

Construction & Housing 2006



“How Information Technology Will Support The Australian Industry Key Challenges Over the next 2 –3 years

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Oracle Asia Pacific

How Information Technology will support Australian Industry



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Agenda

- **Our Industry Characteristics**
- **Some Areas Of Change**
- **How IT can help – a few example**
- **Summary**

Our Industry Characteristics



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1. Our industry is very Fragmented and Heterogeneous

- i. Typified by a very large numbers of small companies and no one dominant player *ie in Europe about 85% of companies are small or very small*
- ii. Business model is one of dynamic, short term communities brought together to deliver one project.
- iii. Unlike Auto, High Tech or Retail we have no value chain 'master' or dominant OEM to bring uniformity and standards.
- iv. Projects are driven by people not automated business processes

2. Our industry is very data dependent

- i. CAD, Engineering, building standards, regulations, contracts, bills of quantity, resources schedules, product specs, change requests, daily reports etc etc
- ii. Data access and collaboration across project community is paramount to success
- iii. Still Very paper centric and manual process focused

3. Our industry is complex and full of RISK

4. Our industry is undergoing major change

Areas of Change



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- **Move towards Design, Construct, Operate model**
- **Increased specialization**
- **Accelerated construction: pressure for shorter and shorter construction times**
- **Resource Skills Shortages**
- **Move towards Public Private Partnerships(PPP's)**
 - Moves more responsibility on main contractor for complete Life Cycle
 - Major contractor takes responsibility for success of sub-contractors
 - Increases risks over extended life of project
- **Enormous growth in amount of documentation required**
- **Increased Industrialization of products**
- **Growth of Building Information model using Virtual Construction**
- **Growing influence of Information Technology**

How can Information Technology help meet these challenges ?

**1. Improve
Collaboration**

Centralize All Data



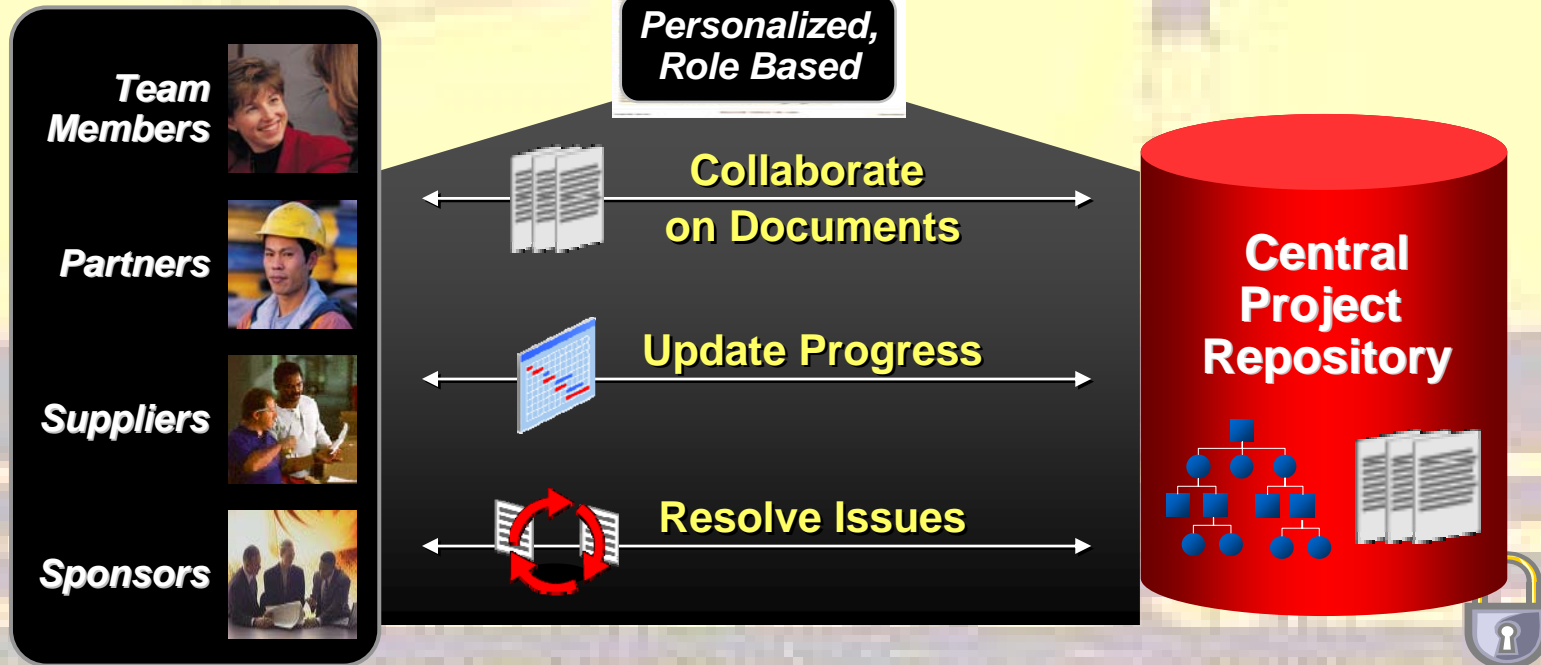
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Provide Team Member Access

