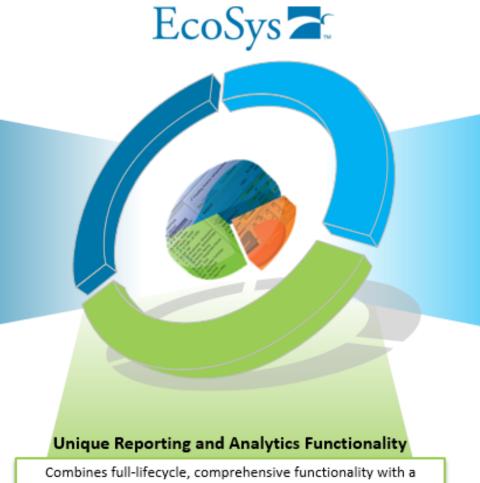


#### Leading, End-to-End Solution for Enterprise Project Controls

EcoSys EPC delivers the complete spectrum of project controls functionality in a single unified platform

#### Leading Project Controls and Planning Solution

- o Enterprise Project Controls
  - Budgeting and Forecasting
  - · Change Management
  - · Contract Management
  - Progress Measurement
  - Performance and Earned Value Management (EVM)
- o Capital Planning
- Project Portfolio
   Management
- Workforce Planning



#### Comprehensive Integration Technology

- o Seamlessly integrates with:
  - ERP systems
  - General Ledger systems
  - Document Management systems
  - Scheduling systems
  - Timesheet systems
  - Human Resources systems
  - Microsoft Excel









Combines full-lifecycle, comprehensive functionality with a powerful built-in reporting and analytics engine and Excel-like ease-of-use



## **Project Controls Challenges**

- Poor Planning
- ☐ Rigid systems and processes
- ☐ Information silos / Lack of integration
- ☐ Manual processes
- Poor visibility and reporting
- Poor communication
- Inability to act on information
- Insufficient Project Controls resources and knowledge



## **Project Controls Challenges**



- ☐ Who approved this budget?
- ☐ Who approved this Change?
- Where is this project going?



- Where are my resources?
- What does my cash-flow look like?
- When are procured items due?
- Can you run me that Project budget report?



- Thow is this forecast calculated?
- How is this progress being measured?
- How does Project A compare to Project B?

## Impact of challenges

61%

of major projects miss their budget <sup>1</sup> 80%

average cost increase <sup>2</sup>

98%

of large scale capital OO projects face cost overruns or delays <sup>2</sup> -11%

impact on share price if project deadline or budget missed <sup>3</sup>

1: Source: "Utilities Capital Projects: Will They Deliver?", Accenture 2013

2: Source: "Owner Operators Study", McKinsey n.d.

