

1 Q. **Reference: Evidence, page 7, lines 19-20**

2 Provide a copy of the report or memo from the project team recommending EnterpriseOne
3 software.

4

5

6 A. Please refer to PUB-NLH-196, Attachment 1.

Nalcor Energy

Building the Foundation - Enterprise Resource Planning

Business Case Overview

Boundless Energy



October 26, 2015

Agenda



Agenda

- Safety Moment
- Background
- Evaluation of Options
- Recommendation
- Benefits
- Implementation and Critical Success Factors
- Next Steps

Appendix

1. *Benefits by Business Module*
2. *Detailed Cost Comparison*

Safety Moment





Take a
MOMENT
for Safety



Driving Nalcor's Safety Journey

- Open reporting is the foundation of Nalcor's safety culture. It ensures a clear internal flow of information within all levels of the company, and is largely achieved through the **Safe Workplace Observation Program (SWOP)**.
- As of August 2015, there was a 18.8 per cent company-wide decrease in SWOP reporting compared to the previous year. The majority of our divisions saw a decrease in reporting during August month, compared to August 2014.
- Decreased safety reporting may seem as though there are less unsafe events or behaviours happening, but that isn't always the case.

The Value of SWOP Reporting

- Allows for timely identification of hazards and system deficiencies in the workplace.
- Critical for organizational learning and continuous improvement of our Safety Management System – in turn strengthening our safety culture.
- Plays an essential role in incident prevention, enabling documentation of appropriate follow-up actions through prompt analysis of safety data.
- Prevents reoccurrence of an incident by informing behavioural and operational changes.

SWOP Opportunities

- The SWOP database can be used for describing the following examples of hazardous activities and events:
 - Unsafe acts and practices like improper lifting techniques
 - Incidents such as a fall from a ladder
 - Near misses such as an excavator sinking in a wet area.
- It can also be used for commending people on positive safety behaviours, that are above and beyond regular procedural requirements, such as:
 - Helping a co-worker move a heavy or awkward object safely
 - Correcting an observed hazard immediately to prevent potential incident.

SWOP Opportunities

- SWOP isn't just for on-the-job safety reporting. It can also be used for reporting off-the-job hazards and conditions, such as:
 - Hanging ice on power-lines
 - A car blocking a fire hydrant
 - A bag of garbage blown into the street.
- Reporting off-the-job events and behaviours, such as:
 - You saw someone passing a school bus with a lit stop sign
 - Injuring yourself playing sports
 - Salting a sidewalk near your home to prevent pedestrian slips and falls.

Background



Background

- In 2014, Nalcor launched its Corporate Business Systems Transformation Initiative with the vision of ensuring that Nalcor's key corporate business processes and systems facilitate:
 - the effective stewardship of resources,
 - accurate, timely and relevant information for decision makers,
 - effective comptrollership,
 - Integration of performance and financial results information,
 - appropriate management of risk; and
 - support of quality service delivery.
- To operate within this vision, in 2015, a dedicated project team was assembled to obtain an understanding of the current key business processes, identify functional and technical business requirements and determine revisions required to business processes on a go forward basis
- The changing dynamics of the business was the driving factor behind this review and included the following:
 - substantial growth, including the addition of new lines of business
 - anticipation of the Lower Churchill Project (LCP) becoming operational resulting in increased workloads and complexity in business processes
 - expected retirement of experienced personnel and hiring of numerous new replacements throughout the organization
 - Implementation of an integrated management control framework (COSO)
 - Increased public attention and scrutiny

Background (continued)