Improve Productivity and Communication

Team Member Home Page

“Extended” Project Team



Centralize All Data



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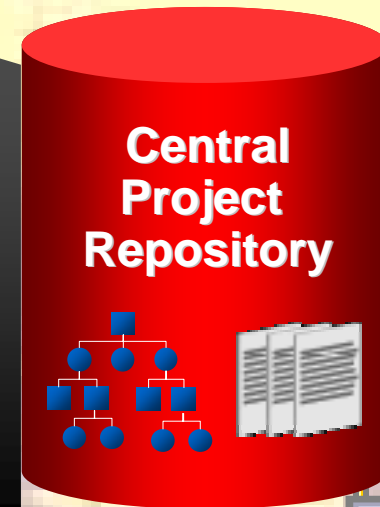
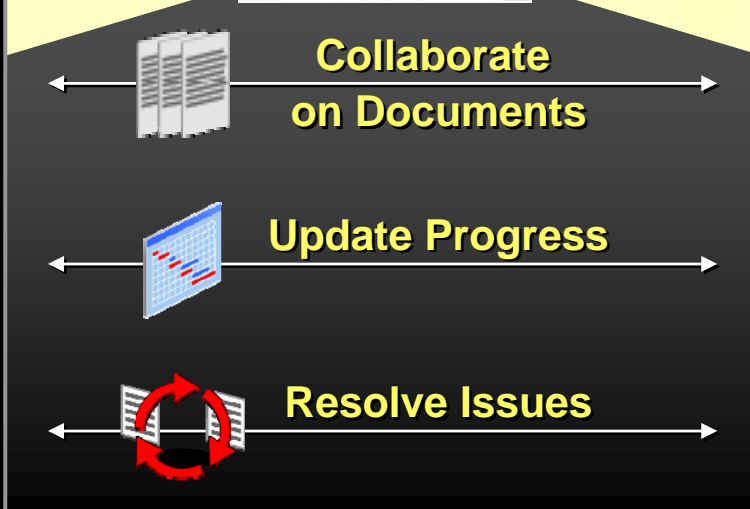
Provide Team Member Access

Improve Productivity and Communication

Examples:
Bovis Lend Lease
"Project Web"