3: Source: "Capital Projects: Is Your Board Doing Enough?", PWC, 2013



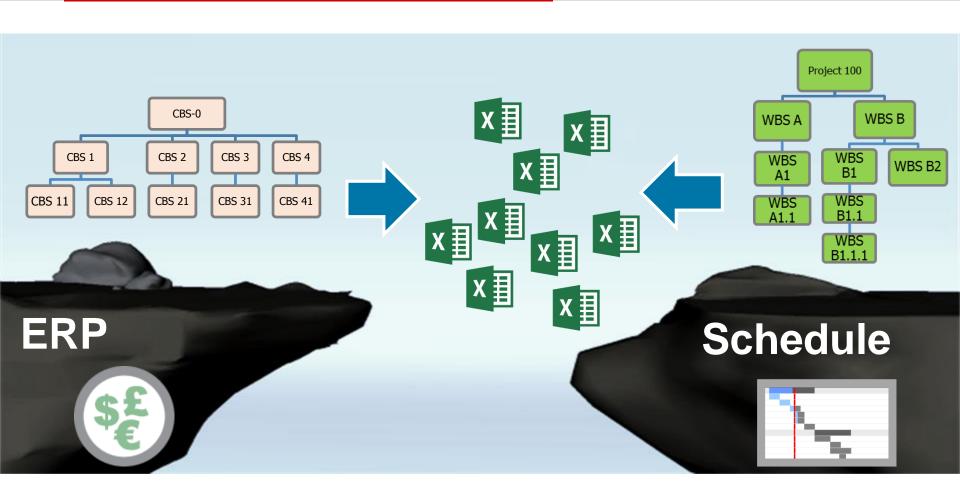


#### Takeaway 1:

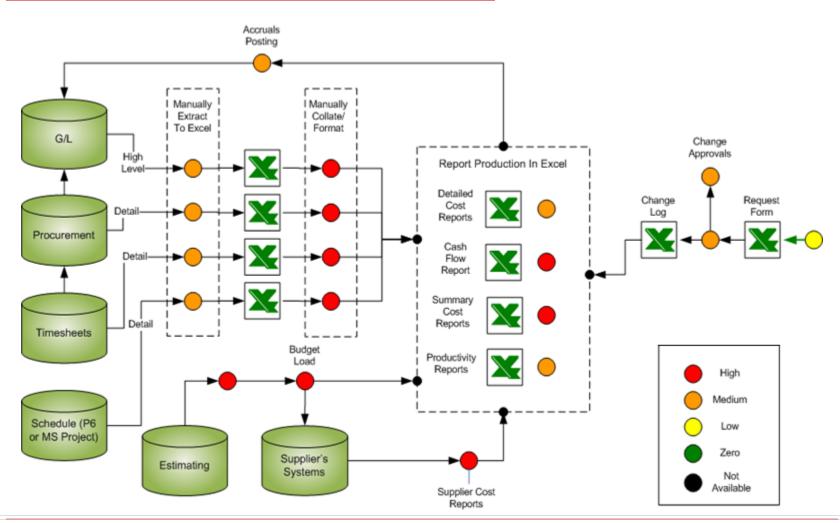


Remove your dependency on inefficient tools that currently manage project controls data