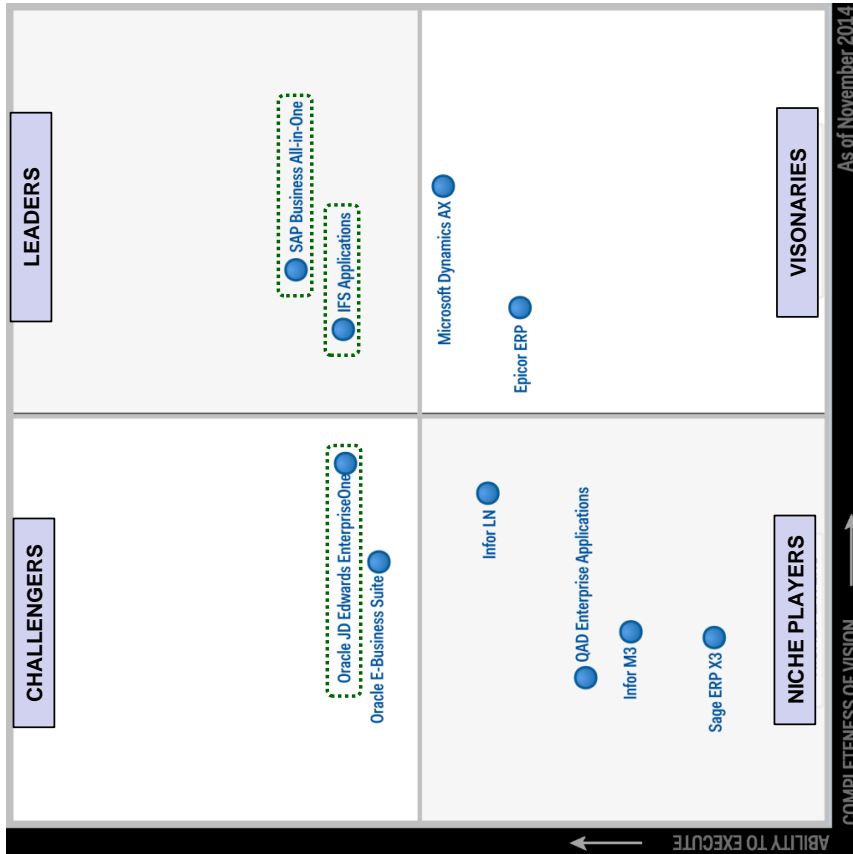
- Areas addressed under this review included:
 - Capital Assets (including budgeting and forecasting)
 - Operating Budgeting and Forecasting
 - Customer Service
 - Human Resources/Payroll
 - Health and Safety
 - Finance
 - Corporate Resource Planning
 - Risk Management
 - Intercompany
 - FTE Reporting and Tracking
 - Asset Management
 - Materials Management
 - Information Management
 - Treasury
 - Oil and Gas
- In completing this review, it became clear that a decision was necessary on the “foundation” on which we would build the required business systems transformation – this foundation being the Enterprise Resource Planning (“ERP”) software
- Currently we are using JD Edwards World A9.3 – but this no longer supports the growing needs of the business and has several shortcomings (key business processes outside ERP, limited functionality, limited reporting capabilities, difficult user interface, no mobility apps, limited workflow)
- As such, presentation today reviews the business case for recommendation of this foundation – the ERP software required to address areas of concern by the lines of business

Business Case Approach

- Key requirements gathered for functional modules (Asset Management, Finance, HR/Payroll, Materials Management, Customer Service)
 - Outlined specific requirements using current process and examined opportunities for improvement by functional area
 - A review of ERP benefits by module are provided in the Appendix
- Software options selected for business case evaluation based upon:
 - Validation against industry leading research / consulting firms (Gartner and Nucleus Research) – see next slides
 - Discussion review with peers – Industry Scan – to evaluate what other Canadian utilities and energy companies are doing
- Four options selected for evaluation:
 1. **“World”** - Upgrade from Oracle JD Edwards World A9.3 to A9.4 (maintain support, integrated with other external software and utilizing additional functionality within to attempt to meet business needs)
 2. **“E1”** – Migrate from Oracle JD Edwards World A9.3 to Oracle JD Edwards EnterpriseOne (E1);
 3. **“SAP”** – Implement SAP Business Suite; and
 4. **“IFS”** – Implement IFS Applications – IFS was selected but vendor did not wish to further pursue as they indicated a large gap in functionality offered and our identified business requirements – thus IFS was eliminated from further review
- Worked with vendors to arrange and attend on-site demonstrations of systems against which key requirements were evaluated as well as to gather budget information for purchase and implementation of each option

Research Validation – Gartner Magic Quadrant

Single Instance ERP for Mid-Market Companies



Based on the completeness of the vision of the vendors and their ability to execute the vision

Leaders:

- SAP Business Suite
- IFS Applications

Top Challenger:

