Managing a Successful R12 eBusiness Suite Upgrade

A Repeatable Methodology to Help Ensure Success

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Introduction

ERP systems are complex by their intent and design. They must be upgraded periodically in order for companies to benefit from the latest application and tech stack enhancements or maintain basic supportability. Whether you like it or not, if you run the Oracle eBusiness Suite of Applications, you have an upgrade in your future. Too often, organizations underestimate the scope of effort that a successful upgrade will require because they don't fully understand the breadth of the project. This is due to the fact that an upgrade is a cross-functional endeavor that demands support from all areas of the organization.

Most organizations are grouped and managed by specialty. In an upgrade, it is important that everyone involved know not only their individual role but also how their contribution affects the project as a whole. Coming from a wide-ranging background in industry where I was responsible for large, cross-functional projects to consulting where we assist companies with their Oracle ERP upgrades, it is striking to see how fragmented most upgrade projects are.

Whether it's a quick technical migration or an extensive functional upgrade, the same process can be used and re-used as periodic upgrades are needed. From planning to process to resources and management, we'll provide the full high level of view of what happens, what you need to do, and where to find the answers. Also bear in mind that Release 12 is different and will require a more intensive upgrade effort than a typical dot release. As such, some areas of the organization will be more heavily involved because the amount of change that will be required of the end users of the application. This presentation is for anyone who needs to plan, manage, or be part of an upgrade.

Why Upgrade

The standard answer for why an organization upgrades is to do so only if there is a compelling business reason. Taking advantage of new features and functionality of the software will enable the business to operate more effectively. By using the latest enhancements, and following shared Best Practices, organizations will be better positioned to keep their Information Technology functions aligned with changing Business Objectives and improve competitive position.

Exploring, assessing, and understanding the new features and functionality of the new software is key part of the early planning process. Release 12 contains some large modifications to key areas of the applications (most notably the user interface) that will require significant changes to end users. Exhibit 1 shows an example of an R12 screen that resulted from the "Swan project" redevelopment of the user interface.

Exhibit 1: Example of a new R12 screen

Early evaluation and measurement of the application differences will drive the training and change management efforts that will be required as part of the project. Some organizations adopt well to change while others do not. Release 12 applications will require end users to learn new screens and most will be impacted by changes in functionality. This upgrade (11i to R12) can't be treated like a simple dot release that is handled as a small "back of the house" project that has little impact on end users.

There are many benefits to the Release 12 upgrade. The product has been improved in many areas to shift towards a process orientation and away from a silo management approach. Significant documentation exists on the Oracle website, metalink and other places that highlight product improvements in many areas. Organizations that had implemented earlier releases of the eBusiness Suite and have not reviewed customizations and bolt-ons recently have found that standard functionality will enable them to streamline operations by eliminating time-consuming and costly customizations. By taking this step, it reduces support cost and inefficiency and improves an organization's capabilities for subsequent upgrades.

Realistically, one of the primary drivers for upgrades is the need to stay "in" support. If there is a problem with your Oracle system and you contact Oracle Support, there will be "issues" if you are not on a supported version of the product. The *Oracle Lifetime Support Policy for Oracle Applications* is available on Oracle.com and lists support coverage dates for all of Oracle's applications. There is also an *Oracle Lifetime Support Policy Oracle for Technology Products.* To locate these documents, query: lifetime-support-applications on Oracle.com. The revisions come out monthly so always check to ensure that you have the most current version. As of the February, 2009 edition, it should be noted that there are only two releases, 11.5.10 and Release 12, that are currently under Premier Support. Release 11.5.9 is in the first year of Sustaining Support and Oracle has agreed to provide Severity 1 production bug fixes through June, 2009. Sustaining support ended for Release 11.0.3 in January, 2009.

Types of Upgrades

There are multiple ways to bring Oracle Applications to a current release state. In order to avoid the discussion of re-implementation vs. upgrade (a topic generally worthy of its own White Paper) we will focus strictly on upgrades and categorize the options as two, a Technical Upgrade and a Full Feature-driven Upgrade.

Technical upgrades are the prevalent method used for minor, dot-release upgrades. A dot-release upgrade describes an inter-version release (i.e. 11.5.8 to 11.5.9) that primarily entails technical product enhancements and bug fixes. Typically there are limited functionality improvements involved in dot release enhancements and the focus is on the tech stack enhancements. As such, this effort is usually led by the DBA and technical team with limited involvement from the functional resources and user-community. Involvement from Super Users and affected functional resources comes in the form of application testing prior to go-live and support once the new release is in production.

