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Evolution of Project Controls at CSX Transportation

Session ID#: 15470

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Project Manager II

CSX Technology

REMINDER

Check in on the
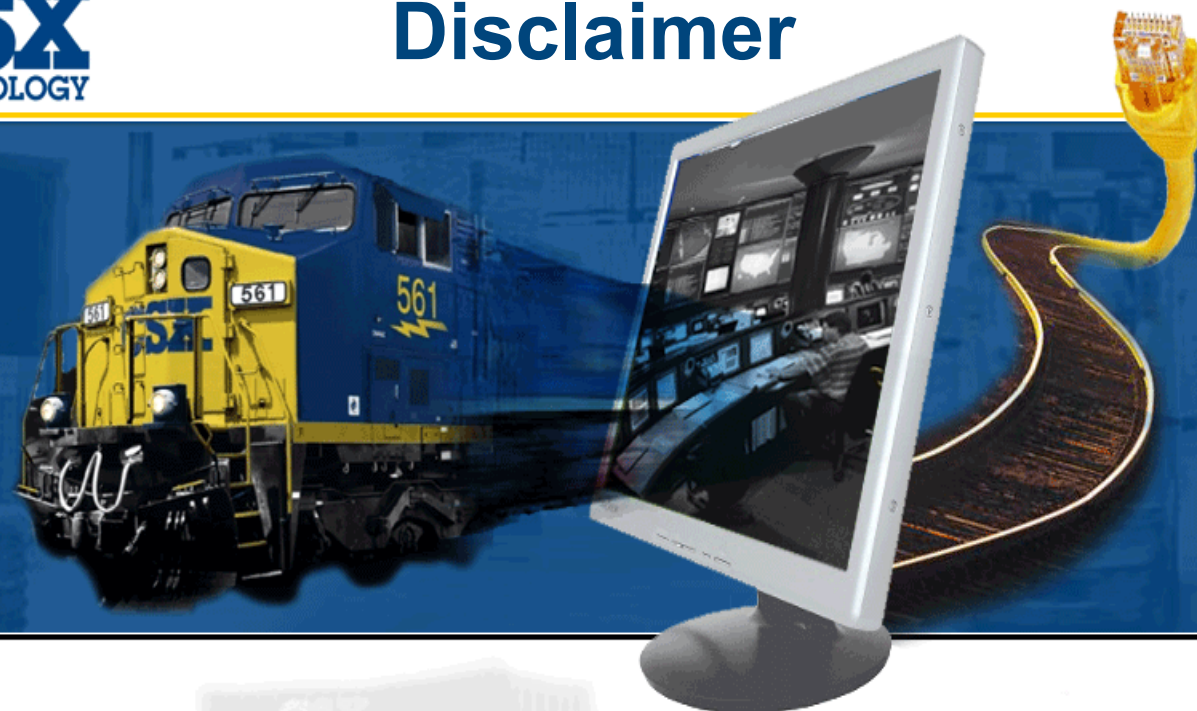COLLABORATE mobile app

Everyone enjoying Collaborate 2014 so far?

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About the Presenter

- James Minks, CSX Technology
  - 28 Years in Technologies
    - Development
    - Technical Support
    - Project Management
  - 17 years at Oracle - Technical Support, Global IT, Development
  - Joined CSX Technology in February 2011
    - Project Manager for Project Controls at CSX
    - Project Manager for Hyperion HFM and Planning at CSX

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Agenda

- CSX Overview
- Where We Began (2011)
- What We Accomplished (2012-13)
- What We Plan to do Next (2014+)
- Q&A
- Websites and Email

CSX Overview

Our Vision
To be the safest, most progressive, North American railroad, relentless in the pursuit of customer and employee excellence

Operate in every major population and industrial center east of the Mississippi and two Canadian provinces

- $11.9B in Revenue

- 21,000+ route miles / Over 32,000 employees

- 4,000 locomotives / 70,000 freight cars

- Operates an average of 1,350 trains per day

- Transports an average of 20,000 carloads per day

- Transports 6 million carloads of products and raw materials a year

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Abstract

- CSX Transportation's (CSX) adoption and use of Primavera P6 and Contract Management solutions has exploded in 2013.

- In 2012, we had over 300 projects and 30,000 activities. Today, we have more than 4,100 capital and public engineering projects and 520,000 activities.

- The Engineering organization requested that CSX Technology upgrade our existing Oracle solutions (P6 and PCM) to current releases to leverage new functionality.

- AutoVue was also implemented to manage drawing markups to aid in optimal decision-making.