- JD Edwards Enterprise One

JD Edwards World – not on chart

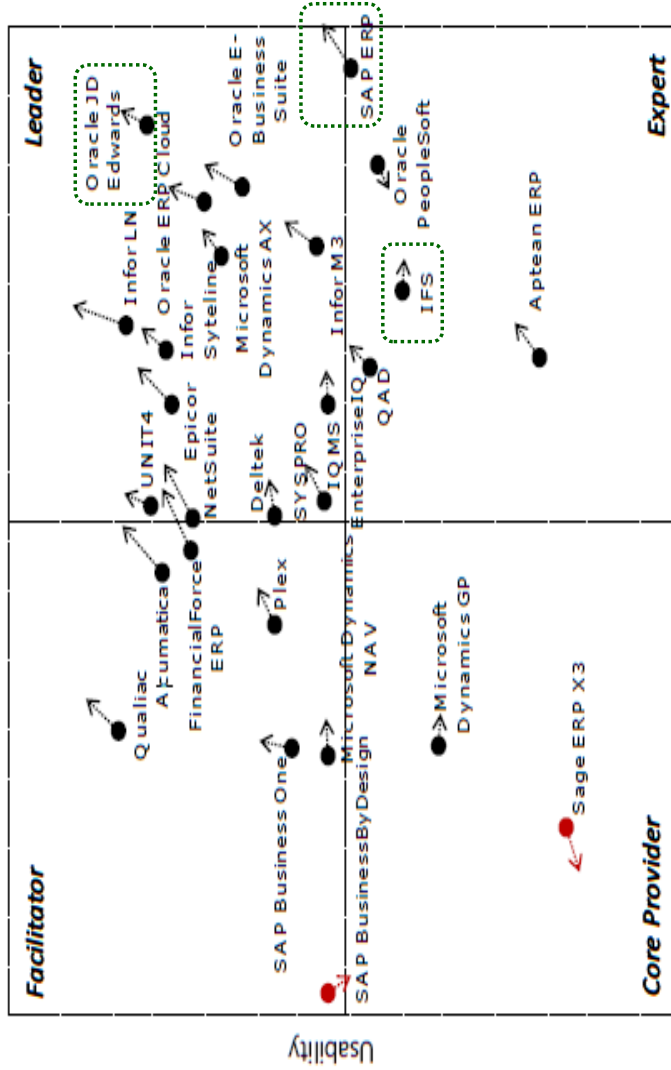
As of November 2014



Research Validation – Nucleus Research ERP Value Matrix



ERP VALUE MATRIX 2H2014



JDE EnterpriseOne has significantly higher rating of usability than SAP or IFS

Based on functionality, SAP leads, followed by EnterpriseOne and then IFS

JD Edwards World – not on chart



Industry Scan – Overview

- Discussions were held with various energy companies to get an understanding of their processes and systems, industry best practices, and lessons learned from their previous ERP and other system implementations
- The following organizations were interviewed (by ERP software):

JDE E1	SAP	Oracle Financials
<ul style="list-style-type: none"> • Hydro Ottawa • Saint John Energy • JD Irving (for ERP only) 	<ul style="list-style-type: none"> • BC Hydro • NB Power • Manitoba Hydro • Fortis Alberta 	<ul style="list-style-type: none"> • Nova Scotia Power

- Crescent Point Energy Corp. Interviewed related to Oil and Gas software
- Documentation and regulator submissions were also examined related to Hydro One and Hydro Quebec

Industry Scan – Findings

- Most of the companies upgraded or migrated to later versions of their ERP. They have already invested in the technology and the user community is familiar with the software
- Most of the companies aimed at using “out of the box” functionality regardless of which ERP selected as customization complicates future upgrades and customizations were only added in exceptional circumstances where required for business process continuity
- Where SAP has been implemented, companies found that the integration of the various modules is cumbersome. Implementation required more effort than originally contemplated. Usability of the software was a noted issue
- Utility companies with JDE E1 were able to leverage the core functionality within the various modules easier with less effort for integration. User interface is intuitive and was well received by the user community
- The manner in which the JDE E1 is architected renders itself easier for clients to select which upgrades they wish to implement whereas an entire release and a very lengthy upgrade process is required for SAP and other products
- Some challenges were encountered with both SAP and JDE E1, primarily due to tight timelines for implementation and decisions not to implement the value added business functionality

Industry Scan – Lessons Learned

- Proper business requirements gathering exercise is needed to assess the business and system changes and determine the “needs” versus the “wants” for change
- Business requirements should be properly prioritized and scope well defined prior to commencement of implementation
- Engaging business users by having their ‘to-be super users’ part of the implementation team facilitates user adoption within the various business units and provides a transfer of knowledge and training
- Documentation, training and monitoring of the business processes to ensure compliance are critical to success
- Establishment and execution of a communication plan throughout all phases of the project is crucial to achieve success along with user adoption
- Ensuring that selected vendor has adequate, experienced resources assigned to the project is important and care should be taken to ensure that vendor utilizes proposed resources