Team Member Home Page

"Extended" Project Team

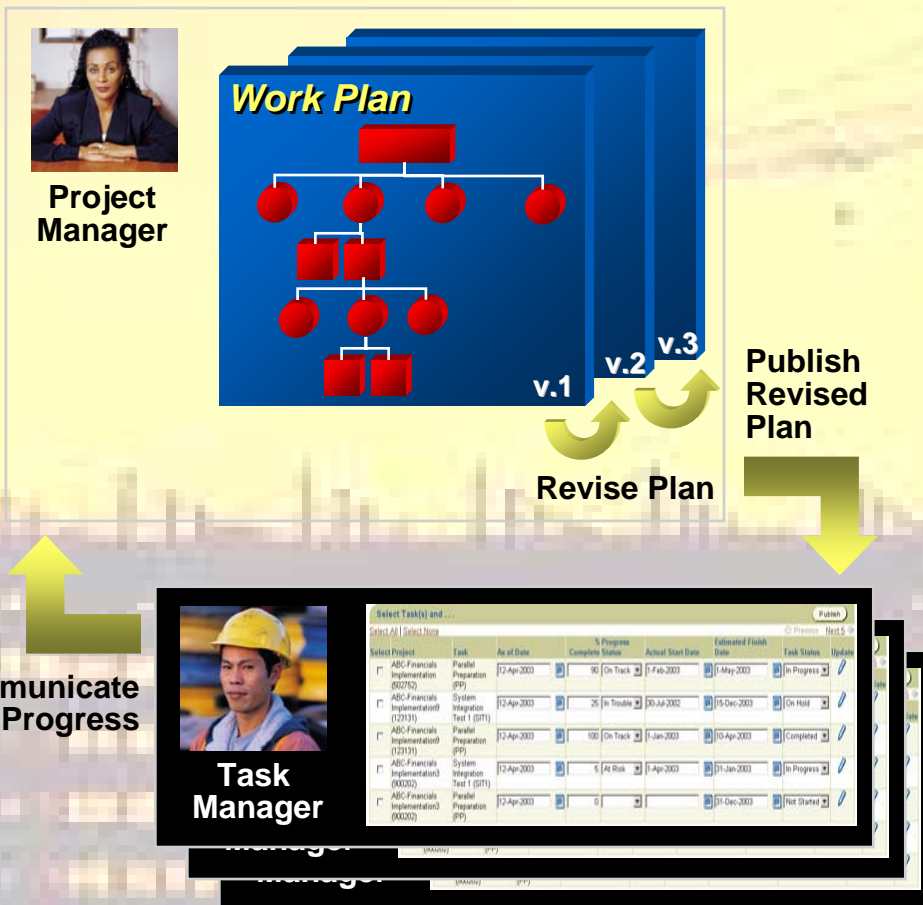


Work Collaboration



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Coordinate Project Work Collaboratively *Enable Real Time Communication and Updates*



- **Assign Task Managers**
- **Provide Visibility into Current Info**
 - Latest published work plan
 - All assigned tasks & overall schedule
 - Impact of changes, dependencies
 - Attached documents
- **Update Anytime, Anywhere**
 - All required information (hours to complete, % complete, etc.)
 - Multi-row update for all tasks
 - Raise issues, initiate changes
 - Provide estimates
 - Respond to reminder notifications



Industry:

- Engineering & Construction

Size:

- \$1B +

Company Overview:

- Leading global engineering, consulting and construction company specializing in infrastructure development in the fields of energy, water and information

Primary Use:

- Manage engineering & construction projects

Goals:

- Build a global project management and accounting system

Realized Benefits:

- Improved and simplified project accounting/management
- Integrated business functions within a single integrated package

Fact / Quote:

- About half of the company's revenue is managed by Oracle Projects.
- "Our people-intense project work is handled through Oracle Projects," Johnson said. "That's where we see most of the transaction volume and profit."

Work Collaboration



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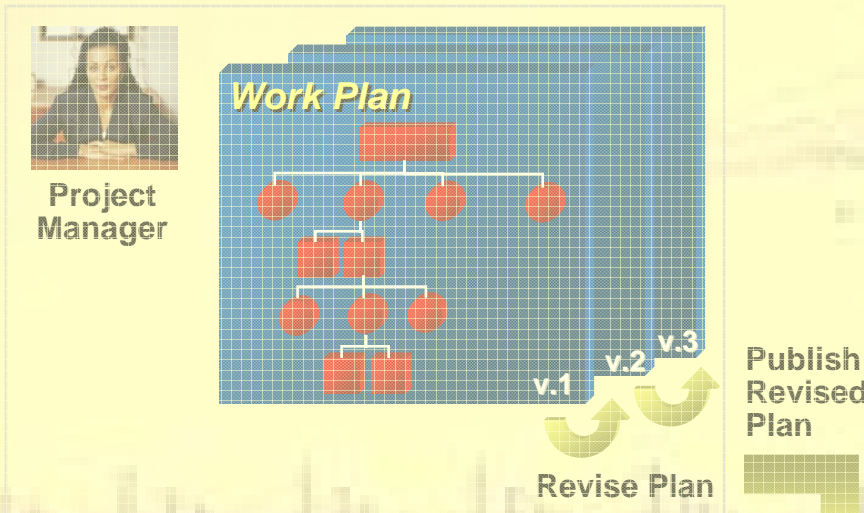
Coordinate Project Work Collaboratively
 Enable Real Time Communication and Updates

Example:

JWH Group a WA homebuilder has significantly automated how Supervisors report progress on homes and trigger notification to suppliers subcontractors ,progress payments etc

- Assign Task Managers
- Provide Visibility into Current Info
 - Latest published work plan
 - All assigned tasks & overall schedule

"Oracle Collaboration Suite saves a lot of time and money in terms of reduced travel, more efficient communications, and better logistics. It is a significant productivity enhancement that has noticeably improved our effectiveness." -- Nigel Kirkby, Chief Information Officer, JWH Group Pty Ltd



Communicate Progress

Respond to reminder notifications



Rapidly Resolve Issues

Eliminate Time Delays



- **Get Issues Resolved Collaboratively**
 - i. Review new / outstanding issues and changes
 - ii. Provide supporting information (documents or related issues)
 - iii. Manage multiple actions concurrently
 - iv. Track all interaction via Action Log
- **Recognize Dependencies and Impact of Issues on Other Issues or Tasks**
- **Reduce Resolution Time with Clear Ownership and Actions**