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Where we Began (2011)

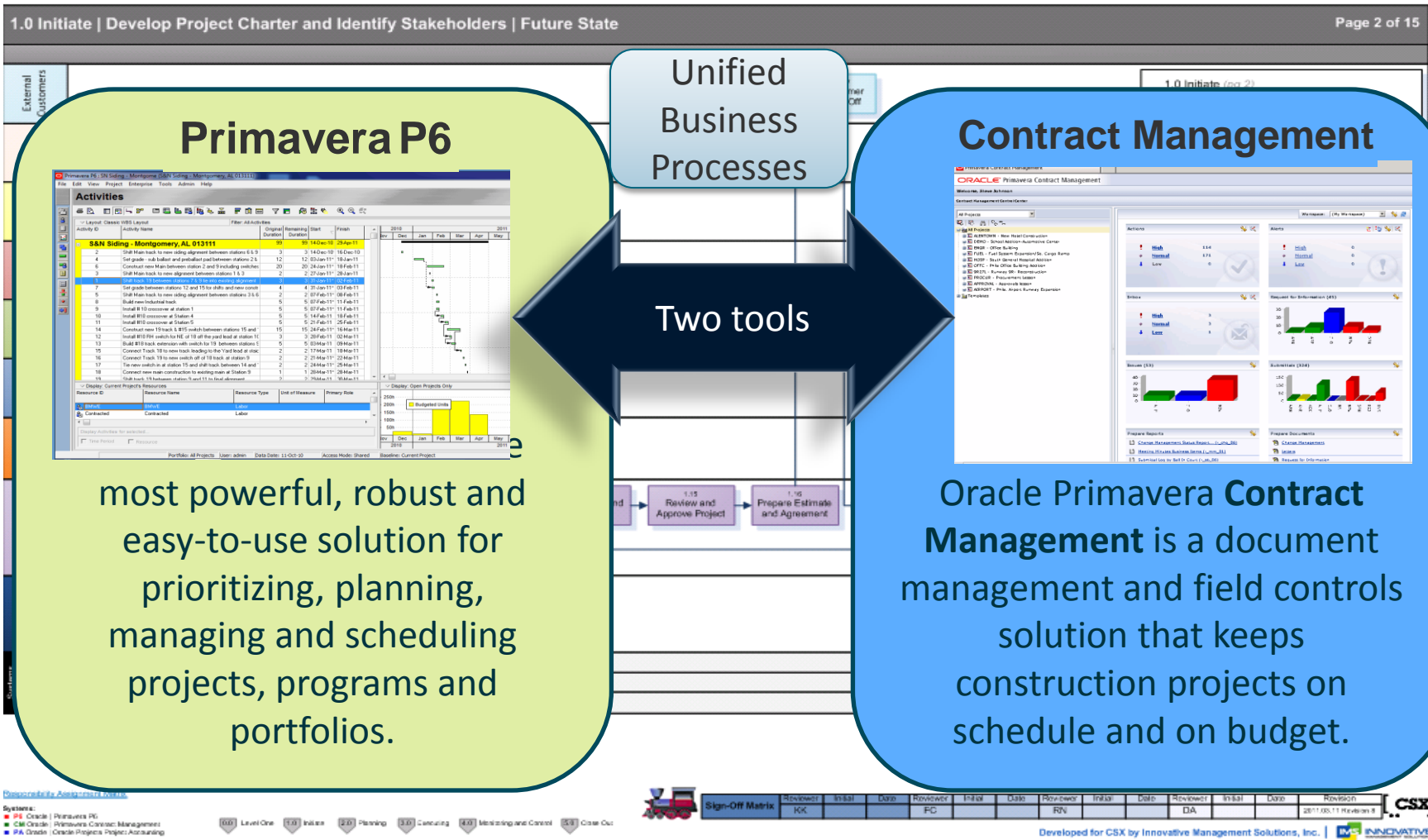| KEY MILESTONES	Crawl	Walk	Run
	TIMEFRAME: 2011-12	**TIMEFRAME: 2012-13**	**TIMEFRAME: 2014+**

	• Standardize business processes
	• Roll-out P6 & CM
	• PM training
	• Basic Financial Integration
		• Advanced dashboard analytics
		• Improved resource management
		• Improved OP3 interface
		• Technology upgrades
		  • P6 from 8.0 to 8.2
		  • CM from 13.0 to 14.0
		• Implement Oracle AutoVue
			Technology Updates:
			• Primavera P6 8.3+
			• RDBMS
			• Oracle ECM 11g
			• Weblogic
			• Build out new UAT environment

Where we Began at CSX (2011-12)

- Oracle Primavera P6 8.0
  - 35 P6 users
  - Limited adoption
  - 300+ projects and 30,000 activities
- Oracle Primavera Contract Management 13
  - 5 PCM users
  - 25 projects (beta)
- Oracle Financials 12.1.3
  - Project Accounting (data source)
- Project Partners OP3 2.5.10
  - Integrates Oracle Project Accounting and P6
    — Budgets
    — Actuals

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What was CSX Project Controls in 2011?

Primavera P6

most powerful, robust and easy-to-use solution for prioritizing, planning, managing and scheduling projects, programs and portfolios.

Unified Business Processes

Two tools

Contract Management

Oracle Primavera **Contract Management** is a document management and field controls solution that keeps construction projects on schedule and on budget.

