Release 12 Upgrade Services -- *Contents*

Upgrade Service Offering

TruTek specializes in e-Business Suite Upgrades and e-Business Suite Training, both functional and technical. Our functional and technical consultants have years of experience performing EBS upgrades. Our years of upgrade experience allow TruTek to guide your company through the upgrade process.

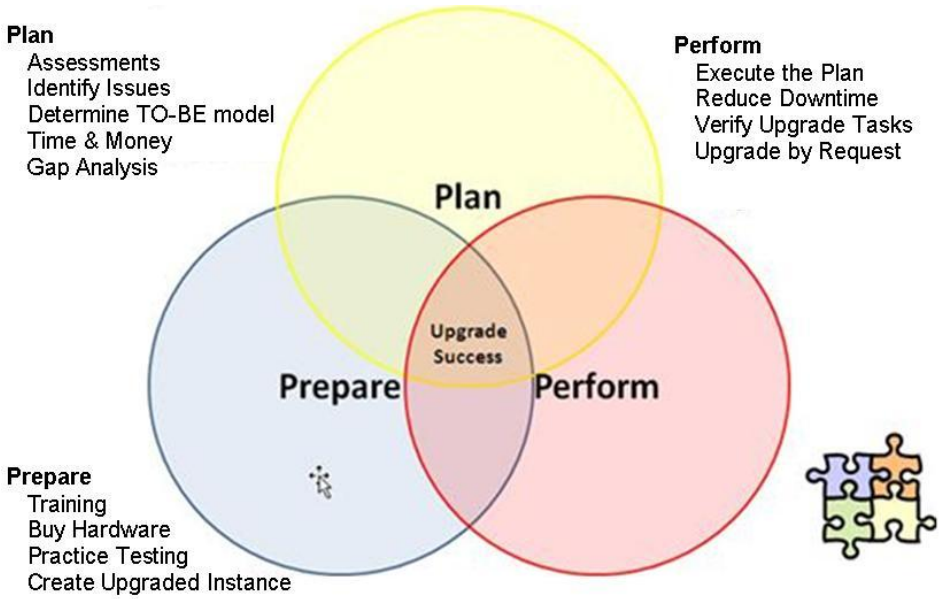
Typically, most companies do not need to know how to perform the R12.1 Upgrade; they need to know how to use the system after the upgrade is complete and participate in User Acceptance Testing, during various phases of the upgrade process.

TruTek provides the following assessment services: 10g and 11g Database Health Checks, R12.1 Upgrade Assessments (both functional and technical), and R12.1 Customization Assessments. Additionally, we offer Technical and Functional Upgrade Services, Customizations Upgrade Service, Test Management Service, Functional Testing, and Linux Migration Service.

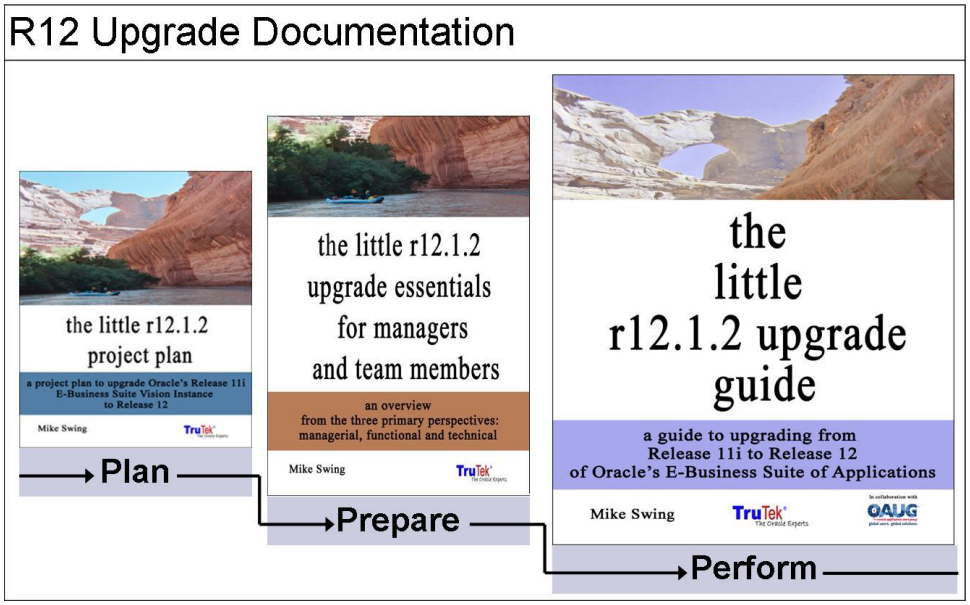
TruTek offers a full spectrum of Oracle consulting services and Oracle training classes.