Max Boegl

Project management success



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Overview

- German engineering and construction firm, specializing in civil engineering, tunneling, bridges and construction engineering
- Over 4000 employees in 10 divisions and 30 locations across Europe

Goals

- Single application for all projects, documents, changes
- Personalized views of project information including external partners
- Standardize business processes across projects, including change management, planning and contract management
- Centralize to-do lists across multiple departments
- Improve risk management

Realized Benefits

- Reduced Cycle Times
 - Change order approval
 - Contract review and approval
 - Construction plan review and approval
- Increased Visibility and Control
 - No delays in understanding timeline slippages, issues, and progress to plan variances
- Reduced Risk results in reduced reserves on Balance Sheet

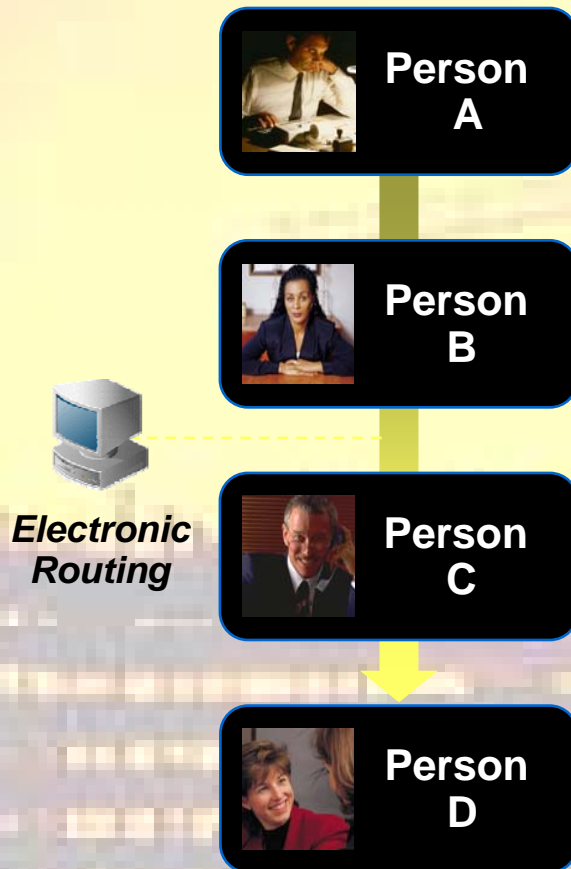
Document Collaboration



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Easily Track & Collaborate on Documents

Improve Efficiency and Reduce Review Time



- **Establish Shared Document Repository for Project Team**
 - i. Use Oracle Files of Collaboration Suite
 - ii. Integrate with enterprise document repository via WebDav protocol
- **Utilize Foldering and Versioning**
 - i. Check documents in and out
- **Ensure Security for Documents**
- **Provide Collaborative Environment for Real-Time Review**
 - i. Streaming via Oracle CADView-3D
- **Route and Approve Documents**

Documentation Collaboration Hochtief



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Project: Taiwan High Speed Railway

Design and Build 40 kms of railway across valleys, rice fields, roads so 90% of link involves bridge structures

Scope and nature of Documentation:

Work broken into 108 design units.

There are 7 design stages and docs have to be controlled in order, across all of these.

- Drawings including revisions were 128,000, 49,000 check reports and 1,000 structural analysis and other reports
- Design work carried out Germany, India, Taiwan, Italy, UK and Japan
- Keeping to tight design timeframe and schedules was paramount

Outcomes

- i. Efficient collaboration between all parties was achieved
- ii. High acceptance by all parties involved thanks to solutions ease of use
- iii. Significant savings in personnel resources over other similar projects
- iv. Design phase completed slightly ahead of schedule
- v. Client extremely happy with outcomes

Summary



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- **We are still a very fragmented and heterogeneous Industry**
- **... and that's unlikely to change**
- **We operate in a fairly in complex operating environment where our customers are demanding we take more share of their risk**
- **Its always a tough economic environment – event in good times.**
- **We need to leverage Information Technology to assist us in lowering our costs, increasing our operation efficiencies across a wider set of skills across new Design, Build, Operate model**
- **There are many areas for this from Total Project Life Cycle Management to improved collaboration and many more**
- **Information Technology is not just for the big companies it has something for every size of business**

Information Technologies Role – Enablement



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Information Access



Personalised access to information, applications and people – in context.
Unified view of all information.
Any format or device.

Business Processes



Integrated business flows and intelligence.
Increase business velocity while reducing compliance and integration burden.

Projects Hub



Create standard business definitions – customers, projects, contractors, employees – for all applications.
A 'single source of truth'.

Grid Infrastructure lowers cost of data management and processing



Coordinated use of many small servers acting as one large computer at lowest possible cost



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Thank You

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