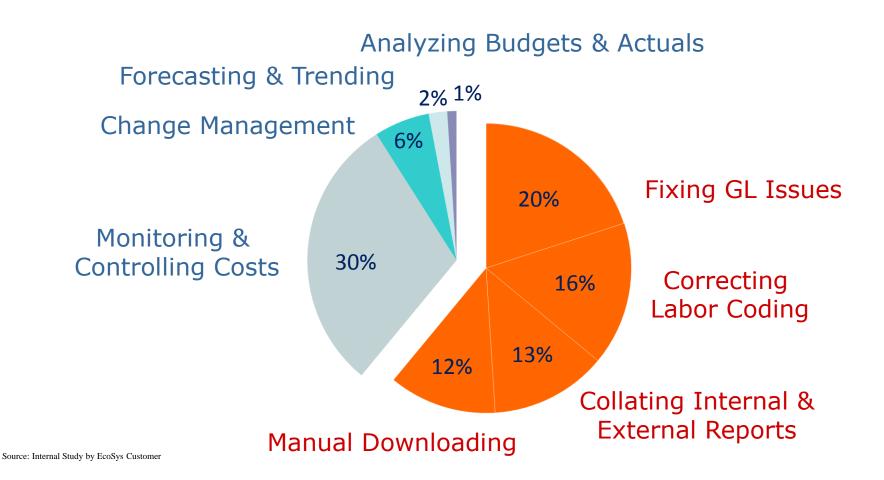
#### **Inefficient tools**



#### **Inefficient tools**



## 61% of cost analysts' time was "Wasteful"





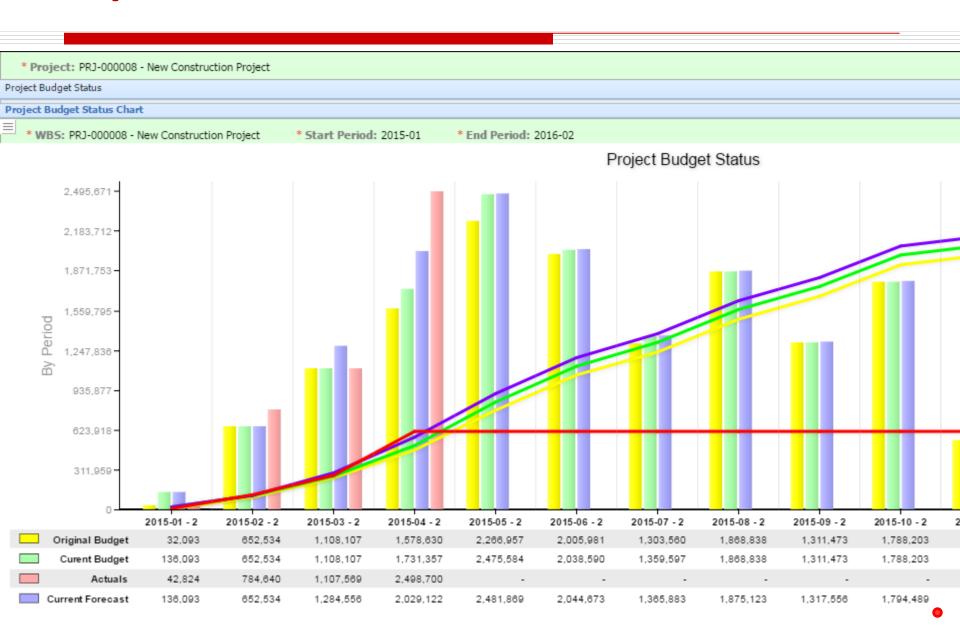
# **Simple Best Practice Solutions**

* Project: PRJ-000008 - New Construction Project													
	Project Budget Status												
Sheet Edit Display Rows													
	Path ID	Name	Original Baseline	Pending Changes	Approved Changes	Current Budget	Target Budget	Commitments	Actuals	Accru			
@ E	PRJ-000008	New Construction Project	8,232,288	<u>343,075</u>	<u>839,000</u>	9,121,288	9,464,363	3,089,825	2,216,867				
	□ 🖥 PRJ-000008.01	<u>Engineering</u>	<u>1,183,437</u>	<u>0</u>	<u>175,000</u>	1,408,437	1,408,437	<u>685,000</u>	929,244				
	PRJ-000008.01.01	Site Investigation	<u>353,437</u>	<u>0</u>	<u>0</u>	403,437	403,437	<u>0</u>	<u>16,000</u>				
	PRJ-000008.01.02	Engineering Design	<u>510,000</u>	<u>0</u>	<u>175,000</u>	685,000	685,000	685,000	833,000				
	PRJ-000008.01.03	Resident Engineering	320,000	<u>0</u>	<u>0</u>	320,000	320,000	<u>0</u>	80,244				
	□ 🔁 PRJ-000008.02	Construction	<u>3,661,971</u>	<u>343,075</u>	<u>664,000</u>	4.325,971	4,669,046	<u>1,904,825</u>	782,938				
	□ 🖷 PRJ-000008.02.01	<u>Facilities</u>	<u>0</u>	<u>303,700</u>	<u>0</u>	<u>0</u>	303,700	<u>0</u>	102,999				
	PRJ-000008.02.01.01	<u>Buildings</u>	<u>0</u>	303,700	<u>0</u>	<u>0</u>	303,700	<u>0</u>	102,999				
	PRJ-000008.02.01.02	Building Services	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>				
	□ 🖷 PRJ-000008.02.02	Site Work	3,661,971	<u>39,375</u>	<u>0</u>	3,661,971	3,701,346	<u>1,904,825</u>	679,939				
	PRJ-000008.02.02.01	Existing Conditions	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>				
	□ 🖷 PRJ-000008.02.02.02	<u>Earthwork</u>	3,661,971	<u>39,375</u>	<u>0</u>	3,661,971	3,701,346	1,904,825	679,939				
	PRJ-000008.02.02.0	<u>Dewatering</u>	447,415	9,200	<u>0</u>	447,415	456,615	<u>450,000</u>	524,389				
	PRJ-000008.02.02.0	Grading Earth	66,418	25,000	<u>0</u>	66,418	91,418	100,000	60,000				
	PRJ-000008.02.02.0	Earth Excavation	<u>152,653</u>	<u>5,175</u>	<u>0</u>	<u>152,653</u>	157,828	200,000	67,500				
		Embankment Construction	595,441	<u>0</u>	<u>0</u>	595,441	595,441	679,995	<u>8,500</u>				
	PRJ-000008.02.02.0		123,448	<u>0</u>	<u>0</u>	123,448	123,448	<u>0</u>	<u>0</u>				
	PRJ-000008.02.02.0	Sub-grade Preparation	398,715	<u>0</u>	<u>0</u>	398,715	398,715	<u>0</u>	<u>0</u>				
4	<b>1</b> ■ PB FUUUUUN US US US U		246 507	0	n	246 507	246 507	0	0				
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# **Simple Best Practice Solutions**

