Implementing SAP BPC NW Version 10 During A Large Scale Enterprise-wide SAP Program

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Parminder Ghatahora
Formed in 1884 and headquartered in Omaha, Nebraska, more than 125 years of construction excellence

Operations throughout North America, more than 30 district and area offices in the United States and Canada and employs 30,000 people

Diversified business

More than $11 billion in 2012 revenue, owned by active employees

Emphasis on safety and quality

One of the largest privately owned equipment fleets in North America
  - 26,000 units
  - More than $2 billion replacement value

Kiewit is one of the few construction firms that can compete for billion-dollar mega-projects while their decentralized and localized organizational structure also allows them to take on smaller contracts
ENTERPRISE-WIDE KIECORE
- Reduce staff-to-craft ratio by half and maximize asset utilization
- Underinvestment in IT led to a fragmented application landscape that is unable to support growth and is expensive to maintain
- Capabilities of current systems are limited and manual
  - Complex system landscape with more than 500 applications
  - Lack of scalability and difficult to upgrade, high total cost of ownership (TCO)
  - No mobile solution to support field operations
  - Limited support for International Business
  - Narrow analytics
- Four major goals for the project:
  - Less data entry, more construction
  - Have the right information to manage the business
  - Enable district driven self improvement
  - Enforce harmonized standards
“KieCore purpose: re-invent the way we do business”

- The spirit of the program is best represented in two words “transformative innovation” - applying optimized business process and technology both in cost and capability

- Implementing a combination of packaged and state-of-the-art SAP solutions in an accelerated project schedule to realize the future state.

- Solution addresses all EC&O business processes: Estimate Work, Build Work, Manage Content, Manage Assets, and Back-office (Finance/Tax, HR, Procurement, Compliance)
Solution based on a scope of effort:

- 200 business processes
- 80 data objects
- 500 enhancements to standard ERP capabilities
- 10 technical platforms (Sybase, BW, CE, PI, ECM, Java, …)
- Integration with Microsoft front-end technologies (incl. DUET)
“KieCore has followed an aggressive schedule since its inception. Most companies take three to four years to get to this point in their ERP initiatives – KieCore has been developed in 20 months”

- Bruce Grewcock, CEO & President (Kiewit)
FINANCIAL CONSOLIDATIONS SUB-PROJECT
KEY OBJECTIVES

- Replace the existing financial consolidation solution – PeopleSoft.
- Q3 2012 legal reporting using the new solution.
- Flexibility to meet future changing reporting and information needs – management reporting.
- Efficient and controlled financial consolidation and reporting process.
- Integration with SAP core-financials.
- Address intercompany mismatch issues.
### SAP BusinessObjects Planning and Consolidation 10.0 NetWeaver Platform (BPC)
- SAP’s leading solution for consolidations
- Unified solution for planning and consolidation
- ‘Integration’ with SAP transaction (ECC) and business warehouse (BW) systems
- Compliance with SAP HANA

### Participate in SAP’s ramp-up program
- Assigned ramp-up coach – validate and assist in developing solution
- Newly enhanced consolidation features
- New reporting – EPM Add-in
- Upgrade not required after go-live

### SAP Technical Services to install BPC and provide documentation for additional installations
- Stand-up Development environment, ensuring all prerequisites met
- Shadowing by Kiewit’s technical team
- Documentation for installation on other environments

### CSC program business partner
- CSC’s SAP EPM team to lead implementation of the SAP BPC solution
KEY DESIGN PRINCIPLES

- Reduction in time to report Kiewit parent company and for the overall financial close.
- Automation of majority of consolidation eliminations and adjustments.
- Manual journals at both Entity and Group level of the organization for non-passback adjustments.
- Controls to ensure data integrity of submissions.
- Flexibility to customize the consolidation methods based on joint venture agreements.
- Provide consolidated statements at various group levels of the organization.
- Data loads from both SAP and non-SAP data sources, and master data from SAP ECC.
- Data loads in local currency and multi-currency translations during consolidation.
- Transparent audit for all data from load through to reporting.
- Owned and managed by the business but maintained by IT.
- Flexibility to align with management reporting solution.
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<tr>
<th>Role</th>
<th>Description</th>
<th>Responsibility</th>
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<tbody>
<tr>
<td><strong>Project Management</strong></td>
<td>• Sourced and facilitated the on-boarding of required resources.</td>
<td>Kiewit Business</td>
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<td>• Ensured all project resources are engaged on their assigned tasks; tracks project progress to meet deadlines and is responsible for the on time/on budget delivery of the project.</td>
<td>and CSC</td>
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<td>• Ensured the integration of the BPC implementation with the overall program multi-stream master project plan.</td>
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<td>• Escalation point for issue resolution, organized sponsorship / team involvement.</td>
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<td><strong>Business SME</strong></td>
<td>• Defined the delivery of business functionality detail; designs and report reviews for content and meaning; worked with all team members on all functional aspects of the system.</td>
<td>Kiewit Business</td>
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<td>• Participated in meetings; gave insight into business processes. Primary skills sets included business knowledge, familiarity with key data, and analytical capabilities.</td>
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<td><strong>SAP BPC SME</strong></td>
<td>• Employed best practices to provide the overall functional system design based on requirements. Involved at key project milestones.</td>
<td>CSC and SAP</td>
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<td>• Ensures complex Kiewit’s technical and functional integration avenues were sufficiently addressed and monitored. Drove alignment to the FICO configuration and improving financial business process.</td>
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<td>• Provided detailed knowledge of BPC, and provides hands-on knowledge transfer to Kiewit’s business team. This included development of the core application and challenging business rules.</td>
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<tr>
<td><strong>SAP BPC Build Team</strong></td>
<td>• Provided detailed knowledge of SAP BPC, building early versions of system and reports,</td>
<td>Kiewit Business</td>
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<td>• Provided hands-on knowledge transfer to Kiewit’s business team. This included development of security model, building of dimensions, logic associated with cube data processing, reporting, data input, data loading, and currency functionality.</td>
<td>CSC, and SAP</td>
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<td>• Power-users on the business team with strong Excel skills that took responsibility for business functionality maintenance of the BPC application. Writes reports, performs BPC maintenance, and must be BPC trained in advance for product familiarity.</td>
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<td><strong>Technical Team</strong></td>
<td>• Technical team to assist in infrastructure activities and performance optimization.</td>
<td>Kiewit IT and CSC</td>
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<td>• Basis team to manage BW activities: troubleshoot errors, resolve transport issues, server database maintenance, establishing additional environments and applying service packs.</td>
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<td>• BW technical team integration activities: design and development of data extractors, and associated troubleshooting issues.</td>
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IMPLEMENTATION CHALLENGES