TruTek Methodology

P^3 Upgrade Methodology



TruTek has experience in each area of the P^3 methodology outlined above, as well as AIM and Fast Forward methodologies. We have resources available that serve as guides in the planning, preparing, and performing stages. With our upgrade services, we can help you to maximize the return on your Oracle investment.



Upgrade Partnership

TruTek can perform a turnkey upgrade, completing all the functional and technical tasks, including project management, custom development, and training your employees on the use of the new system. We prefer, however, to form a partnership to facilitate:

Knowledge Transfer – TruTek can train your employees to perform the upgrade, but there is no replacement for experience. TruTek consultants have years of experience upgrading Oracle Applications. By working side-by-side with our consultants, your employees are mentored in a more practical client-centric environment.

Efficient Use of Subject Matter Experts (SMEs) – include client employees and TruTek consultants on the upgrade team. Client employees that are "Superusers" typically understand the client's business processes better than anyone. TruTek consultants understand the upgrade process better than anyone. By combining this knowledge on the upgrade team, the client achieves an efficient upgrade with the client's users prepared to use the system and understand the changes R12.1 presents to your business processes.

Cost-Effective Use of Resources – We augment your staff's expertise and look forward to creating a cost-effective team.

Efficient Use of Training Budget – We recommend that you start and finish your upgrade with training. TruTek offers training covering both technical and functional topics. Your DBA team might start with our upgrade training, where we work together to upgrade Oracle's Vision instance to the latest release of R12. This offers clients a chance to see what types of issues might come up, including operating system, database and E-Business Suite functionality issues. It also allows Superusers to see what types of functional-specific issues will need to be addressed for a production upgrade.

R12.1 Upgrade Project Management

The success of the upgrade project is dependent on effective project management. TruTek project managers know what to expect during an upgrade and can help avoid costly mistakes. TruTek's upgrade

project managers understand the dependencies in the upgrade project plan and can help your organization smoothly navigate the R12.1 upgrade.

Typically, the upgrade to Release 12.1 from 11.5.10.2 will require a 3 to 4 day weekend for downtime, starting at the close of business on Wednesday or Thursday, for a 3 or 4 day downtime window.

The database upgrade generally takes 8 to 12 hours, If the database upgrade is complete prior to upgrade weekend, it's possible to do a 2 day applications upgrade from 11.5.10.2.

The Applications portion of the upgrade will take 14 to 32 hours depending on the speed of the server and the amount of data to upgrade. Testing will take 8-12 hours after the upgrade is complete.

Several backups should be taken during the upgrade process, and this adds more time to the schedule. Normally, a backup of 300-400 GB of datafiles and application files, takes about 4-6 hours, unless block virtualization software is used to make snapshots, and then backups take a few minutes, if done correctly. Discussion and planning of your backup strategy are essential not only to the upgrade, but to follow-on use of the upgraded environment.

10g and 11g Database Health Checks

Any system can benefit from periodic reviews--the corresponding improvements quite often result in improved performance and costs savings. Your Oracle system is no different. TruTek has some of the top experts in the business and is uniquely capable of improving your system's performance and keeping on top of corruption. Mike Swing, author of the little r12.1.2 upgrade guide, has been requested by Oracle Consulting Services to use his services to help Oracle's clients improve their performance. Let him do the same for you.