Evaluation of Options



Evaluation Criteria

Criteria	World	E1	SAP	Commentary
Industry Validation				<ul style="list-style-type: none"> JDE E1 and SAP are ranked in the top three vendors identified in the Gartner's Magic Quadrant and a leader in the Nucleus Research ERP Value Matrix and ranks highest in usability
Functional Requirements				<ul style="list-style-type: none"> Both SAP and JDE E1 meet key business requirements; still functional gaps in JDE World alternative Integration available for E1 and SAP for a broader range of software applications than World. Integration for E1 and SAP includes Primavera, currently used by Project Execution and Technical Services To provide required functionality, JDE World would need to integrate with a number of other software programs requiring maintenance of interfaces, reconciliation of data, additional maintenance and support costs
Continuing Development				<ul style="list-style-type: none"> Research and development related to JDE is now focused on E1 with fewer enhancement upgrades for JDE World compared to E1 (80%-90% of JDE customer base using or migrating to E1 versus World). New JDE customers are purchasing JDE E1 and not JDE World
Mobility Applications				<ul style="list-style-type: none"> Mobility applications, which improve access to ERP from locations outside of the office are not available for JDE World unless they are custom developed JDE E1 allows data entry in the field and access to information from all locations for required processes, increasing timeliness and usefulness of reporting and access to real time data – over 80 mobile applications SAP provides approximately 400 mobile applications through Fiori product
Internet of Things / Monitoring				<ul style="list-style-type: none"> JDE World does not allow the interconnection via the Internet of computing devices embedded in everyday objects and equipment, enabling them to send and receive data JDE E1 and SAP allows collection and analysis of real time data from equipment allowing for a more effective and efficient asset management program

Evaluation Criteria (continued)

Criteria	World	E1	SAP	Commentary
Reporting / Data Analytics				<ul style="list-style-type: none"> JDE World has no built reporting functionality and would require an external reporting solution OneView Reporting under JDE E1 allows for customizable reports easily generated using real time data without Information Systems intervention and personalized dashboards. JDE E1 also provides advanced query technology JDE E1 uses Hyperion Essbase (which Nalcor currently owns) to perform data analytics SAP has a built in platform (called HANA) for built in data mining
Automated Workflow				<ul style="list-style-type: none"> Both E1 and SAP have automated workflow which allows predefined automated approval and escalation routes to be established for such items as purchase requisitions, journal entries, etc. World has limited workflow functionality
Security				<ul style="list-style-type: none"> Role based security model (used by majority of companies that defines access to the system based on the user's role) available in all three options While role based security is available in World, currently not utilized Field level security available in both E1 and SAP but not JDE World
Solution Architecture				<ul style="list-style-type: none"> JDE E1 and SAP have larger number of supported platforms and use modern programming language World uses programming language no longer taught in local universities and colleges

As previously noted, current and upgraded JDE World is unable to meet changing business needs. The leading solutions (JDE E1 and SAP) provide significant benefits in the areas of automated workflow, reporting, user interface and in addressing requirements for future growth opportunities with mobile and monitoring applications



Evaluation Criteria (continued)

Criteria	World	E1	SAP	Commentary
Usability				<ul style="list-style-type: none"> JDE E1 is a leader in usability over its competitors (including SAP), simplified screens and data displays are easy to use JDE World is based on green screen technology and has a cumbersome user interface Usability, accessibility, connectivity, and personalization are all high value to the new generation E1 Pages, Cafe One, Carousel, Breadcrumbs, Tasklists provide a graphical, web based navigational interface that reduces navigation time by ~20-30% and can lead to significant productivity gains
Integration (within ERP)				<ul style="list-style-type: none"> Utilities using SAP also encountered difficulties in integrating the various modules within SAP to achieve the desired outcomes
Training				<ul style="list-style-type: none"> For JDE World , fewer options available for external training courses than E1 (would have to be custom developed). Training primarily focused around E1 consistent with the Oracle customer base User Productivity Kit (already owned by Nalcor) can be used to internally develop training material for both JDE World and E1. Comparable product offered by SAP called SAP Knowledge Acceleration All three options will require significant training for process changes E1 architecture is based on World with which Nalcor users are familiar (naming conventions, database structure, terminology, chart of accounts structure, etc). As entirely new product, SAP is new to the user base and would require additional training and result in a steeper learning curve

JDE E1 provides benefits over SAP as JDE E1 better integrates within the ERP and has lower costs to train users. E1 is also a leader in usability over SAP



Evaluation Criteria (continued)