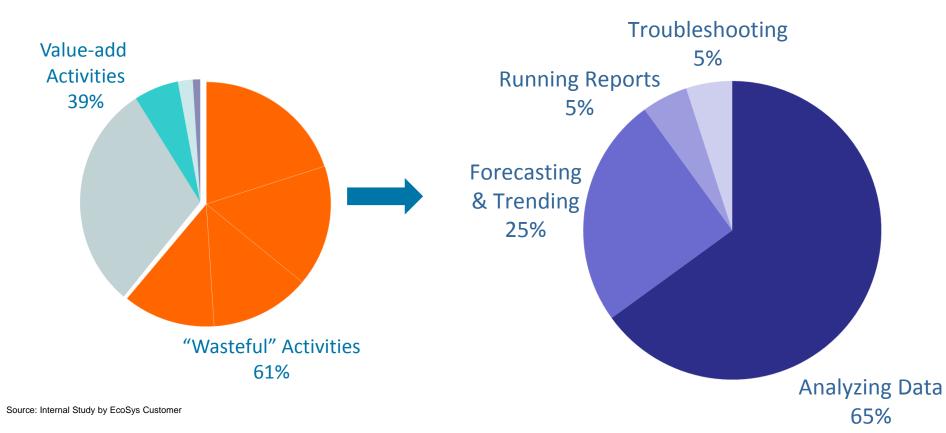
	* Project: PRJ-000008 - New Construction Project													
Pro	Project Budget Status													
	Commitments													
	* WBS: PRJ-000008 - New Construction Project													
She	_	Edit Display Rows												
	G	WBS Path ID	Cost Account ID	Lin△ ID	Description	Quantity	UOM	Hours	Cost	Currency	Cost in Project Currency	Date	Vendor ID	ì
								8,400.0	3,089,825.00		3,089,825.00			
	Θ	PO-000001 - Engineer	ing Design					4,900.0	685,000.00		685,000.00			
	Ц	PRJ-000008.01.02	LAB	1	Drawings IFR	50.0	EA	1,800.0	195,000.00	USD	195,000.00	04/07/2015		
		PRJ-000008.01.02	LAB	2	Calculations	45.0	EA	1,100.0	195,000.00	USD	195,000.00	09/18/2015		
		PRJ-000008.01.02	LAB	3	Drawing IFC	50.0	EA	2,000.0	295,000.00	USD	295,000.00	09/18/2015		
	Θ	PO-001 - Dewatering						3,500.0	450,000.00		450,000.00			
		PRJ-000008.02.02.02.01	LAB	1	Labor	0.0		3,500.0	450,000.00	USD	450,000.00	04/07/2015		
	Θ	PO-002 - Grading & Ex	cavation					0.0	300,000.00		300,000.00			
		PRJ-000008.02.02.02.02	LAB	1.0	Grading Earth	0.0		0.0	100,000.00	USD	100,000.00	04/07/2015		
		PRJ-000008.02.02.02.03	LAB	2.0	Excavation	0.0		0.0	200,000.00	USD	200,000.00	04/07/2015		
	Θ	🚅 PO-003 - Embankmen	t					0.0	679,995.00		679,995.00			
		PRJ-000008.02.02.02.04	LAB	1.0	Embankment	0.0		0.0	679,995.00	USD	679,995.00	04/07/2015		
	Θ	PO-004 - Stabilization						0.0	349,830.00		349,830.00			
		PRJ-000008.02.02.02.09	LAB	1.0	Rock Stabilization	0.0		0.0	260,820.00	USD	260,820.00	04/07/2015		
		PRJ-000008.02.02.02.10	LAB	2.0	Soil Stabilization	0.0		0.0	89,010.00	USD	89,010.00	04/07/2015		
	Θ	PO-005 - Shoring						0.0	125,000.00		125,000.00			
		PRJ-000008.02.02.02.12	LAB	1.0	Driver & Vehicle	0.0		0.0	125,000.00	USD	125,000.00	04/07/2015		
	Θ	PO-006 - Project Cont	rols					0.0	500,000.00		500,000.00			
	Rows 1 - 18 of 18 Show All Page Size 20 << First   < Prev   Next > Last >>													