The TruTek Oracle Database health check is designed to spot performance issues and make certain that your database is fully optimized. The health check begins with a characterization of the workload and a review of Initialization parameters. TruTek will then help to identify bottlenecks by using wait statistics (utilize session). The health check will also include a system performance review by examining database memory (SGA, PGA), Input/Output disk Capacity and iops, and an examination of SQL tuning.

R12.1 Upgrade Assessment Service

The R12.1 Upgrade Assessment Service is made up of the following assessment services:

1. Functional Upgrade Assessment
2. Technical Upgrade Assessment
3. Customization Upgrade Assessment

Functional Upgrade Assessment Service

We work with you to determine if R12 is right for you. We're skilled in reviewing your business processes to spot opportunities for streamlining work, tightening controls and adding efficiencies that save time and money. Our expert assessment allows you to determine how well the next release will meet your needs and to estimate your upgrade costs. For a fee, TruTek's Upgrade Assessment gives you confidence that investing in R12 will bring real benefits.

The R12 Functional Upgrade Assessment Phases Include: Audit, Report, Manage

Audit

Understand the System Architecture
- Modules in use
- Modules to be implemented

Identify business issues
- Issues must be clearly defined and measurable
- Set performance targets
- Prioritize business issues

Identify the gaps between the current release and the new R12.1 release to determine functional, platform, network and operating system gaps. Functional experts are required to map custom processes from 11i to R12.1. Because of new functionality in R12, existing custom processes may be replaced by new functionality in R12.1.

Assess the database, reporting and interface transition issues
Evaluate management controls required: timing, resources and training issues
Recommend an approach (Upgrade vs. Re-Implementation)

Manage

Functional Application Tuning
- System setup affects performance
- Improve Functional Processes
- Review User Defined Functions
- Review Fast Formulas

Report

Document all issues and solutions
Summarize Performance Gains for C level executives

Get Answers

Our functional consultants combine best practices learned at other organizations and Release 12.1 new features knowledge with what they learn about your organization's unique business processes, to help determine:

- Where do our current processes run into issues?
- Would R12.1 address them?
- Are you getting the reports needed from the system?
- Would R12.1 make a difference?
- Do you have any control weaknesses?
- Would R12.1 resolve them?
- Would you realize enough business benefits from the upgrade to upgrade now?

Functional Area Best Practices

For each Oracle module you license, we interview key personnel involved in the corresponding business processes. By systematically walking through models of best practices in each functional area, we learn how your own practices conform to, or deviate from, the model. We understand why you do things a certain way and why you experience problems…always on the lookout for potential bottlenecks, control risks and possible improvements.

Then we prepare recommendations on how you might make the most of Oracle technology and tell you whether upgrading to R12.1 is likely to bring sufficient business benefits. Our final report includes:

- A review of how well you are currently using your Oracle software.
- Recommendations on the ideal future state of your E-Business applications.
- An estimate of the costs of upgrading to Oracle Release 12.1.

Technical Upgrade Assessment Service

The technical assessment investigates:

- Future Capacity Requirements
- Tech Stack Version Compatibility and Patch Levels, including CPUs
- Current Issues from Log files
- Current unresolved service requests
- Hardware

If the plan includes buying new hardware, consider migrating from the current 32-bit platform to a 64-bit platform. The following are reasons to migrate to a 64-bit environment:

- Release R12.1 doesn't support running the Application Tier on a 64-bit hardware platform, however, Release 12 does support 64-bit architectures for the Application Tier.
- Release R12.1, Release 12, and Release 12.1 all support running the database on a 64-bit operating system, in a split or mixed architecture.
- There are five hardware platforms supported for Release 12.1 and all of the platforms support a 64 bit version.
- There are less memory restrictions on a 64-bit machine because of additional addressable memory.
- Because of more addressable memory, more users can be supported on each Application Tier.
- MRP and other programs run much more quickly in a 64-bit database.