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Project Controls Lifecycle

Project Lifecycle in Project Controls

Engineering
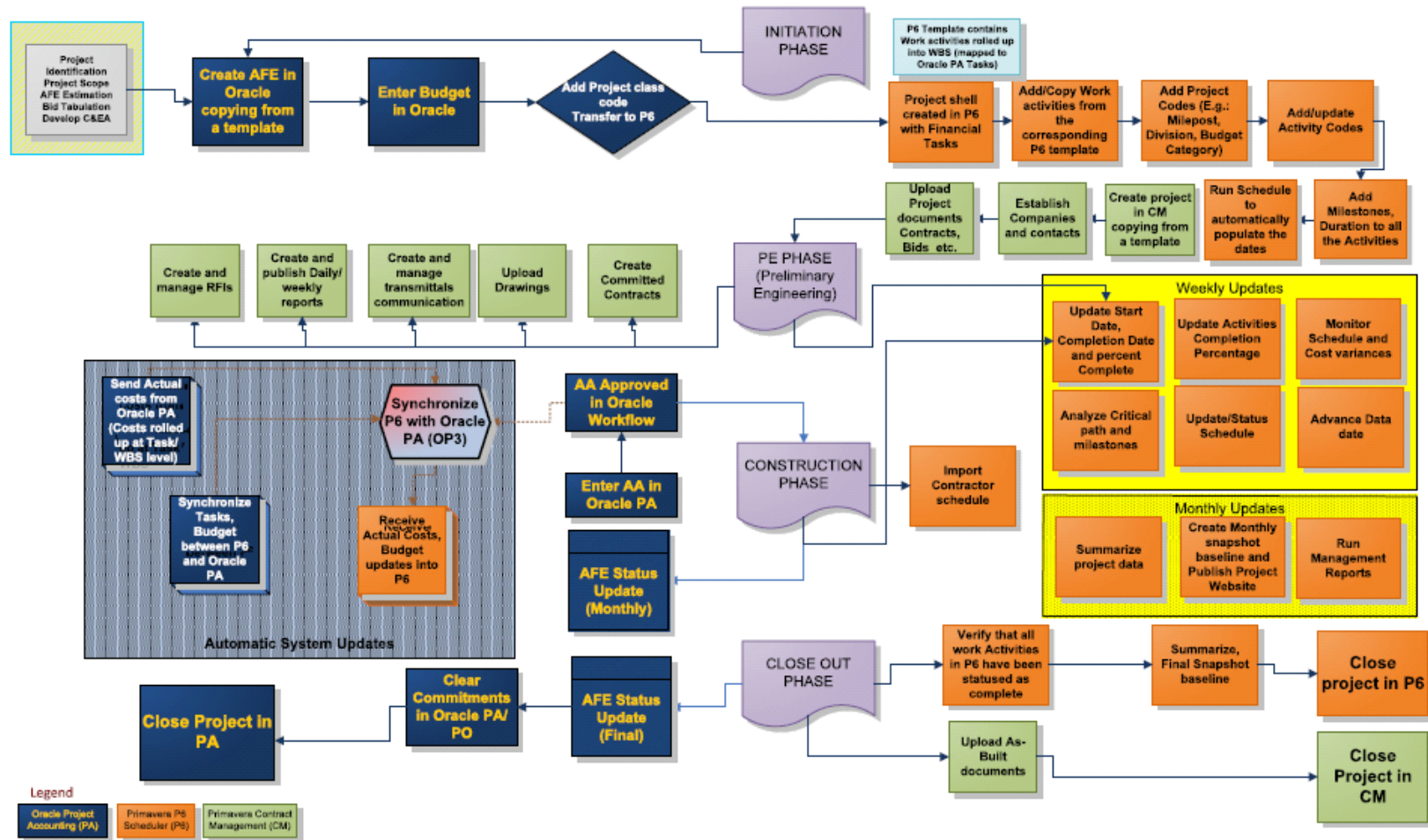
Oracle Technical Landscape

Oracle Landscape

[.CSX.]

Financials & Procurement

Oracle Assets

Oracle GL

Oracle Inventory

Material Transactions

Capitalization

Oracle A/P

Invoices

Oracle Projects (Project Accounting)

Oracle Purchasing

PO Receipts

Billing

Oracle A/R

Oracle Contracts

Project Management

Oracle | Primavera P6

Project Cost Shell & Actual Costs [OP3]

Milestones, Submittals, etc.

Oracle | Primavera CM

Document Repository

Project Documents Charter Contracts Logs

Oracle UCM (Universal Content Management)