Criteria	World	E1	SAP	Commentary
Ease of Change Management				<ul style="list-style-type: none"> All three options will require extensive business process change requiring active management For JDE World and JDE E1, core functionality of the ERP will be familiar to users JDE World option will require technology change (external systems) to meet functionality gaps For JDE E1, functionality gaps will be primarily met within ERP SAP option will require a completely different solution for core business processes resulting in a higher level of change across business Industry scan indicated companies rarely migrated from existing ERP product line
Cost to Implement				<ul style="list-style-type: none"> Total implementation costs for JDE E1 are significantly lower than that of SAP (estimated difference of \$22.2M) Pre-defined migration path from World to E1 reduces cost and time to migrate Nalcor already owns licenses for E1 as part of current license structure, additional licenses will be required however for new modules (extended functionality) Total implementation costs for JDE E1 option exceed the cost of the World alternative by \$5.6M While JDE E1 costs exceed the JDE World option, there are significant quantitative and qualitative benefits associated with JDE E1 which outweigh the additional costs primarily from productivity gains; allowing focus on value added activities
Cost to Maintain				<ul style="list-style-type: none"> Annual JDE E1 maintenance and support costs are significantly lower than for World with supporting systems and SAP
Risk				<ul style="list-style-type: none"> Risk associated with any ERP implementation is high and will be continuously monitored and managed Risk is increased with SAP implementation due to a significant change in technology in addition to business process change. There is also a lack of familiarity with software vendor and implementers and higher risk associated with user adoption due to usability challenges and lack of experience with the system The risk associated with World implementation would be higher than E1 due to the number of required interfaces and new external solutions to meet functionality requirements. Level of current user satisfaction is low with World and users are hungry for change

JDE E1 provides significant benefits over SAP due to Nalcor's existing investment in JDE World which greatly reduces the implementation risk, cost and impact on users while greatly improving the likelihood of success in meeting the business requirements for the business systems transformation



Costing Comparison Summary

	World	E1	SAP
Implementation	\$ 3,868,800	\$ 15,047,300	\$ 37,265,500
Integration with Third Party Products	6,775,700	1,198,700	1,164,800
Hardware Purchase, Installation and Configuration	260,000	260,000	260,000
Total One Time Cost	\$ 10,904,500	\$ 16,506,000	\$ 38,690,300
Total Annual Recurring Cost	\$ 970,000	\$ 488,200	\$ 1,166,100



Recommendation



Recommendation

Migration to EnterpriseOne from World will:

- Facilitate the execution of required changes to the Asset Management Program
- Enable Nalcor to establish and easily monitor metrics and the collection of pertinent information for Asset Management, Financial Management, Human Resources, Safety, Materials Management and Customer Service
- Position Nalcor to face its needs for the future and to be ready to handle the changing business requirements upon transition of the Lower Churchill Project to operations
- Enhance the efficiency, consistency and integrity of business processes and reporting
- Address issues raised by employees on the Employee Engagement survey with respect to not having the necessary tools to perform their jobs (through the automation of many activities) and work life balance (efficiency gains)
- Improve security access and internal controls embedded throughout key business processes
- Provide a higher level of user satisfaction for the system using technology with which successive generations are comfortable while building on the current familiarity and investment with the system
- Move Nalcor to a mainstream ERP solution which will continue to receive functional enhancements and research and development effort

Based on the evaluation undertaken, the project team recommends migration to Oracle JD Edwards EnterpriseOne (E1) for Nalcor’s ERP solution

Benefits



Health and Safety Management

- Project will enable world class standard of tracking, reporting and analysis of safety incidents and observations
- Project will provide support for the automated calculation of statistics and detailed trending in reported safety observations, incidents, near misses and commendations
- Project will enhance efficiency and timeliness of safety reporting, supported through use of mobile applications
- Replacement of the current Lotus Notes Safe Workplace Observation Program (SWOP) database reduces time required to modify the application when there is a reorganization within the company
- Workflow functionality will provide notifications when incidents are reported, informing those that need to know as soon as an incident takes place so action can be taken

Management of Assets

- Project will enable execution of Nalcor’s overall Asset Management Strategy and provide technology to support agreed upon processes changes with process owners (to be determined)
- Project will enable standardization of Asset Management practices and data management across organization and provide integration with other key business processes including Materials Management, Human Resources and Finance
- Technology will enable improved scheduling and monitoring of Asset Maintenance activities including predictive or condition based, preventive or corrective maintenance and provide support for analysis
- Project will enable mobile accessibility with ability to obtain and update information “in the field” and dashboards for access to real-time information personalized for assets under individual’s management
- Project will enable automation of workflow to ensure appropriate individuals are included in decision making and approvals (eg. Work Order approvals, Asset Management database)