R12.1 Customization Assessment Service

- Identify all customizations
- Check-in all customizations into configuration management
- Determine customizations that are replaced by new R12.1 functionality

R12.1 Functional Gap Analysis Service

Introduce Functional Financial R12.1 New Features

Multiple Organizations
Global Accounting
Financial Enhancements
Release 11i GL SoB
Release 12 Subledgers
Multi-Org Access Control (MOAC) – Subledger Accounting (SLA)
Subledger Accounting Model
Sub-ledger Currency Views
Ledger Sets
Integrated Financials
Subledger Architecture

Multiple Reporting Currencies Shared Services
Multi-Org Access Control (MOAC)
E-Business Tax
Payments

Review Business Process Best Practices for R12.1

Identify business areas that should adopt best practices that may differ from current business practices.

Further investigate the functional gap by examining the following:

- Reasons for the change and areas that benefit from new functionality
- Functionality that is temporarily disabled or has been made obsolete
- Changes to user interfaces, terminology or concepts, and menu options

R12.1 Technical Upgrade Service

The Technical Upgrade Service migrates the customer's E-Business Suite R 11.5.10.2 environment to E-Business Suite Release 12.1. TruTek's Upgrade Service is designed to allow for ease of maintenance

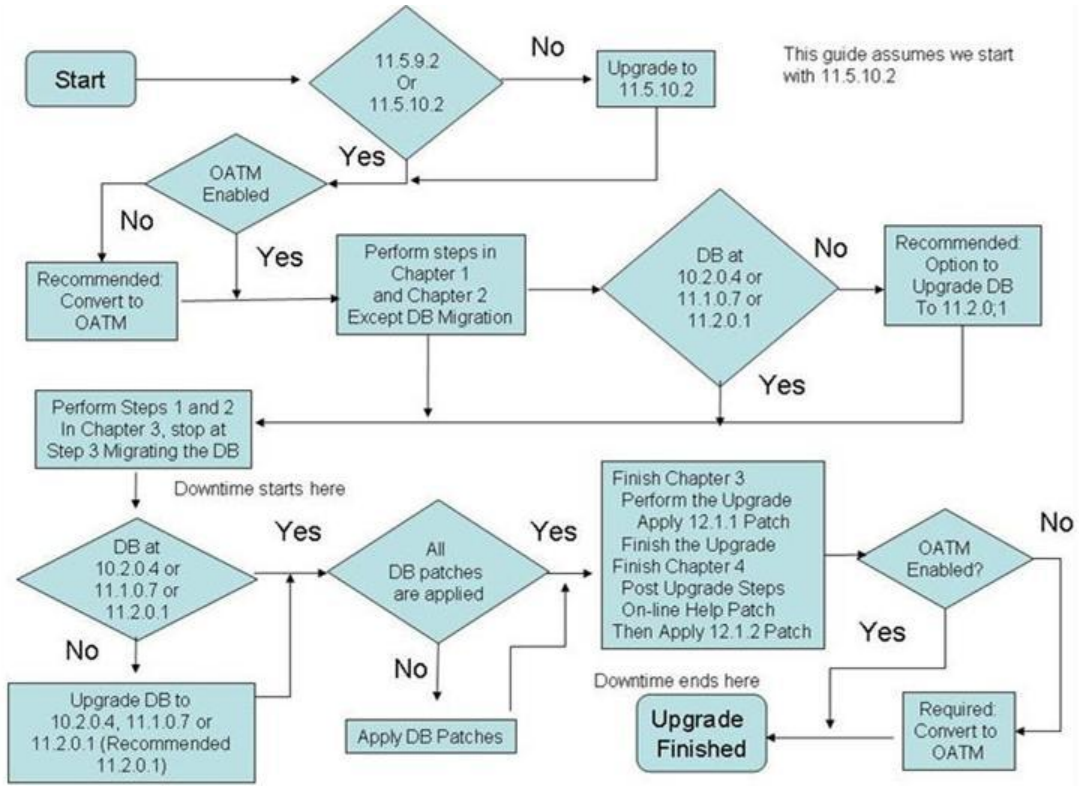
and the ability to manage customizations. This service is delivered using Oracle tools, methodologies, and best practices, and includes the following:

The Technical Upgrade Service includes an upgrade of the Oracle Application Server, Oracle Database, Oracle Forms and Reports and Oracle Applications to Release 12.1.1 component version levels.