Current Configuration

New Integration and Functionality

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Technical Architecture
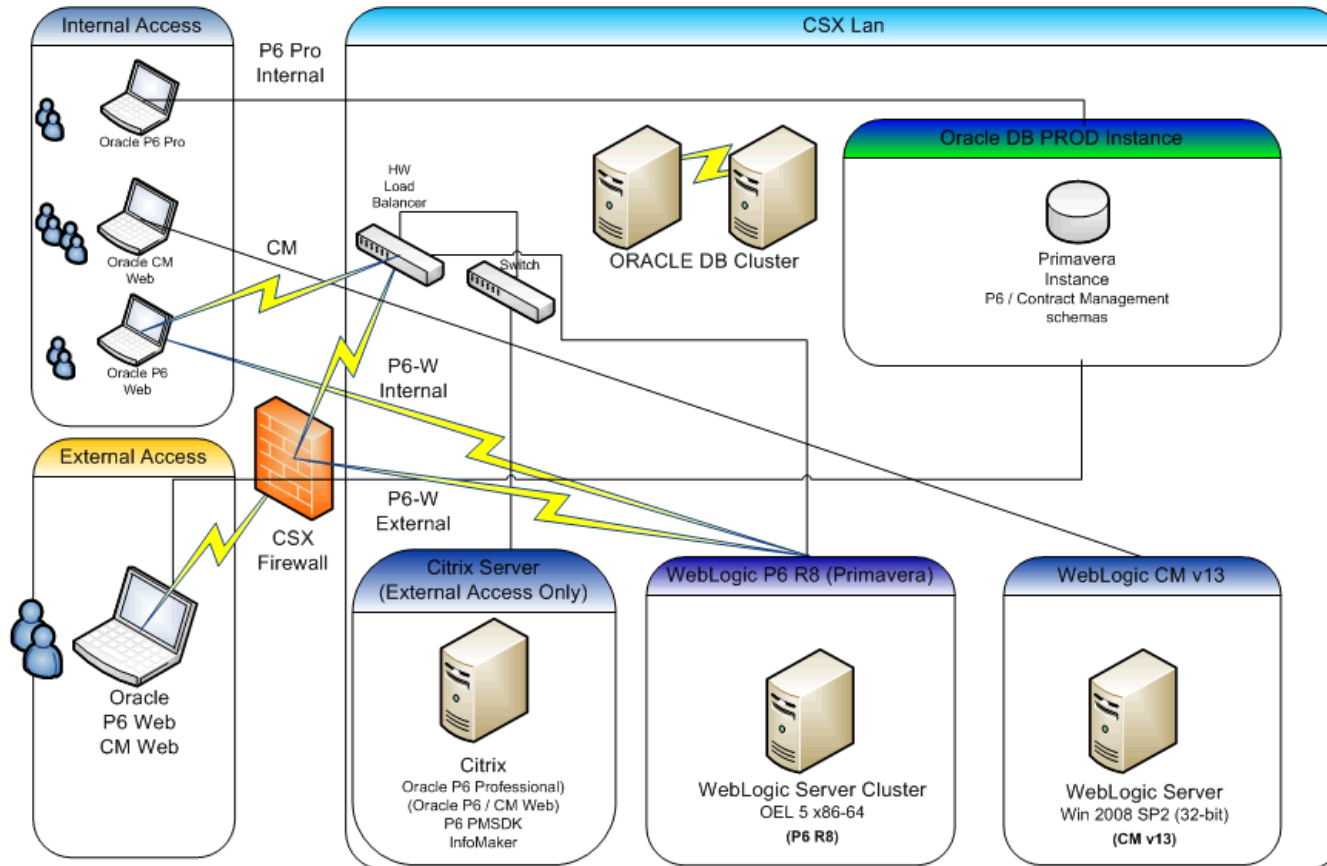
2012 Project Dashboard

ORACLE Primavera P6

| Dashboards ▼ | Portfolios ▼ | Projects ▼ | Resources ▼ |

All Projects | Design & Constructio... | Comm & Signal | Facilities Projects | Bridge Projects | All Projects - PM | Des & Con - PM | Comm & Signal - PM | Facilities Projects ... | Bridge Projects - PM

All Projects
Expand All | Collapse All | Customize

☆ Capital Spend Outlook
Save | Cancel | **Add** | **Delete** | **Expand** | **Collapse** | **Export Spreadsheet** | **Customize**

Name	Project ID	City	State / Province	Current Budget Amt	Prior Years Total Spend	2012 Plan	YTD Cost
⊟ **Total**				**$488,850,903**	-- -- --	**$1,000,000**	**$63,131,307**
⊟ **Boston Line Clearance Improvement Projects**				**$6,450,000**	**$4,591,624**		**$1,379,223**
⊞ 📁 Westborough TRANSFLO Terminal	A39025	WESTBOROUGH	Massachus...	$6,450,000	$4,591,624		$1,379,223
⊟ **Bridge**				**$24,656,242**	-- -- --		**$4,068,819**
⊞ 📁 00J 139.20 , Whiteside, TN	A35699			$162,244	($66,962)		$151,599
⊞ 📁 SP 840.90, Chattahoochie, FL	A35700			$64,334	$0		$14,945
⊞ 📁 BAL -0.52, Baltimore, MD	A35132s	BALTIMORE	Maryland		-- -- --		
⊞ 📁 SH 331.85, Poston, SC	A35474			$4,699,889	$3,025,909		$622,799
⊞ 📁 XXB 185.00, Montgomery, AL	A35438			$4,824,702	$1,126,371		$663,671
⊞ 📁 00F 366.00, Bartlett, TN	A35592			$538,271	$391,784		$404,229
⊞ 📁 BD 214 to 263 - Decatur Sub	A35650			$12,750,000	$3,106,356		$1,885,653
⊞ 📁 00C 140.40 , Livingston, KY	A35672			$200,000	$106,378		$125,919
⊞ 📁 SY 857.70, Oldsmar, FL	A35701			$116,145	($62,586)		$95,499
⊞ 📁 SR 790.70, Brooksville, FL	A35703			$192,571	$0		$884
⊞ 📁 S 827.10, Valrico, FL	A35702			$181,810	($9,114)		$21,560
⊞ 📁 AN 811.60 , Ozark. AL	A35706			$92.190	($19.952)		$28.201

