

Introductions

- Mark Hattersley – Director of Product Management for Construction
- Dr. Paul Mihalic – Director of Development for Construction

Agenda

1. Discuss Advanced Work Packaging
2. Automation of work packaging implementation
3. Questions and Answers

Today's Presentation

- Overview of the value of formal work packaging for construction projects
- Introduce the ProjectWise Construction Work Package Server
- Software demonstration
- Questions-and-Answers

Safety Topic

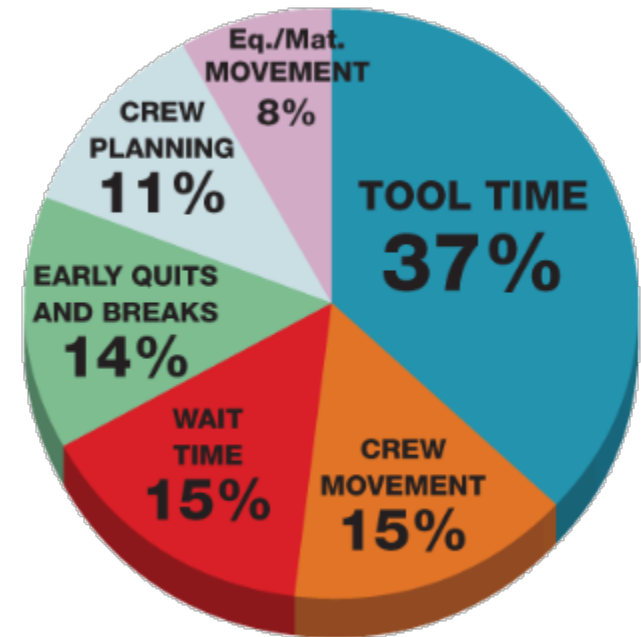
- Lightning can strike as far as 10 miles away from the rain area in a thunderstorm
 - That's about a distance you can hear thunder
- When a storm is 10 miles away, it may even be difficult to tell a storm is coming
 - IF YOU CAN HEAR THUNDER, YOU ARE WITHIN STRIKING DISTANCE – SEEK SAFE SHELTER IMMEDIATELY!
- The first stroke of lightning is just as deadly as the last
- If the sky looks threatening, take shelter before hearing thunder



Source: National Weather Service

Construction Today

- Increasing project complexity, cost, and risk
- Significant project re-work due to
 - Poor field planning
 - Insufficient coordination between engineering and contractors
- Need to increase crew efficiency
37% of craft labor time is spent working



How a Crew Spends its Day
Data from COAA

Work Packaging



- Not a new process for construction projects
- Breaking down projects into well defined manageable pieces
 - Align engineering and construction functions
 - Forecast resource requirements
 - Improve safety and quality
 - Improve project predictability and insight
- Design by system, build by area – need to bridge this gap
- Involve construction at the front end!

Work Packaging in the Construction Industry

- Various processes, definitions, and implementations
- Emerging standardization led by



Advanced Work Packaging: Design Through Workface Execution

Work Packaging Results

- 25% productivity improvement
- 10% decrease in total installed cost
- Greater schedule & cost certainty
- Improved:
 - Safety performance
 - Quality
 - Contractor profitability
 - Stakeholder alignment



Work Packaging as a Business Practice

- Need to:
 - Scale from a single project to all projects
 - Repeatable, auditable, traceable activities
 - Visualize project and portfolio performance
- Automated, immersive, and scalable suite of tools to enforce the business processes of work packaging

ProjectWise Construction Work Package Server

ProjectWise Construction Work Package Server

- **Comprehensive Construction Information Management**

- Data Relationships (e.g. relate engineering, material, inspection and construction data, documents, tasks)
- *Instantly Access Project Delivery Data*

- **Automated Work Packaging**

- Change Manage, Assemble, Publish For Distribution
- *Construct More Consistently and More Safely*

- **Holistic Reporting and Insight**

- Continuous feedback
- *Operate More Confidently Through Actionable Awareness*

ProjectWise **Construction** Work Package Server



ProjectWise Construction Work Package Server

- Enterprise server, workflow, control, and repository
- Web access and includes ConstructSim for immersive N-D work packaging
- “Occasionally connected” support for work packaging
- Reporting and dashboards
- Mobile ready