Management of People

- More effective and efficient reporting and access to information (critical for managing people) enabled through OneView reporting and dashboards
- Project ensures the protection of sensitive Human Resources information and compliance with privacy regulations through role based security model and field level security
- Increased level of employee satisfaction attributed to improved system usability and automation. Project also supports Employee Engagement Survey results by providing tools to perform job duties
- Project supports the integration of Human Resources activities, enabling reduction of efforts on non-value added activities including the following applications currently supported outside of the ERP:
 - Time Entry
 - Performance Management
 - Competency and Learning Management
 - Recruitment Management and Applicant Tracking
- Project enables employees to perform self service activities, ensuring timely information updates and reduction of duplication of efforts

Customer Service

- Project supports the three year strategic plan for Customer Service through:
 - Improving operational efficiencies, streamlining processes and establishing standards and measures
 - Significant reduction of manual processes including recording of customer interactions, rebills
 - Support of Automated Meter Reading
 - Focusing on quality of customer service through recording of all interactions with customers, providing easy access to complete customer information and integration with other key business processes including Work Order Management
 - Providing trained knowledgeable employees empowered to make decisions
 - Supporting effective handling and timely response/resolution
 - Allowing performance of analytics on customer interactions, enabling necessary decisions/actions to be taken (including data trending capability)
- Supports Customer Service goal to maintain an 80% customer satisfaction rating over the next five years and improve company reputation
- Project will facilitate customer collections, highlight overdue accounts and automate correspondence with customers

Implementation and Critical Success Factors

Implementation – Phased Approach

- The recommended approach for this implementation is a phased approach based on functionality:
 - Phasing based on modules reduces the risk associated with the overall project and provides time for staff to adjust to system and process changes in specific areas prior to implementing elsewhere
- Phase 1:
 - Includes implementation of the core EnterpriseOne functionality in such functional areas as Finance, Human Resources/Payroll, and Materials Management; Capital Asset Management module for Asset Management; Utiligy-360 module for Customer Service; Mobility applications and One View reports will be implemented as modules are implemented
- Phase 2:
 - Includes rollout of additional functionality currently not available to the business through JDE Edwards World but identified as requirements including Accounts Payable Automation, Expense Management, Health and Safety, Time Entry, Human Resource Self Service, Performance Management, Competency Management, and Recruitment
 - In addition, Primavera, a new Oil and Gas system, the Treasury system and the Energy Trading Risk Management system will be integrated with the ERP (as desired)
 - Implementation of Orchestrator and the Internet of Things after further evaluation

Critical Success Factors

Strong executive sponsorship and support

- Executive involvement reinforces the importance of a project
- A Program Steering Committee has been formed consisting of Vice Presidents representing each line of business, the Manager Internal Audit, the Manager Information Systems, the Chief Risk Officer, Program Management, the General Manager Commercial, Treasury, Risk and Technology along with the Chief Executive Officer
- Inclusion of the project on the Corporate Quilt will reinforce importance of the project and executive commitment

Managing organizational change

- Underestimation or failure to address organizational change can result in failure to deliver expected business outcomes
- It is critical to embed change management into the project plan and approach from the outset and ensure skilled change management expertise resides on the project team to drive and embed the change

Managing expectations

- It is critical that throughout each phase of an Enterprise Resource Planning implementation project that appropriate expectations are created for all parts of the organization affected by the change
- The key to formulating realistic expectations is the design and execution of a robust and effective communication process that is integrated into each phase of the project

Critical Success Factors (continued)

Focusing on the people

- People need to be prepared, informed, and ready to accept these changes. In an effort to ensure people are ready for the change the following must be considered:
 - Inform employees affected by changing business processes and job functions
 - Ensure employees understand why change is necessary and how they will benefit
 - Develop a communication plan to notify employees of changes and how they can provide feedback and educate employees on the changes/empower employees with the knowledge they need to excel in their roles

Manage scope and minimize customizations

- Organizations should be realistic about what is achievable and what benefits can be realized in the project timeframe
- Project must have a clearly defined scope

Managing risk

- Continuous risk assessment and management and the execution of appropriate mitigation strategies will also be a key factor to the success of the project

Next Steps

- Issue Request for Proposal for professional services to assist with the implementation of JDE EnterpriseOne and award prior to year end
- Establish a Project Steering Committee with management representation from each functional area
- Define business process owners who will be responsible and accountable for approving business process changes and ensuring they are implemented, enforced, and monitored
- Define roles and responsibilities for steering committee members, business process owners, management team and project team
- Establish Change, Risk, Communication and Stakeholder management plans and Benefits Realization Plan for the ERP implementation
- Complete prerequisite projects prior to year end. Projects include hardware purchase and implementation, JD Edwards data archiving, role based security design, and Showcase application upgrade