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P6 and Oracle EBS Integration (2011+)

Oracle Applications - FAPP
File Edit View Folder Tools Window Help

Projects, Templates Summary
Projects, Templates
Project Classifications - A39769

Category	Class Code	Code Description	Percentage	[]
Is AFE in the Capital Plan?	Yes	Yes, AFE is funded		
Possible Billable Costs	No	There won't be any billable costs		
Project Approval Category	Line Capacity - Operatio	Line Capacity - Operations		BA
Replacing existing assets?	NO	This is a new asset; non-replacement		
Track Update Required	Yes	Track Update Info Required		
Transfer to P6	Yes	Yes		

Show Exceptions

Currency
Key Members
Additional Information
Pipeline
Transaction Controls
+ Burden Multipliers
+ Asset Information

Detail

Open

Classify project(s) for transfer in EBS

Daily concurrent request to transfer the project(s) budget, tasks, and header information

Daily concurrent request to transfer the project(s) actual costs

Project Partners

ORACLE Primavera P6

Dashboards ▾ | Portfolios ▾ | Projects ▾ | Resources ▾

Workspace | EPS | Team Usage | Activities | Issues | Risks | Documents

Enterprise Project Structure

Actions ▾ Edit ▾ View ▾

EPS / Project Name	Linked	OP3 Autolink?	Current Budget Amt	Original Budget Amt	YTD Cost	Total Actual Cost
CREATE B9 - ARGO INTERLOCKING	✓	Y	$207,390	$207,390	$14	$159,239
CREATE B16 - THORNTON JCT CONN	✓	Y	$333,113	$55,113	$5,653	$401,871
NOTASULGA SIDING	✓	Y	$7,296,988	$435,034		$6,044,594
TYNER	✓	Y	$2,199,999	$92,506	$496,461	$2,388,961
R CABIN MANNED INTERLOCKING	✓	Y	$349,664	$349,664	$114,028	$431,334
WB MANNED INTERLOCKING	✓	Y	$4,499,999	$349,664	$106,759	$4,526,822
BLCIP MASSDOT RAISES	✓	Y	$934,705	$934,705	$31,821	$139,537
WORCESTER CP45 & CP46	✓	Y	$6,000,925	$380,001	$40,008	$2,191,046
VA0344 KILBY SUPPORT YARD	✓	Y	$0	$366,999	$1,754,972	$1,811,395
MAGELLA	✓	Y	$300,000	$300,000	$3,723	$224,182
BESSEMER SUPPORT YARD	✓	Y	$15,149,631	$700,000	$43,836	$12,522,203
BLCIP WILBRAHAM	✓	Y	$1,373,529	$1,373,529	$100	$1,279,581
Freedom Siding & TCS	✓	Y	$7,192,863	$400,000	$658,420	$2,780,697
GALATEA CONNECTION	✓	Y	$4,919,509	$408,650	$133,352	$2,750,151
Galatea - Install track between Toledo Sub and Willard Sub						

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What We Accomplished (2012-13)

- Platform Change
  - Switched from Microsoft Windows 2008R2 to Redhat Linux
  - Physical servers to virtual machines
- New Oracle Software
  - Team Member 8.2 (email enabled)
  - AutoVue 20.1 for visual decision-making
  - Oracle 11.1.1.5 WebCenter integration
  - Vuelink to "bridge" between Contract Management, AutoVue and Content Management system
- Authentication
  - From native method to Microsoft Active Directory
    — Oracle P6 and Contract Management
    — Oracle WebCenter and Oracle AutoVue

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What We Accomplished (2012-13)

- Upgraded Core Oracle Products
  - P6
    - From 8.0 To 8.2.1
      - Gained 20-30% improvement in performance of P6 web
    - Improved dashboards and reporting
    - Expanded resource management from managing by work teams to specific work teams
  - Contract Management
    - From Release 13 to Version 14.0.2.0
    - Refined Contract Management drawings and drawing sets
    - Standardized dashboards
    - Integrated with Oracle UCM 11g as document repository