## **Simple Best Practice Solutions**



### **Greater value-add for cost analysts**







## Takeaway 2:



# Reduce the total cost of effort to adopt efficient tools

#### How?



Implement fewer but more strategic tools
Adapt the tool as the business evolves

- 1 Increase user adoption rates
- Increase adoption of product capability
- Reduce total cost of ownership
- 1 Increase % ownership of expensive tasks

## **Key system considerations**



















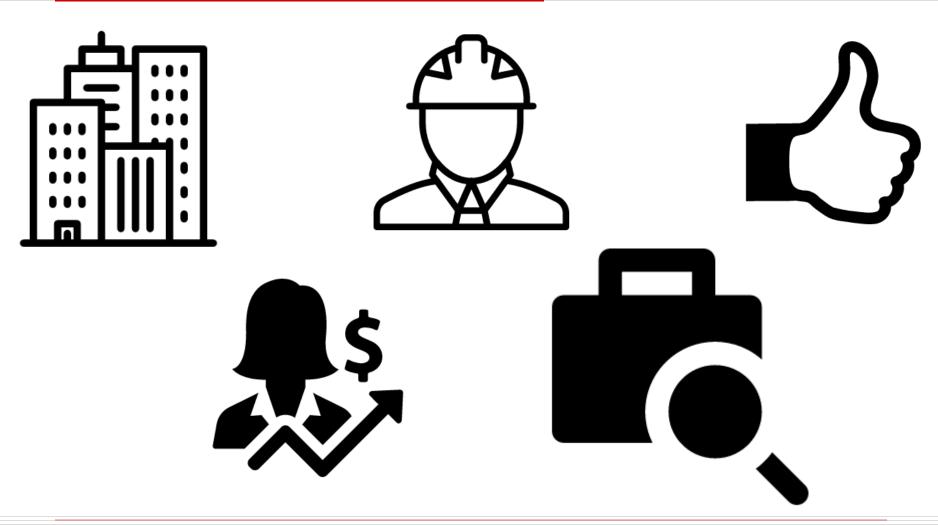


# Takeaway 3:



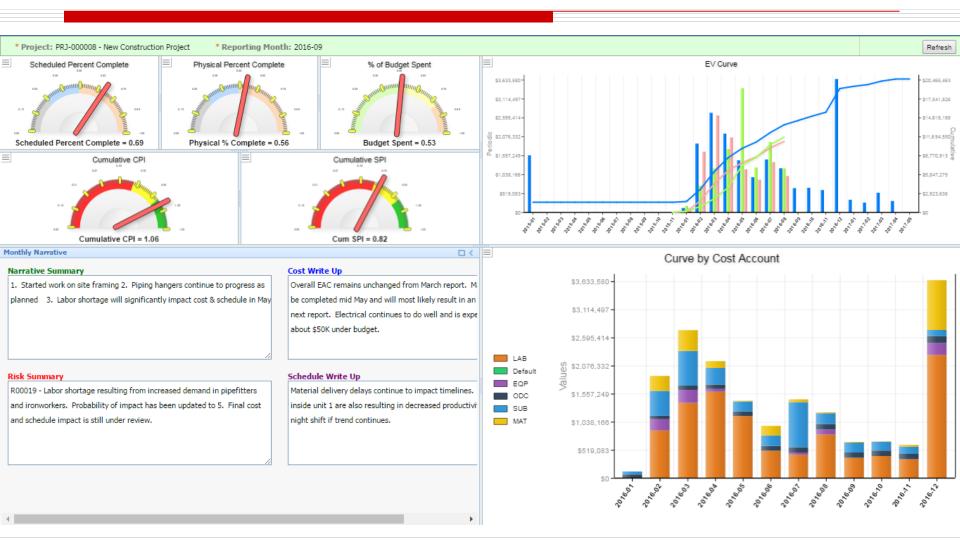
#### Strive for DIY

# **DIY Project Planning and Monitoring**



## **DIY Data – Client Reports**





# **Internal/External Stakeholders**





Details Time-Phasing  * WBS: PRJ-000008 - New Construction Project											
* WBS: PRJ-000008 - New Construction Project											
eet Edit Display Rows											
WBS Path ID	Cost Account ID	Start Date	End Date	Curve	Quantity	UOM	Hours	Cost	Currency	Cost in Project Currency	Budget
							64,040.8	18,078,774.58		18,078,774.58	
PRJ-000008.01.01	SUB	01/01/2016	12/30/2016	Bell Curve	0.0		0.0	1,183,437.29	USD	1,183,437.29	BGT-000001
PRJ-000008.01.02	LAB	04/07/2016	08/31/2016	Front Loaded	0.0		6,356.3	953,437.29	USD	953,437.29	BGT-000001
PRJ-000008.01.03	LAB	03/16/2016	04/29/2016	Back Loaded	0.0		0.0	890,000.00	USD	890,000.00	BGT-000001
PRJ-000008.02.02.02.01	LAB	10/23/2016	11/17/2016	Bell Curve	1,000.0	EA	1,000.0	20,000.00	USD	20,000.00	BGT-000002
PRJ-000008.02.02.02.01	MAT	10/23/2016	11/17/2016	Bell Curve	1,000.0	EA	1,000.0	20,000.00	USD	20,000.00	BGT-000002