This is a less expensive, limited upgrade option and does not require as much planning, management, training, or testing. The primary cross-functional interaction is application testing and there are typically few or no changes to business processes to incorporate new application features. While the benefits outside of the tech stack aspects may be minimal, the investment in time, effort and resources is also limited. Customizations, extensions, and 3rd party bolt-ons are continually maintained. Many organizations that perform regular upgrades generally limit the effort to Technical upgrade unless there is a compelling internal or external business reason to consider the wider ranging option. Because of this, they do not spend much effort evaluating the new features and functionalities of the target release.

Full Feature-driven upgrades are wide-ranging company initiatives that are inclusive across IT and Business areas and align software enhancements with Business objectives. They are treated as wide-ranging projects that require Executive Sponsorship and active participation throughout the organization. Significant effort is expended in the Planning stage to evaluate new application features and functionality and determine whether changes should be made to current processes. Retiring customizations and implementing software-enhanced best practices would increase Change Management and functional requirements for the project and fuel the need for additional training to support the new application processes. All of this would increase the need for more management of the project and require active Executive support. While this effort is clearly more expansive (and expensive) than a limited technical upgrade, the returns garnered from the changes would be expected to offset the increased investment and provide a positive return on investment.

Upgrade Overview

The process flow diagram shown in Exhibit 2 illustrates a typical Upgrade Process Flow regardless of whether it is a Technical migration or Full Feature-driven upgrade. As shown on the diagram, the key variable component is the amount of effort expended in the "Evaluate new release" / planning step.
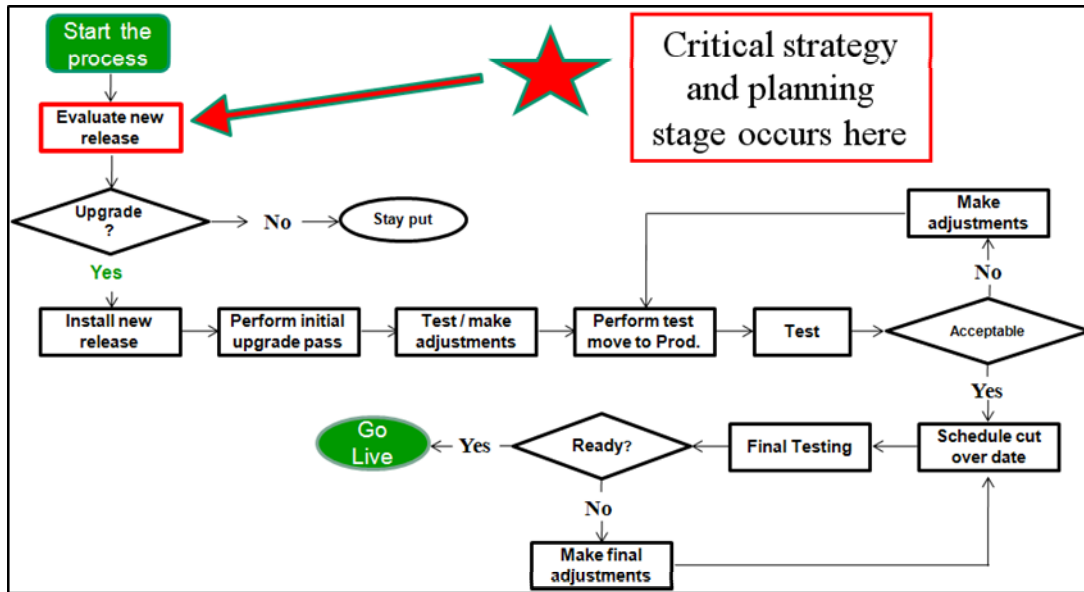
HIGH LEVEL R12 UPGRADE TIMELINE / OVERVIEW

Exhibit 2: Typical Upgrade Process Flow

One essential element that it is not readily apparent from this diagram is the iterative nature of the process. It is critical that at least three iterations of the upgrade are performed prior to the move to production. If timing will allow scheduling of more than 3 iterations it should be considered. Each iteration contains testing that is stepped up from iteration to iteration as it progresses from the DBA testing in iteration 1; to super-using unit testing in iteration 2; to integration / stress testing and more extensive end user testing in iteration 3. The third iteration is also considered the dress rehearsal as critical timings are captured and used to estimate the outage time for the cut-over schedule.