The Technical Upgrade Service helps ensure successful implementations by aligning best practice architecture and operational standards. The Technical Upgrade Service includes:

1. Management of technical tasks
2. Guidance for standards, procedures, environments, and tools
3. Technical guidance regarding compliance requirements
4. Perform the upgrade of Oracle Applications to Release 12.1
5. Go-Live support

Overview of Technical Upgrade



Upgrade Timeframe

Typically, the upgrade to Release 12.1 from 11.5.10.2 will require a 3 to 4 day weekend for downtime, starting at the close of business on Wednesday or Thursday, for a 3 or 4 day downtime window.

The database upgrade generally takes 8 to 12 hours, If the database upgrade is complete prior to upgrade weekend, it's possible to do a 2 day applications upgrade from 11.5.10.2.

The database upgrade can be completed independent of the Release 12.1 applications upgrade and if possible, should be completed weeks or months before the Release 12.1.1 Upgrade.

The Applications portion of the upgrade will take 14 to 32 hours depending on the speed of the server and the amount of data to upgrade. Testing will take 8-12 hours, after the upgrade is complete.

Backups can be time consuming and recovery should be tested before the upgrade weekend.

R12.1 Functional Upgrade Service

The Functional Upgrade includes evaluating the impact of Release 12.1 on the current business flows, determining the set-ups for R12.1 business processes, and assistance with functional Service Request resolution. The functional upgrade includes steps to:

1. Tune Applications Setups & Business Procedures
2. Perform pre-upgrade downtime reduction steps
3. Complete the post-upgrade verification steps

Functional topics that should be carefully investigated:

- Steps you can take to verify that all transactional data is upgraded as expected
- Suggestions for reducing downtime, for example:
    - Consider running depreciation with or without closing the current period as permitted by business prior to the upgrade
    - Prepare and post these pending Mass Addition lines before the upgrade: GL Journals Entries Pre-Upgrade consists of the Program - Prepare Posted Journals Before Upgrade concurrent program

R12.1 Customizations Upgrade Service

Configurations, Extensions, Modifications, Localizations, and Integrations CEMLI.

The CEMLI Upgrade includes determining technical impact of Oracle E-Business Suite Release 12.1 on CEMLIs, upgrading CEMLIs to the new technology stack, retrofit of CEMLIs for compatibility and usability on Oracle E-Business Suite Release 12.1.

Identify all customizations
Check-in all customizations into configuration management
Determine customizations that are replaced by new R12.1 functionality
Re-Code customizations
Prepare Customization Upgrade Implementation Plan
Customization Configuration Management

Test Management Service

The lack of effective testing is the single most frequent cause of failure to "Go Live". Testing is a dedicated job. Most companies only lend a resource to a test initiative. The Test Manager should be a dedicated resource. The Test Managers tasks:

1. Mentor the Testers
2. Stress the importance of testing on the organization
3. Ensure adequate testing
4. Monitor and improve the Test Development process
5. Coordinate testing with the technical and functional staff

Functional Testing

Functional Testing includes:

- Updating customer's existing E-Business Suite test scripts to reflect valid navigation paths for Oracle E-Business Suite Release 12.1
- Develop new Oracle E-Business Suite Release 12.1 test scripts
- Perform regression testing

Linux Migration Service

The Linux Migration Service supports customers executing a migration to Linux hardware, by:

- Supporting Red Hat Linux and Oracle Enterprise Linux
- Recommending Database related Operating System packages
- Perform Migration to Linux
  - Single Node
  - Single Node to RAC
  - RAC to RAC
- Support the conversion of interfaces and customizations

Oracle Applications Training

Develop Training Plan – Knowledge Transfer to Client
The lack of training contributes to the users' feeling of frustration.