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Improved Technical Architecture
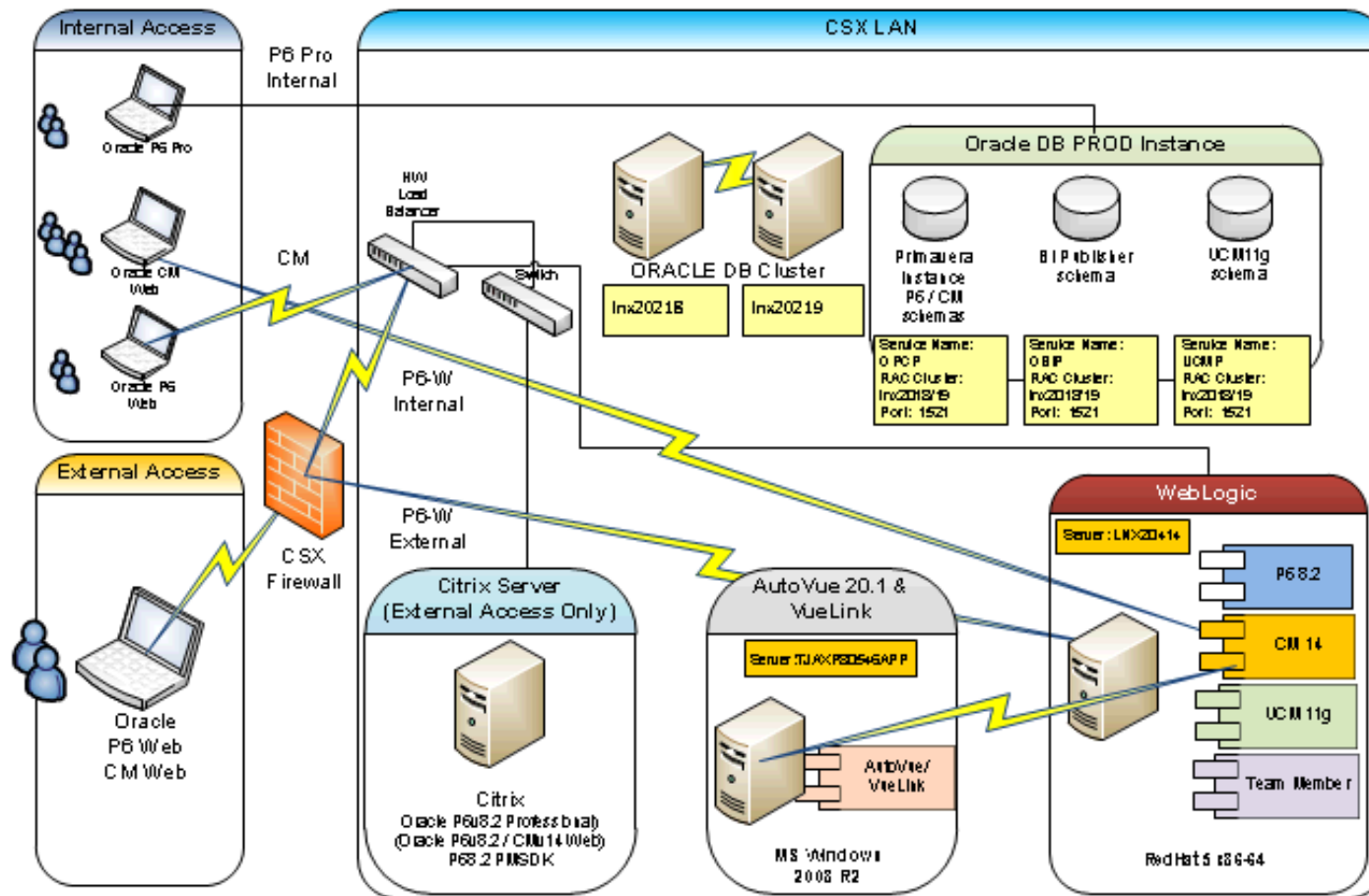
Top Primavera Implementation Issue

Problem:
Users were maintaining separate logins for Primavera and their email resulting in complaints from users.

Resolution:
• Single point of entry for new users via Microsoft Active Directory
• Increased integration to all business systems by utilizing one source of truth.
• Improved user satisfaction, as it resulted in one less password to remember.

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Implemented Quality Control Practices
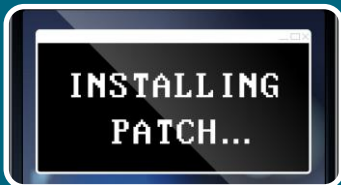
Implemented IT patching strategy
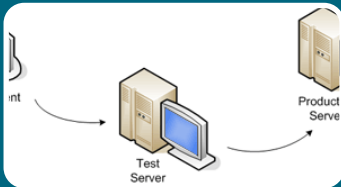
Created multiple environments to support PROD (i.e., DEV and TEST)

CSX instituted a **Project Controls Governance Board (PCGB)**

Implemented change control and quality assurance

Project Control Governance Board Principles

- Ensure a single point of accountability for the success of the project

- Ensure separation of stakeholder management and project decision-making activities

- Ensure separation of project governance and organizational governance structures

Elements of CSX Project Controls Governance

- All stakeholders identified
  - CSX business partners
  - CSX Technology
    - Project Management
    - Infrastructure Support
  - Primavera P6 super users
- A defined method of communication
  - Monthly meetings
  - Quarterly Newsletters to field personnel
- Clear roles and responsibilities assigned
- Process for management and resolution of issues
- Process for recording and communicating risks

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Primavera P6 (2012-13)