There are a few critical task elements that cause tremendous variability in the timing of an Upgrade project. As mentioned above, the amount of effort expended in the planning step can add significant time to the project timeline depending upon how widespread and comprehensive the planning process is. In addition, should a substantial Change Management, process redesign, or training effort be required, they would all have to be scheduled in conjunction with the upgrade. The third area of variability is present in all upgrades and is the amount of technical development work that will be necessary to update and test any customizations or 3rd party bolt-ons that are being brought forward. Exhibit 3 illustrates a potential upgrade timeline using a 3 iteration process.

The length of the Planning phase is determined by the organization's desire to evaluate current processes and adopt new features and practices as part of the upgrade. For the purposes of the illustration we have assumed that the customization development work is minimal and proceeding in parallel.

HIGH LEVEL R12 UPGRADE TIMELINE / OVERVIEW

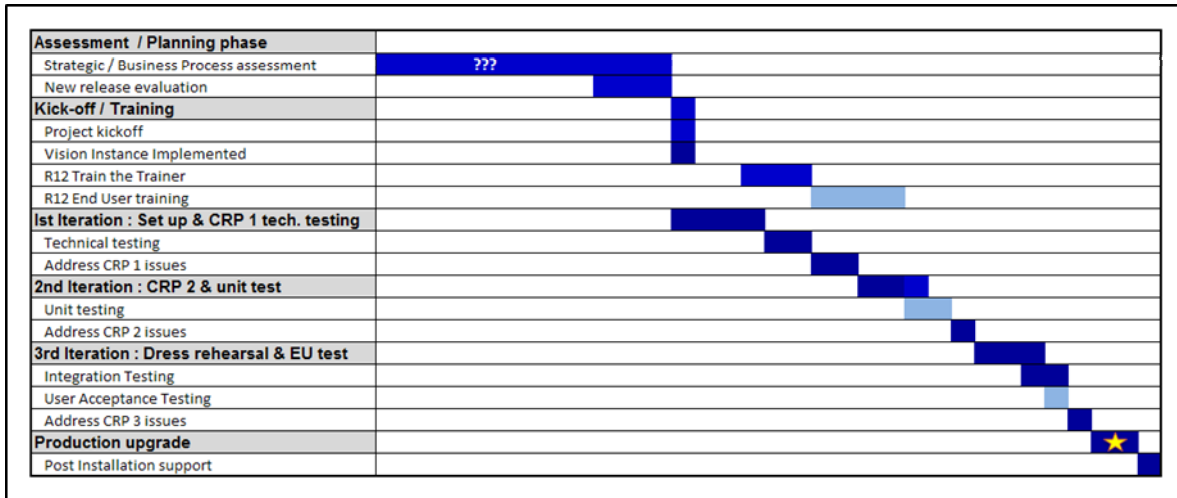| Assessment / Planning phase		
Strategic / Business Process assessment	???	
New release evaluation		
Kick-off / Training		
Project kickoff		
Vision Instance Implemented		
R12 Train the Trainer		
R12 End User training		
Ist Iteration : Set up & CRP 1 tech. testing		
Technical testing		
Address CRP 1 issues		
2nd Iteration : CRP 2 & unit test		
Unit testing		
Address CRP 2 issues		
3rd Iteration : Dress rehearsal & EU test		
Integration Testing		
User Acceptance Testing		
Address CRP 3 issues		
Production upgrade		★
Post Installation support		

Exhibit 3: Example of High level Upgrade Timeline

The level of effort and depth of participation throughout the organization would vary based on the extent of the change to business processes as well as the complexity and adoption capacity of end users. More training, project management, and Executive sponsorship will be required in relation to the size and speed of change required.

Upgrade Planning

Planning processes vary from organization to organization in both frequency and scope. Because upgrades are not an annual occurrence, it is important that a repeatable, comprehensive process be employed when assessing an upgrade. Whether it is to be a Technical or Full Feature-driven upgrade, the elements for consideration should be consistent. Determination needs to be made of how big of an effort an organization is willing to take on and what the expected benefits will be. A resource assessment, in addition to who is going to do the work should include the following areas: Hardware / platform / network capacity, application testing strategy, training tools and capacity, and Oracle product strategy. Effective facilitation of the upgrade planning process will heighten focus, decrease scope creep, and yield a more concise project charter to guide the upgrade. Many organizations struggle with this planning process because its lack of frequency and requirement to work across organizations.

Upgrade Project Methodology

Years of experience performing upgrade projects have enabled us to build a repeatable process that yields successful upgrade projects. There are eight components that contain significant detail and depth. For the purposes of this paper, we are presenting a high-level fly over of the basic elements.