Appendix 1
Benefits by Business Module

Module Benefits

Capital Asset Management

- Integration with other key EnterpriseOne modules allowing for standardization of processes across the organization and replacement of several stand alone applications and databases
- Collection, analysis, and reporting of data to facilitate monitoring
- Predictive or Condition-Based maintenance can help make decisions based on the condition of equipment which can potentially reduce overall maintenance costs, equipment downtime, and associated lost productivity – predefined thresholds and automated alerts
- Maintenance scheduling (including resource assignment) and parts availability for jobs
- Equipment cost and failure analysis
- Mobile applications allow for anywhere, anytime access to data

Fixed Assets

- Enable Nalcor to define an appropriate parent and child based asset structure for tracking asset costs including maintenance
- Integrated with equipment plant maintenance module as part of capital asset management
- Allows for Nalcor to track the full asset accounting lifecycle of its assets
- Manage Equipment Mobile Tablet application will allow technicians in the field to view and update equipment details
- Use of workflow functionality will enable elimination of the Lotus Notes Asset Management Database

Module Benefits (continued)

Human Capital Management

- Comprehensive views of employee history, providing cradle-to-grave or point-in-time views
- Self Service Human Resources module provides employees with greater control over administrative tasks and reduces reliance on Human Resources (HR) staff. Mobile applications are also available for this functionality
- Automatic creation of organization charts reducing manual effort and Visio software license costs
- Enhanced wage and salary administration with the ability to select and process a group of employees for processing of pay grade salary increases. Also identifying employees to advance to the next pay grade step for salary increases
- Time Entry module can potentially reduce the time required from payroll staff to process timesheets and eliminate the need for the Lotus Notes Timesheet application
- Performance Management functionality in EnterpriseOne allows for the completion of 360 degree performance reviews, including components of the Nalcor performance management process currently accommodated via Lotus Notes
- Competency Management toolset in EnterpriseOne allows for the addition of unlimited competencies, training, skills, licenses, certifications, etc. supporting Nalcor's Talent Management function
- Recruitment functionality within Human Capital Management is similar to the functionality available in the current Lotus notes Recruitment database. Potential to replace existing application and reduce reliance on Lotus Notes
- Extensive Applicant tracking and search functionality allowing HR to manage information on applicants

Module Benefits (continued)

Health and Safety Incident Management

- Enterprise One has an intuitive, easy to use interface that provides fields for reporting incidents and observations. E1 pages for employees and safety officers provide easy access through the Health and Safety module without menu navigation
- Potential replacement of the current Lotus Notes Safe Workplace observation Program (SWOP) database reducing reliance on Lotus Notes and also reducing time required to modify the application when there is a corporate reorganization
- Notifications via email or the work center happen automatically when incidents are reported, informing those that need to know, as soon as an incident takes place. People assigned tasks are also notified and as incidents and tasks are updated, renotifications can take place.
- Incidents can be analyzed on key attributes and both estimated and actual costs can be reported. Safety statistics, including industry standard incident rates and impacts rates, also provide valuable information and can be configured to calculate on a real time basis. Can easily be seen using dashboard functionality
- Mobile applications are available for Health and Safety Incident Management allowing users to report safety observations, incidents, commendations and near misses and provide photos using their mobile device

Module Benefits (continued)

Financial Management

- **Accounts Payable**
 - EnterpriseOne self service functionality allows suppliers to view their own account activity
 - Electronic routing of invoices for approval allows for the automation of the current high volume, paper based process
 - Automated three way matching of invoices, purchase orders, and receipts of goods allows for the automation of the current time consuming manual process
 - Allows for the setup of a single vendor with multiple sites eliminating need for multiple vendor records
 - Expense Management module allows for the electronic routing of purchase and gas card transactions for approval and coding allowing for the automation of the current manual, paper-based process
 - Expense Management module allows for the electronic attachment of receipts to support expense claims
- **General Ledger/Accounts Receivable**
 - EnterpriseOne offers the ability to attach supporting documentation to journal entries
 - EnterpriseOne allows for the electronic routing of journal entries for approval through its workflow capability
 - Financial statement consolidation within EnterpriseOne allows for information to be consolidated using predefined rules. This will allow for the movement away from Excel and Spreadsheet Server lowering risk and improving efficiency
 - EnterpriseOne workflow will allow for the electronic routing of accounts receivable invoices
 - EnterpriseOne contains integrated credit and collections functionality that allows easy access to customer activity and tracking of all customer interactions
 - Improved customer communication through the use of inquiries and reports