- 4,100 projects
- 650,000 activities
- $2.5B in capital and public projects

P6 Web
Benefits for CSX

Portfolio Analysis

- Customized portfolio view capabilities
- Status snapshot of a portfolio of projects

Portfolio Dashboards

- Custom user-defined performance indicators
- Spreadsheets can be reduced or eliminated
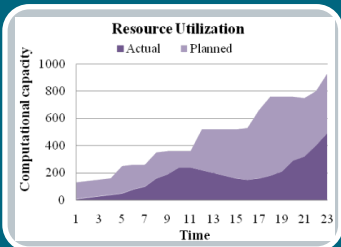
Resource Analysis

- Better resource team analysis
- Visibility to identify over- or under-allocated resources

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What We Accomplished (2012-13) Florida Sun Rail (S Rail)
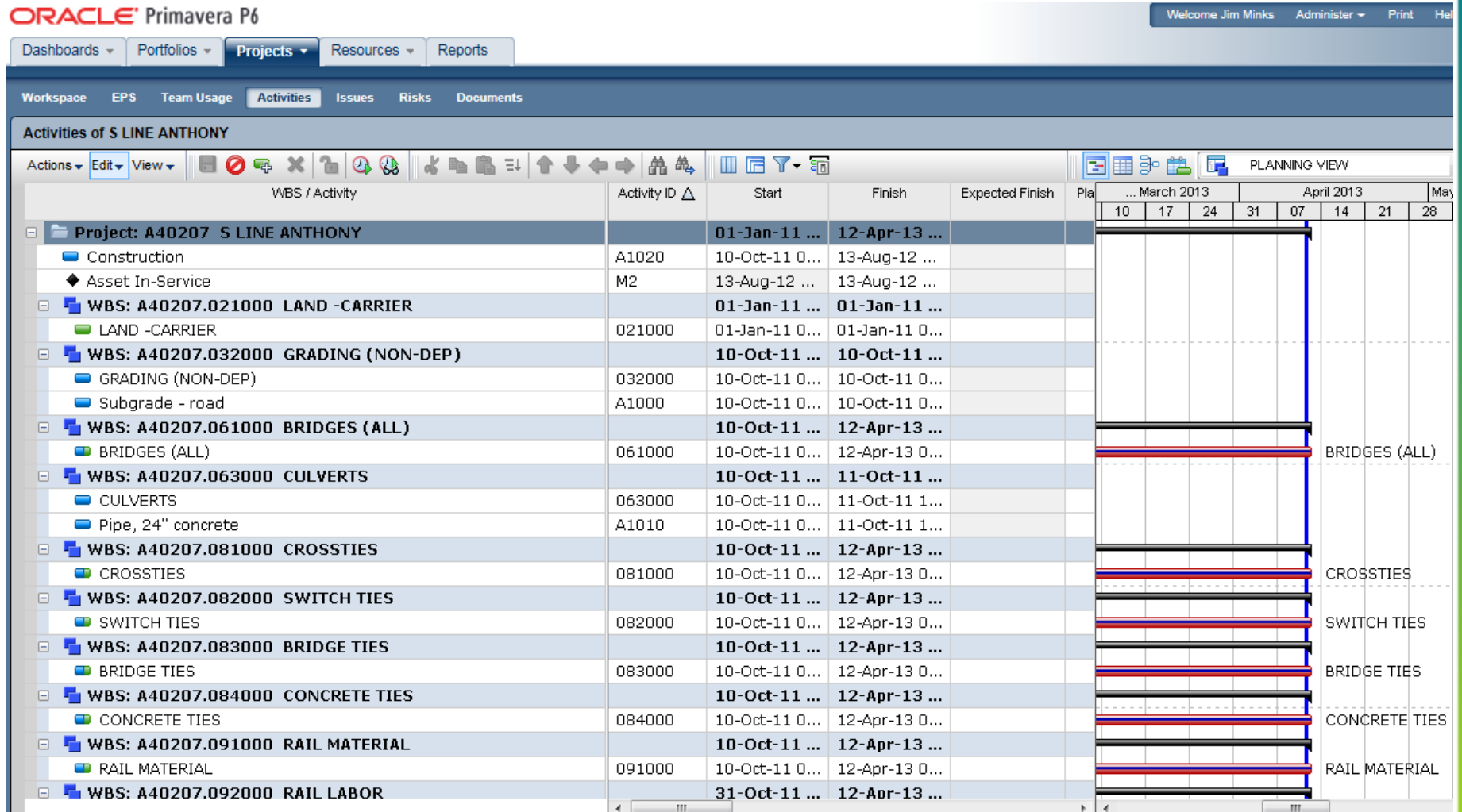
What We Accomplished (2012-13) Contract Management 14

Accomplishments (2012-13)