Secure Active Executive sponsorship and support: The extent of the upgrade project will determine the level of activity needed by the Executive sponsor. If the project is important to the organization, this is a critical requirement. There needs to be high level, visible support to validate project importance and provide crisp, timely decision-making. Too often this element is over-looked and ends up affecting the outcome of the upgrade project.

Communication and transparent reporting on progress: The importance of widespread, effective communication escalates as the expected change increases. In other words, the more end users will be impacted (both in number and intensity) by a project, the better the upfront communication needs to be. Knowing your audience and what is important to them is a key element of this component. Relevant information needs to be disseminated at the right frequency to maintain interest and excitement about the coming changes. The tone should be positive, but, above all, it must be transparent and honest. Previously mentioned changes to the R12 user interface and functionality changes

to widely used modules dictate that a substantial communication and change management effort will be required for this upgrade.

Gather the proper materials: There is a significant amount of information available through Oracle's Metalink to guide organizations through upgrades. They key is to not get lost and bogged down in information overload. Among the various Implementation and User Guides is the E-Business Suite Upgrade Guide that can be found in Metalink note 461705.1. In addition, the eBusiness Suite R12 Information Center is valuable resource that also contains Release Content Documents that detail the changes to the applications. Caution is advised when reviewing these documents and they should be cleaned up and simplified before being distributed to non-expert users.

Other critical documentation that should be compiled in the early stages of the project (as early as possible) includes a comprehensive list of customizations and extensions. This includes all reports, forms, views, extracts, triggers, custom reports (in all forms), and interfaces. Workflow and Account Generator definitions should also be documented as well as oracle supported extensions and anything that touches Oracle that didn't come shipped from Oracle Corporation. This investigation needs to be exhaustive in order to guard against any "gotcha" customizations surfacing late in the project and derailing the development efforts.

Identifying and securing a library of viable test cases and detailed test scripts will improve testing and eliminate unnecessary re-work. Always include and use test cases from past 11i implementation or upgrades and be prepared to add some test cases for new features or functionality. Test case should be modified to reflect any and all new or changed functionality. Be sure that your test cases have specifics about test data and expected results and check them back in to the library for next time / upgrade or patching.

Because all aspects of the Technology Architecture should be evaluated in the planning and assessment stage, all hardware, storage, network, and desktops should be mapped, inventoried, and classified. Particular attention should be paid to availability of adequate server space necessary to handle a viable instance strategy to allow flexibility during the upgrade.

Recruit the right team members: Many times organizations focus on the expected hardware and software costs and downplay the internal soft costs. To soften this impact, organizations have a tendency to under staff an upgrade project or use inexperienced resources. Both of these are dangerous to the project and could have a serious impact. Exhibit 4 illustrates the Extended Team responsibilities that need to be covered in an upgrade. It should be stressed that these are responsibilities and not necessarily people / headcount. The extent of the involvement will be determined by the scope of the upgrade.

EXTENDED PROJECT TEAM RESPONSIBILITIES FOR R12 UPGRADE

Management / Executive Sponsor			
Project Manager			
Technical Lead	Business Analyst Fin. Apps	Business Analyst SC & Other	Trainer
DBA / Sys. Admin	Developer / Analyst	Business Process Owners	Super Users
Help Desk / Network Support			
End Users / Testers			

Exhibit 4: Extended Upgrade Team – Responsibilities

As previously discussed, it is imperative that there be active, legitimate Executive Sponsorship and support of the project. The larger the effort, the greater the expected support. Depending upon the scope, the Project Manager effort could range from part-time internal to full-time internal and external staffing. Change management and active communication are two key elements of the Project Manager role. The eight technical and functional responsibilities represented by the boxes assume a fairly basic Oracle Apps environment and are not at all representative of the level of effort needed in a typical project. All upgrade resources should have specific project responsibilities and accountability that is documented and published. This will aid in the understanding of all facets of the upgrade project.

In an R12 upgrade, whether it is small or large scope, the trainer will be necessary to manage the changes that will be required by both the user interface look and feel as well as the new functionality of the key applications. This will also require that your support staff be trained and ready to assist with support issues that will arise as part of the go-live process. End users, the largest category will be involved in the testing process and will determine success or failure of the upgrade. As such, they should be given as much opportunity as possible early in the process to experience the new applications. Many organizations employ a train the trainer approach to this effort and supplement with on-line training, FAQ's, and Computer Based Training (CBT's) that include videos. That has proven helpful for retraining purposes as well as new employee orientation processes.