Module Benefits (continued)

Financial Management

- Job Cost Management
 - Integrated with Accounts Payable, Accounts Receivable, Contract Billing and Fixed Assets
 - Enhanced job status inquiry providing project managers with general health information on projects
 - Workflow functionality will allow project managers to approve time, purchases, expenses prior to impacting the project
 - Dashboard functionality allows for the drill back to all transactions affecting the project
 - Time schedules for jobs enables the scheduling of subtasks for a project
 - Job Budget Revision enables the user to lock the original budget and enter a revision (forecast). This allows for the comparison of the original to revised budget
 - Availability of mobile applications provides project managers with access to real time project information while in the field with the ability to enter updates to their projects
- Procurement and Supply Management
 - The Supply Management module provides the ability for the system to automatically search for inventory items in multiple locations
 - Workflow offers the ability to request item additions electronically and route for approval based on business rules
 - Automated approval of requisitions with workflow for approval based on delegation of authority
 - Ability to generate a Bill of Materials for parts which can be used on subsequent work orders reducing the need to rekey

Module Benefits (continued)

Customer Service Utility 360

- Fully integrated with EnterpriseOne and incorporates industry best practices for all utility types including electric utilities
- Supports the Customer Service department's three year strategic plan
- Ability to electronically record all interactions with the customer
- Step-by-step service wizard for Customer Service Representatives to create new customers
- Utility Collection Manager allows for easier reporting on all customer collections history reducing manual effort in the customer service department
- Automated meter reading allows for data upload from hand held devices reducing manual rekeying efforts
- Data trending capability
- Rate Manager will allow for efficient rate management, helping to ensure data integrity

Appendix 2
Detailed Cost Comparison



Implementation

	World	E1	SAP
Labor	\$1,143,600	\$4,036,200	\$8,608,600
External Consultants	961,600	5,865,100	14,674,700
Software Licenses	-	377,100	3,105,000
Travel	192,600	696,600	3,262,500
Escalation	209,400	946,900	2,483,600
Contingency	459,600	2,195,000	3,262,500
Process Change Consulting	702,000	702,000	1,053,000
External Training	200,000	228,400	815,600
Total Implementation	\$3,868,800	\$15,047,300	\$37,265,500

Integration with Third Party Products

	World	E1	SAP
Health and Safety	\$270,000	Included in implementation	Included in implementation
Accounts Payable Automation (Docusphere)	629,800	Included in implementation	Included in implementation
Financial Statement Consolidation (Cognos Controller)	313,800	Included in implementation	313,800
Purchase Card Management	303,000	Included in implementation	Included in implementation
Capital Asset Management (Maximo)	3,387,900	Included in implementation	Included in implementation
Customer Service Enhancements	324,200	Included in implementation	Included in implementation
Reporting (Reports Now)	320,000	Included in implementation	Included in implementation
Training (User Productivity Kit)	260,000	257,000	Included in implementation
Integration with Primavera	712,000	588,700	476,000
Orchestrator (Pilot)	Not available	353,000	375,000
Mobile Applications	Would require customization	Included in implementation	Included in implementation
World - Role Based Security	255,000	Included in implementation	Included in implementation
Total Integration with Third Party Products	\$6,775,700	\$1,198,700	\$1,164,800

Hardware Purchase, Installation and Configuration

	World	E1	SAP
Internal Labor	\$7,600	\$7,600	\$7,600
External Consultants	27,800	27,800	27,800
Hardware Cost	207,200	207,200	207,200
Software Cost	17,400	17,400	17,400
Total Hardware Purchase, Installation and Configuration	\$260,000	\$260,000	\$260,000



Annual Recurring Cost

	World	E1	SAP
Enterprise Resource Planning	\$387,500	\$438,700	\$1,166,100
Health and Safety	86,400	13,000	Included above
Human Resources Self Service	n/a	18,500	Included above
Accounts Payable Automation (DocuSphere)	44,700	Included above	Included above
Financial Statement Consolidations (Cognos Controller)	48,000	Included above	Included above
Purchase Card Management	6,300	Included above	Included above
Capital Asset Management (Maximo)	300,000	Included above	Included above
Customer Service	9,200	Included above	Included above
Reporting (Reports Now)	60,000	Included above	Included above
User Productivity Kit/SAP Knowledge Acceleration	18,000	18,000	Included above
World Role Based Security	9,900	Included above	Included above
Total Annual Recurring Cost	\$970,000	\$488,200	\$1,166,100