Functional Training Classes

R12.1 Financials New Features relative to 11i
Subledger Accounting
R12.1 Approval Management
R12.1 User Management – Security
R12.1 Functional Upgrade
R12.1 System Administration

Technical Training Classes

BI Publisher
OA Framework
R12.1 Technical Upgrade
R12.1 Application DBA Concepts and Administration
Workflow

Performance Tuning Assessment Service

Create Performance Baseline

Oracle Database

Identify Oracle Memory Allocation

Identify Resource Contention
CPU, Memory, Network, Disk IO
Review blocking locks, shared pool and latch contention
Identify the Database Bottlenecks
v$session_events
v$session_wait
Identify the Application Bottlenecks
Identify 'Hot' Tables
Insert, Update, Read, Select for Update
Optimize Table Design
INITRANS
Identify "bad" SQL Statements

Operating System
Identify the Operating System bottlenecks

Oracle Application Server
Identify the Application Server bottlenecks
Heap Memory Settings for OC4J Containers
Garbage Collection

Oracle Applications
Identify the Network bottlenecks
Implement Dead Connection Detection
Tune the SQL Access Path
SQL Trace

GRC (Oracle Applications Governance and Control) Assessment Service for Oracle Financials

In order to effectively map the policies, procedures, and other manual/automated controls to applicable laws/regulations in preparation for a GRC implementation, the client may consider identifying its Oracle security baseline. This can be achieved by performing a security and controls assessment of Oracle Financials for specific modules and supporting infrastructure. The review can use a risk-based methodology to assess the following:

- Oracle Application Security: assessing the creation and assignment of Oracle Responsibilities (application security profiles) for proper segregation of duties.

This includes sampling Oracle Responsibilities and users to ensure that excess privileges have not been granted:

- Business Process and Manual Controls: Assessing the adequacy of the business process and manual controls that support the application (i.e., monitoring controls);
- System Administration: Assessing the controls around the administering of user IDs and passwords, system auditing, and user monitoring procedures;
- Oracle Database: Assessing the security and controls over the database; and,Operating System: Assessing the security and controls over the operating system.

The GRC Assessment Service evaluates the following:

Access to sensitive functions

Organizations are unable to identify who within their business has access to sensitive Oracle functions, such as amending supplier bank accounts or updating salary information.

Segregation of duties
Due to the complexity of the Oracle Access Controls model, organizations struggle to report on (let alone assess) whether they are breaching segregation of duties

Business Process Security
The organization is unsure whether their business processes are utilizing appropriate Oracle system and configuration controls

Database security
The controls at the infrastructure layer are rarely considered and therefore it is unknown whether the database and infrastructure underpinning Oracle is secure

Limited Audits
Typically auditors only conduct limited tests around general computer control areas (such as password controls), and therefore the true status of your Oracle controls is unknown.