Organize, create, and update critical documents: In addition to the previously discussed documents that are gathered in the Assessment phase (i.e. customizations, hardware architecture, etc.) it is important to create two specific project communication documents. The two documents are a Master Checklist and a Master Impact List. It is important to build a Master Checklist and list every step. We recommend downloading the Maintenance Wizard to a spreadsheet and using that as starting point. Make sure to capture timings for pre, during, and post patching activities. It is imperative to list and assign every task.

The other critical document is the Master Impact List. It is a complete listing of all potential changes that should require investigation or possible retesting and it drive ALL testing activities. It applies to standard Oracle features and customer-created impacts and covers items sorted by module. Exhibit 5 shows an example of a Master Impact List.

EXAMPLE OF A MASTER IMPACT LIST FOR PAST PROJECT

Item	Module /Impact Description	Classification	Status	Assigned (Who)	Pack?	Ranking (H,M,L)	Notes
PO							
	Custom Pricing APIs	Optional	Open		11.5.10		Custom pricing date api; Custom requisition pricing api; Custom PO/Release pricing api;
	Purchasing Documents Open Interface Enhancements	Optional	Open		11.5.10		Add new lines and associated shipments to an existing standard PO in Approved or Incomplete status and then initiate the approval process.
	Autocreate and PO Entry Usability	Mandatory	Open		11.5.10		Increased size of autocreate window to display more requisition lines; Increased size of Enter PO window to display more order lines; Reduced pop up messages; Provided "Reassign Buyer" option in the AutoCreate window.
	Procurement Contracts - See Notes Below	Optional	Open		11.5.10		Contract Management capabilities (Oracle Procurement Contracts)
Sourcing							
	Negotiation Scoring	Optional	Open		11.5.10		Negotiation Level Attributes; Scoring Templates; Subjective Scoring; Analysis Scenarios;
	Award Summary	Optional	Open		11.5.10		Provides a complete view of the award recommendation for sourcing team members and designated award approvers.
	Award Approval	Optional	Open		11.5.10		List of approvers is automatically generated based on rules set up in Oracle Approvals Management
	Amendments	Optional	Open		11.5.10		Manage changes to a published sourcing event even after suppliers have begun responding.
	Document Printing	Optional	Open		11.5.10		Buyers and Suppliers can generate copies of the sourcing package in PDF format.
ENG							
	Increase Change Type Name Length	Mandatory	Open		11.5.10		
	Electronic Names and Electronic Signatures (ERES) Support	Optional	Open		11.5.10		Oracle Quality
	MLS Support for Change Types	Optional	Open		11.5.10		Change types can be entered in Multiple languages
WIP							
	Outside Processing Enhancements	Optional	Open		11.5.10		Improved communication between mfg and procurement functions when qty or date changes occur
	Component Picking Enhancements	Optional	Open		11.5.10		Link a Supply Subinventory to a Machine resource
	Electronic Records and Electronic Signature Support (ERES)	Optional	CLOSED		11.5.10		For FDA Regulations

Master Impact Analysis - Upgrade to 11.5.10 Initial version

Exhibit 5: Master Impact List example

Among the information captured and reviewed are classifications, statuses, assignments, prioritizations, and notes. Examples might include items such as 3rd Party Check Printing System that may need to be retested or replaced

with XML / BI Publisher or a custom form that may need to have the customization reapplied to standard Oracle form or a new report available as standard functionality.

<u>Analyze and Plan – Use a three round iterative method</u>: As previously discussed it is critical to use an iterative process with graduating level of testing through iterations one through three. An important aspect of this process is to get clarification on unclear steps early in the project. Missed steps are costly and a serious risk to the project timeline. Another important aspect of the first iteration is the creation of an R12 vision instance in order for the functional team to begin to gain familiarity with the R12 applications. Establishing a viable and available sand box environment is important in the R12 upgrade. In addition, another key element is to gather timings and statistics related to patching.

Use of the Master Impact List will help drive testing as well as investigation of technical impacts. Work with the full project team to continually gather, address, and resolve issues on the Impact List. Once issues are being resolved and timings have been established the detailed cutover plan should be finalized and properly communicated. Experience has shown that an effective cutover will entail the use of a War Room and detailed processes to quickly handle any issues that arise. At the end of the project, the ability to effectively address End User issues may end up being the lasting impression the influences the perception of a successful or failed upgrade.