- Unstable foundation
  - SAP ECC system was being designed at the same time as the BPC solution – objects / definitions unclear.
  - New chart of account constantly in a state of flux.
  - Reorganization of legal entities.

- Design and build
  - Learning curve in relation to new reporting for all team members – EPM Add-in.
  - Functional area: concatenation vs. dimension – reporting issue.
  - Consolidation methods and Group level adjustments.
  - Ramp-up functionality issues, raising OSS messages.

- Data migration
  - Conversion of data from legacy to new SAP ERP required further validation.
  - Lack of financial understanding of part of the business acquired a couple of years ago.
  - Underestimated complexity of data cleansing.
IMPLEMENTATION CHALLENGES

- **Testing**
  - Validations in SAP ECC to ensure data integrity were not initially set up (i.e. trading partner required).
  - Project time constraints did not allow for thorough ‘end-to-end testing’ - no test cases with expected result.

- **Technical**
  - Availability of support resources.
  - Timing constraints for the application of service packs.
  - SAP ECC inconsistent chart of accounts in environments caused extractor issues.

- **Change management**
  - User resistance to accept new solution and processes.
  - Kiewit technical support team’s reluctance to let business manage BPC security and overall maintenance of configuration.

- **Program**
  - Lack of understanding of ‘typical’ BPC implementation approach by ‘core-SAP’ project members and adoption of overall project requirements (unnecessary overhead).
  - Parallel SAP BPC deliverable with dependencies.
  - No fallback option for SAP BPC.
- Availability of development environment.
- Finalized source system design - chart of accounts and relevant master data object
- Detailed analysis and design of interface to legacy solution.
- Availability of user resources – technical and functional – for all systems.
- Activities related to legacy systems expected to be performed by technical resources in a timely fashion.
- Continued use of legacy systems for jobs, due to migration plan, causes delays the closing process.
- Training model dependent on the SAP BPC solution and associated business model.
- Training of business testers prior to integration and user acceptance testing.
DATA INTEGRATION

- Master data
  - Master data maintained in SAP BPC: accounts, entities, interco.
  - Summarized chart of account in SAP BPC vs. SAP ECC.
  - Mapping tables in SAP ECC: legacy and non-SAP to new SAP ECC master data, exclusions.

- Transaction data
  - Transaction data YTD / ITD aggregation in SAP BW
  - Extraction of both transactional data and balances from SAP ECC to SAP BPC
  - Initial opening balances were loaded/entered into SAP BPC.

- Data extraction from SAP BPC
  - Tax requirement for CorpTax.
  - Unable to extract consolidation hierarchy: Group/Entity combination.

- Data loading
  - Scheduled extraction from SAP ECC to SAP BW to SAP BPC staging cube – delta processing.
  - Business users emailed when successfully complete or if transformation fails due to mapping issues.
  - User uses data manager package to load from staging cube into SAP BPC.
  - Master data loaded from SAP ECC to SAP BPC using a data manager package.
LESSONS LEARNED

- Detailed chart of account aligned with SAP ECC vs. summarized – evaluate reporting impact.
- Assess installation of SAP BPC on separate SAP BW instance without full business content activated – physical / virtual.
- Identify dependencies early and clearly communicate to program management via risk / issues register.
- Staggered BPC SAP implementation timeline against overall program timeline.
- Do not underestimate data migration, start early and with adequate skilled resources.
- Define and ‘proof-of-concept’ various applicable consolidation methods.
- Ensure business resource are adequately skilled and available.
- Leverage consulting resource for knowledge transfer and take ownership of the solution.
- Clearly identify project roles and align with sufficient resource.
- Identify early training approach and start documentation, scenarios and build.
Integration with the overall new SAP landscape - using PeopleSoft would have proven impractical
- Faster consolidation time due to the organization / structure of consolidations
- Improved auditability – visibility of data adjustments and eliminations
- Better currency conversions
- Improved analysis and dynamic reporting of data
- Flexibility of input schedules to enter data, in addition to journals

Kiewit expects to realize further benefits, such as faster close, over the coming year as they overcome the following:
- Stabilization of the process changes/enhancements
- Completion of the migration of the existing legacy systems
- Better efficiency with the same resources - improved understanding and adoption of the SAP BPC model
- Additionally, with other potential business processes under review, SAP BPC is being assessed to tackle other business processes, resulting in over-time a unified solution reaching a wider community.
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