PRJ-000008.02.02.02.01	SUB	10/23/2016	11/17/2016	Bell Curve	2,000.0	EA	1,000.0	20,000.00	USD	20,000.00	BGT-000002
PRJ-000008.02.02.02.02	LAB	11/17/2016	11/27/2016	Manual	0.0		4,429.9	447,415.00	USD	447,415.00	BGT-000001
PRJ-000008.02.02.02.03	MAT	02/15/2016	10/10/2016	Linear	0.0		0.0	66,418.00	USD	66,418.00	BGT-000001
PRJ-000008.02.02.02.04	EQP	02/15/2016	03/31/2016	Front Loaded	0.0		0.0	152,653.00	USD	152,653.00	BGT-000001
PRJ-000008.02.02.02.07	LAB	05/09/2016	05/19/2016	Linear	0.0		2,658.1	398,715.00	USD	398,715.00	BGT-000001
PRJ-000008.02.02.02.08	LAB	05/19/2016	06/02/2016	Linear	0.0		1,826.0	246,507.00	USD	246,507.00	BGT-000001
PRJ-000008.02.02.02.09	MAT	06/02/2016	06/23/2016	Linear	0.0		0.0	120,305.00	USD	120,305.00	BGT-000001
PRJ-000008.02.02.02.10	MAT	06/23/2016	07/07/2016	Linear	0.0		0.0	78,917.00	USD	78,917.00	BGT-000001
PRJ-000008.02.02.02.11	SUB	07/07/2016	07/25/2016	Linear	0.0		0.0	628,486.00	USD	628,486.00	BGT-000001
PRJ-000008.02.02.02.12	EQP	07/25/2016	08/16/2016	Linear	0.0		0.0	133,594.00	USD	133,594.00	BGT-000001
PRJ-000008.02.03.02	MAT	11/27/2016	12/18/2016	Back Loaded	0.0		0.0	950,000.00	USD	950,000.00	BGT-000001
PRJ-000008.02.03.02	EQP	11/27/2016	12/18/2016	Back Loaded	0.0		0.0	230,000.00	USD	230,000.00	BGT-000001
PRJ-000008.02.03.02	LAB	11/27/2016	12/18/2016	Back Loaded	0.0		12,000.0	2,109,900.00	USD	2,109,900.00	BGT-000001
PRJ-000008.02.03.02	ODC	11/27/2016	12/18/2016	Back Loaded	0.0		0.0	34,000.00	USD	34,000.00	BGT-000001
PRJ-000008.02.03.03	LAB	02/15/2016	04/29/2016	Front Loaded	0.0		15,098.0	2,309,000.00	USD	2,309,000.00	BGT-000001