WPS - Data Support

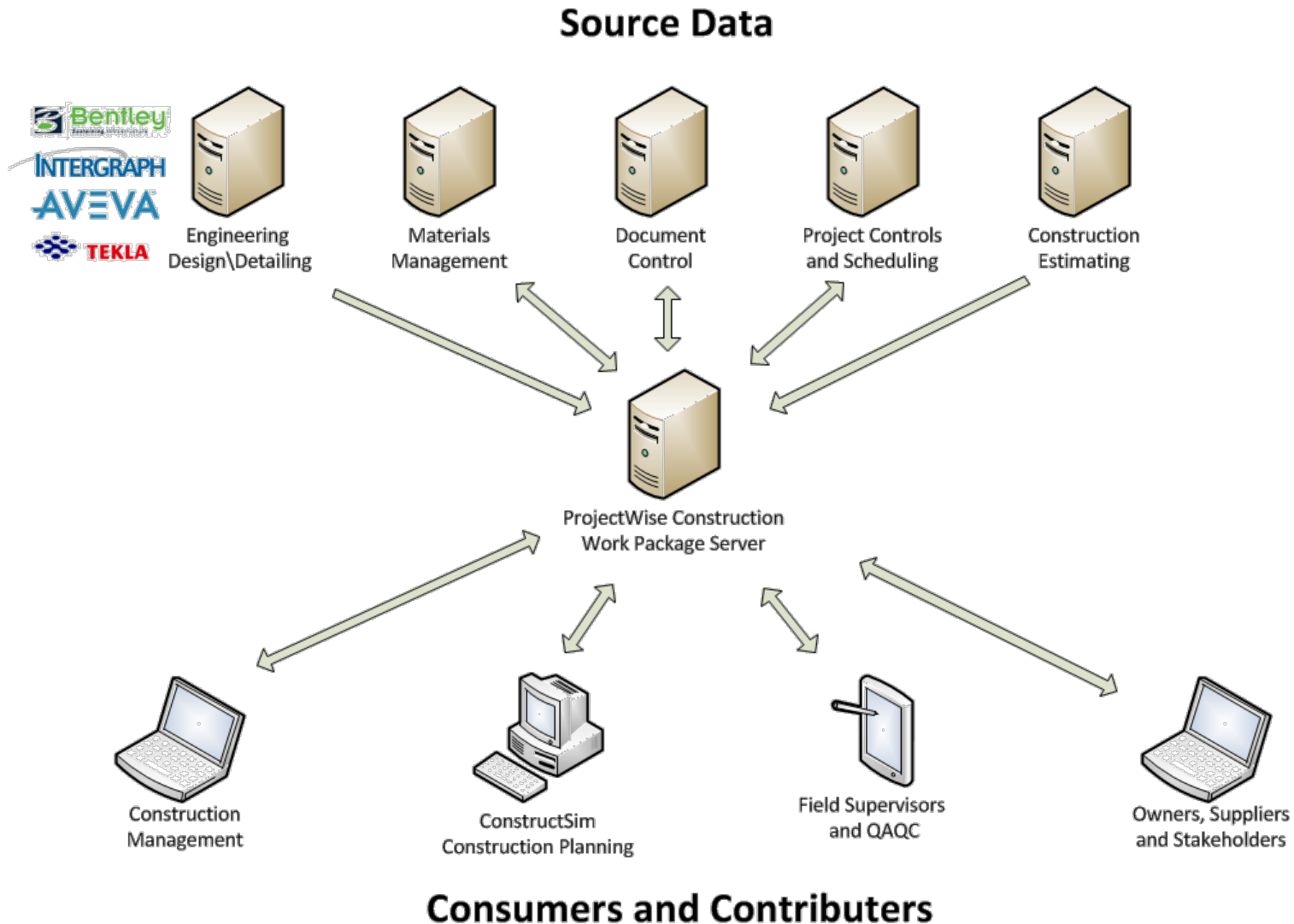
- Support ALL the leading industrial construction design software
 -  **Bentley**: OpenPlant, AutoPlant, PlantSpace, ProStructures
 -  **INTERGRAPH**: PDS, SmartPlant 3D, ISOGEN, Spoolgen
 -  **AVEVA**: PDMS
 -  **TEKLA**: Tekla Structures
- Line, valve, equipment, material etc. lists
- Integration with enterprise systems

Work Packaging Support

- Create and manage EWPs, CWP, IWPs, and TWPs
 - Visualize the relationships among the packages and their status
 - Support consistency through templates
- Automated and manual deliverable linkages
- Automated BOM development
- Progressing work activities/tasks



Complementary to Existing Project Systems



Demonstration

ProjectWise Construction Work Package Server - Internet Explorer
http://localhost/Test/Plugins/WPS.Plugin.Core/WPSHome.aspx

Home [ProjectSummary](#) [Engineering &Procurement](#) [ModuleFabrication](#) [Construction](#) [Progress Reports](#)


Help Hattersley Log off

Project: AnfieldRefinery2014

Launch ConstructSim


Project Summary

- Project Dashboard
- Project Documents
- Download Mobile Model




Engineering & Procurement

- Upload Engineering Data
- Upload Fabrication Data
- Cut Steel Sheets




Module Fabrication

- Module List Excel File
- Module List
- Schedule by Module
- Module Visualizations




Construction

- S Curves
- Yard Head Count - Safety



Progress Reports

- Progress reports
- Fab Yard Reports



Questions & Answers

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Module Fabrication

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- [Schedule by Module](#)
- [Module Visualizations](#)



Construction

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Progress Reports

- [Progress reports](#)
- [Fab Yard Reports](#)