<u>Execute a Serious and Dedicated Testing Process</u>: Testing is one of the most important aspects of an upgrade project and the one that organizations are most likely to cut corners on. This can't be allowed to happen. At times companies take the attitude that the applications should "just work" so they don't need to waste time testing everything. Another bad idea is the notion that things can be fixed after the "go-live". That is called testing in Production and is a recipe for disaster. My favorite is when people state that "Oracle has already tested" the product so they can scale back the testing scope. As previously discussed, there should be graduated levels of testing through the three iterations and time scheduled after testing to fix any problems.

Other things to keep in mind when testing include bringing back your veterans from prior upgrades to assist with the testing. They will be faster and more efficient and able to recognize issues more readily. Always know what results you are expecting and use real data and assign test cases to specific individuals. There should always be a procedure or system for logging test results and resolutions. The process should require details and screenshots and the there should be a sign-off to ensure accountability. Some organizations rely heavily on testing tools. While they are invaluable, effective, and provide additional value in certain circumstances (i.e. stress testing), they can't fully replace user involvement.

<u>Experience matters. Have a leader and bring back the vets</u>: It is highly recommended to use experienced team members to speed up speeds successive iterations. For consistency and efficiency we recommend that an upgrade Tiger team be established to push the effort forward. Previous plans can be re-used as a reference point in building the new plan. We also recommend that Oracle Release Content Documents on New features be scrubbed before giving   to End users in order to simplify them and make them less intimidating. Communication with management also needs to be straight forward and the project complexities should be adequately explained to ensure transparency and heighten support.

Other Sources of Information

In addition to Metalink and the Oracle website, there are other information sources that contain excellent Release 12 and upgrade information. User group conferences (local, regional, and national) generally supply speakers who have real world experience working with the applications and can supply valuable lessons learned. From a blog perspective, Stephen Chan's is highly recommended. It is honest, straight-forward, and readable. You can't beat that! It can be found at: http://blogs.oracle.com/schan/. In addition, the *Oracle Applications - Tools and Technology* on Oracle.com has a wide assortment of articles, White Papers, presentations, and a good summary on new features. They can be found at: http://www.oracle.com/technology/products/applications/index.html. And last, but not least, excellent consulting organizations like O2Works are an excellent source of real life Release 12 information. We have more than a have dozen successful R12 projects under our belt and were recognized by Oracle for our work on one of the first successful R12 Implementation projects. We would be happy to hear from you.

Summary

For organizations using competitive ERP systems, upgrades are a part of life. Whether it is a limited technical upgrade that occurs every other year, or more extensive Feature driven company-wide project, there are basic methodology components should be used and re-used for successful results. As an organization who deals with upgrades on an on-going basis we have the tools and skills to assist in delivering results.

Because of the changes to the Release 12 applications, it is an upgrade that requires widespread cross-functional participation and active Executive Sponsorship. It is not a typical dot release upgrade and treating it as such will minimize results and generate frustration and disappointment among end users. Take the opportunity to assess the new features and functionality delivered with Release 12 and determine if it is time to retire old customizations or, at a minimum, plan to augment your planning timeline to address the additional training and Change Management needs that the R12 upgrade will require.

About…

O2Works LLC – Founded in 2001 with its principal offices in Dallas, Texas, O2Works focuses strictly on providing expert, hands-on consulting resources for the Oracle e-Business suite of applications. *Putting Oracle to Works* means getting the most out of your Oracle investment. O2Works' highly skilled consultants have more than 11 years of applications experience as well as strong business backgrounds and have worked the Oracle Applications dating back to release MPL5. They are involved in, or have completed, multiple R12 implementations, re-implementations, and upgrade projects and were cited by Oracle for its work in completing one of the first successful R12 implementations for American Transmission Company.

Since its inception more than seven years ago, O2Works has grown its client base to more than 130 satisfied customers. All of its clients are 100% reference-able. O2Works is a Certified Oracle Partner firm and are very active in the Oracle Application User Group, where it is a Level 3 partner. Their management team and consultants invest significant amount of time and effort in Oracle Application User Group (OAUG) activities. In addition to being presenters at numerous events, they hold a variety of positions for various national and regional groups. Contact O2Works at info@o2works.com.

This paper and author – This White Paper accompanies a presentation that will be delivered at the annual Oracle Applications User Group (OAUG) Collaborate '09 Conference to be held in May, 2009. The presentation has been delivered at the North Central Oracle Applications User Group (NCOAUG), the Southeastern Oracle User Group (SEOUC) and is scheduled to be presented at the Atlanta Oracle Users Group.

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