Integrated PCM with Oracle AutoVue 2D
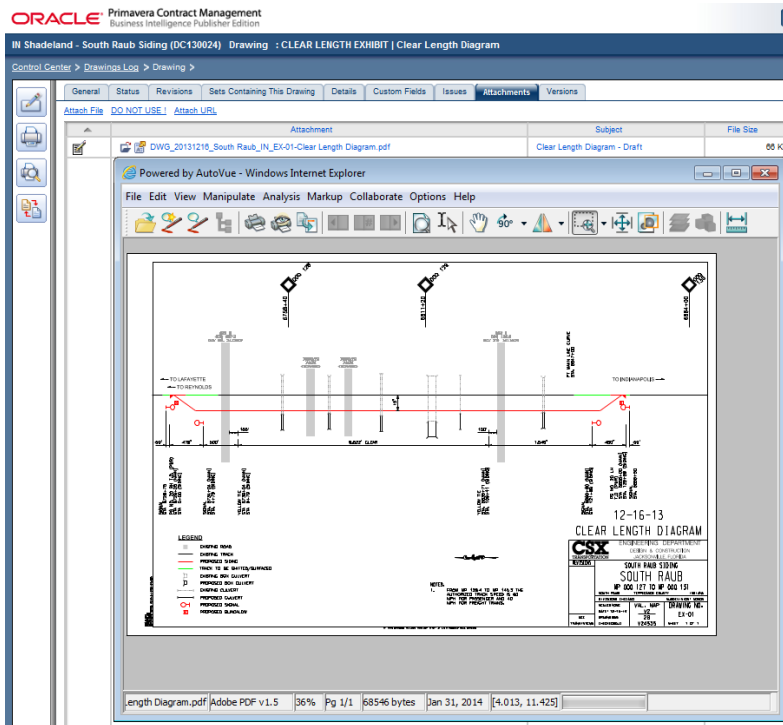
Value Proposition to CSX Engineering

- Provide Engineering a web-based capability to access, view, digitally annotate and collaborate on drawing documents, without requiring **investment** in specialized CAD tools.

- Integrated with **Oracle ECM** 11g for storing mark-ups

- AutoVue improved Engineering's decision making and workflow

What We Plan to Do Next (2014+)

- Oracle Product Upgrades:
  - P6 8.2 to 8.3 PSU to leverage new functionality
    - **Team Member**
      - Discussion Feature looks promising
      - Viewing Notebook topics
      - Viewing documents
      - Extended adoption and usage
        - » Open P6 TM to General Engineering Contractors, Signal Engineering Contractors

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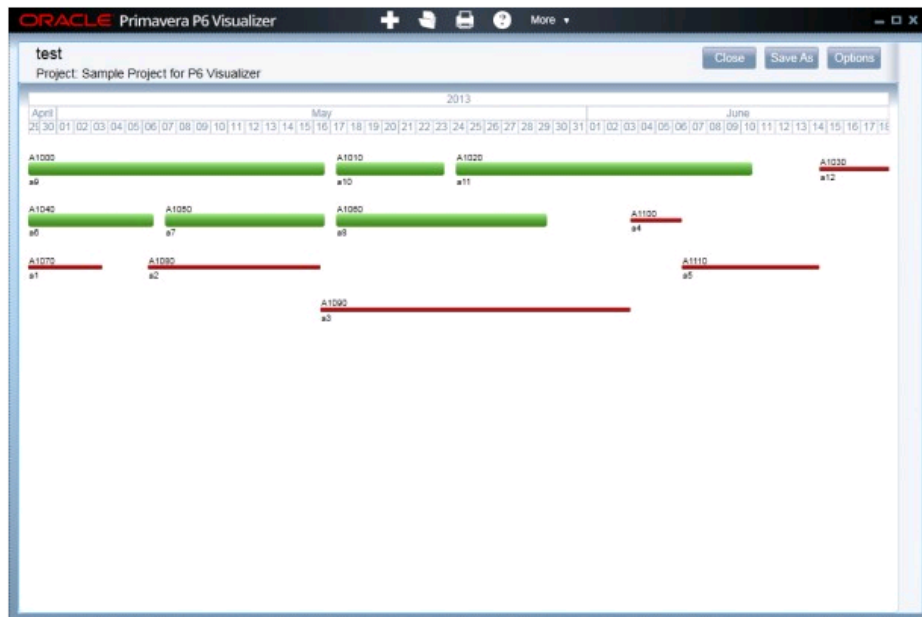FOR THE ORACLE COMMUNITY

What We Plan to Do Next (2014+)

- Oracle Product Upgrades:
  - P6 Professional 8.3 to leverage new functionality (cont.)
    - **Visualizer**
      - Will support graphical reporting by enabling users to create customizable Gantt charts and time scaled logic diagrams (TSLDs).
      - Improve alignment of Engineering schedules, budgets and costs

What We Plan to Do Next (2014+)

- Continued improvements to P6 platform
  - Modify EPS for better team alignment
  - Improve security profiles
    - As we increase adoption of P6 usage by external users
      - Signal Engineering Contractors (SECs)
      - General Engineering Contractors (SECs)
  - Increase adoption and usage of P6 Team Member
    - **Discussion Feature**, enables users to communicate with their project manager and other team members about project task(s)
    - **Viewing Documents**, allows team members to view important documents such as drawings and specifications

Questions

Contact Information

- James Minks, Project Manager II
  - CSX Technology
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  - 904-633-5135

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