# **Internal/External Stakeholders**





* Project: PRJ-000008 - New Construction Project												
Pro	ject Forecast Analysis L	og Import R	eports									
Project	Forecast Summary											
≡ Shee	t Edit Display Rows											
	Path ID	Name	Forecast Method	Manual EAC	Manual ETC	Manual Factor	Preview EAC	Working Forecast	Current Budget	Open Commitment	Actuals	Current Forecast
<b>©</b>	PRJ-000008	New Construction Project						<u>15,242,349</u>	20,579,003	0	105,387	19,794,320
	PRJ-000008.01	Engineering						3,997,524	4,017,103	0	56,969	4,097,524
	PRJ-000008.01.01	Site Investigation	Manual EAC	1,000,005	0	0.00	1,000,005	1.000.000	1,183,437	0	56,969	1,100,000
	PRJ-000008.01.02	Engineering Design	Current CPI	0	0	0.00	1,600,016	<u>1,600,016</u>	1,600,016	0	0	1,600,016
	PRJ-000008.01.03	Resident Engineering	Current CPI	0	0	0.00	1,397,508	1,397,508	1,233,649	0	0	1,397,508
	PRJ-000008.02	Construction						8,297,601	11,625,800	0	0	11,115,472
	PRJ-000008.02.01	Facilities						<u>0</u>	10,000	0	0	10,000
	PRJ-000008.02.01.01	Buildings	Current Budget	0	0	0.00	10,000	<u>0</u>	10,000	0	0	10.000
	PRJ-000008.02.01.02	Building Services						<u>0</u>	0	0	0	0
	PRJ-000008.02.02	Site Work						<u>1,857,625</u>	3,833,010	0	0	4,002,252
	PRJ-000008.02.02.01	Existing Conditions						<u>0</u>	0	0	0	<u>0</u>
	PRJ-000008.02.02.02	Earthwork						<u>1,857,625</u>	3,533,010	0	0	3,702,252
	PRJ-000008.02.02.02.0	Dewatering	Current Budget	0	0	0.00	160,000	<u>0</u>	160,000	0	0	160,000
	PRJ-000008.02.02.02.0	Grading Earth	Manual ETC	0	200,000	0.00	200,000	200,000	547,415	0	0	650,326
	PRJ-000008.02.02.02.0	Earth Excavation	Current Budget	0	0	0.00	166,418	66,418	166,418	0	0	<u>166,418</u>
	PRJ-000008.02.02.02.0	Embankment Construction	AC+Open Commitment	0	0	0.00	0	<u>158,666</u>	252,653	0	0	254,426
	PRJ-000008.02.02.02.0	Erosion Control	Current Budget	0	0	0.00	100,000	<u>0</u>	100,000	0	0	100.000
	PRJ-000008.02.02.02.0	Sub-grade Preparation	Current Budget	0	0	0.00	100,000	<u>0</u>	100,000	0	0	100,000
	PRJ-000008.02.02.02.0	Structural Excavation	AC+Open Commitment	0	0	0.00	0	<u>199,358</u>	498,715	0	0	399,036
	PRJ-000008.02.02.02.0	Structural Backfill	AC+Open Commitment	0	0	0.00	0	164,522	346,507	0	0	305,515



# Why Mobile?

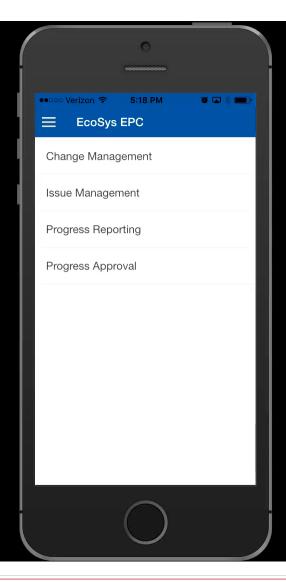
#### Connect departmental silos

Provide access to up-to-date information

Replace cumbersome paper-based and manual processes for field workers

Offer simple tools with no training needs











#### **Product strategy initiatives**

Out of the box best practice content for project controls and contract management

Extended integration capability (SAP, Primavera, Intergraph, Web Services, Flat Files)

The bigger picture (Hexagon augmented reality, multidimensional building modeling)









#### Where to next?



# Meet Iain, Darren, Federico or Mervyn now or later at the EcoSys booth

Talk to us about platform capability and feasibility

Schedule a product demo

Visit www.EcoSys.net