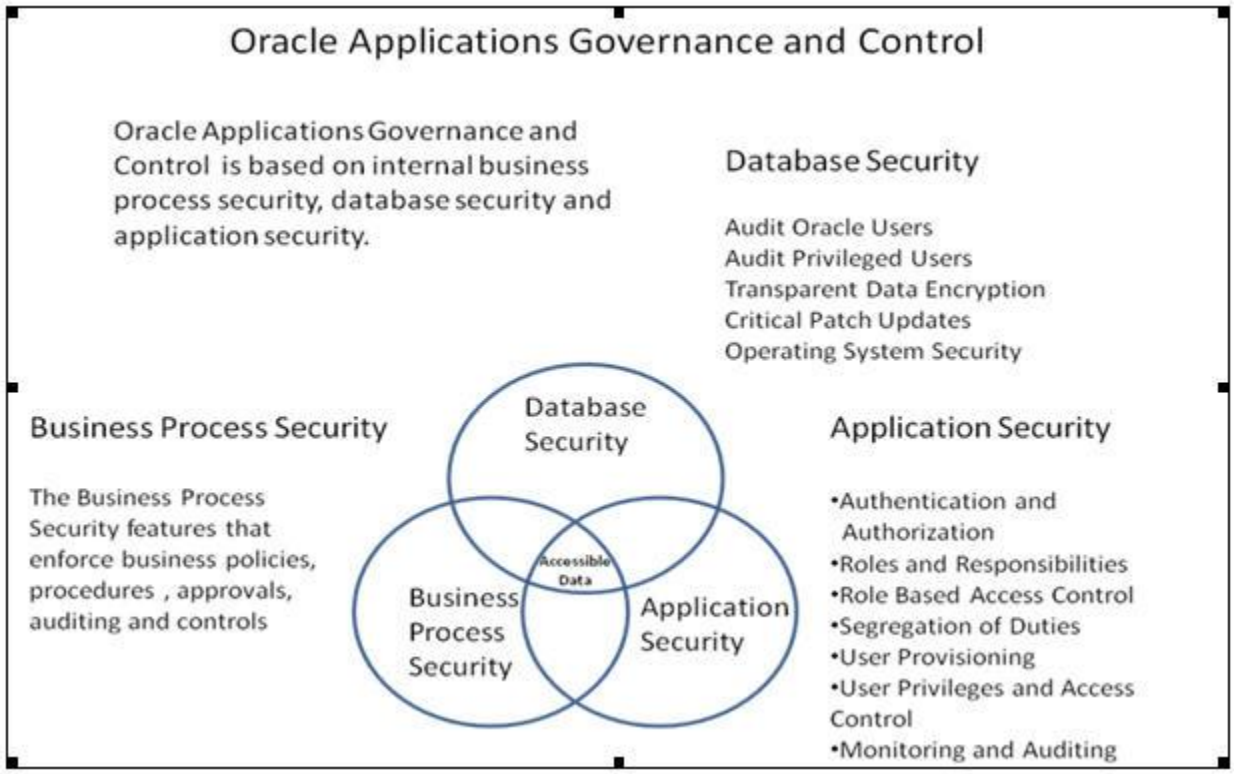


Figure 2

The Implications of Poor Oracle Controls Visibility

Sensitive Data
Oracle can store sensitive data such as customer, supplier and HR information, which is needed to automate key business processes. Where Oracle is inappropriately controlled, the risks to your business

can range from data leakage of sensitive details, purchase to pay fraud and material misstatements of accounts.

Compliance Requirements
There is an increasing requirement from compliance stakeholders to report on and demonstrate effectiveness of key Oracle controls. Where the controls implemented are manual or resource intensive, they can result in an unnecessary overhead and the business complaining about the "controls burden".

Reputation
Organizations seek a competitive advantage through transforming their internal business practices, such as shared service centers and outsourced functions, which can significantly impact your Oracle system. Maintaining a good reputation internally and externally in the market place is key. Public control failures can result in irrevocable damage to your brand, sales and even shareholder value.
It is easy to underestimate the complexity and inter-relationships between the Oracle controls components as illustrated in Figure1. Our approach therefore includes an assessment of controls in each of the four Oracle control components. Typically, an assessment would include the following stages:

- Understand the organization's governance structure, risk and controls framework, and supporting policies /procedures in relation to the Oracle environment
- Provide a report including our findings and a roadmap outlining potential remedial activities and recommendations to further improve, optimize and automate Oracle controls.
  This final report will be in a non-technical language and will be supported by Oracle technical details in the appendices. This will allow the business to understand the risks, and the technical community to understand what may need to be changed from a systems perspective
  As a result, through increased visibility and understanding of your Oracle controls, an organization is able to take the first step in gaining control.

Oracle Control Services

In addition to our Controls assessment capabilities (as referred to in this document), our team can also help implement and optimize your Oracle controls.

Controls Implementation
TruTek will help you get the controls right, by working as part of the GRC implementation program to design and embed controls within the initial solution

Controls Optimization
We can optimize your Oracle controls through automation and rationalization to streamline existing controls or implement automated control solutions

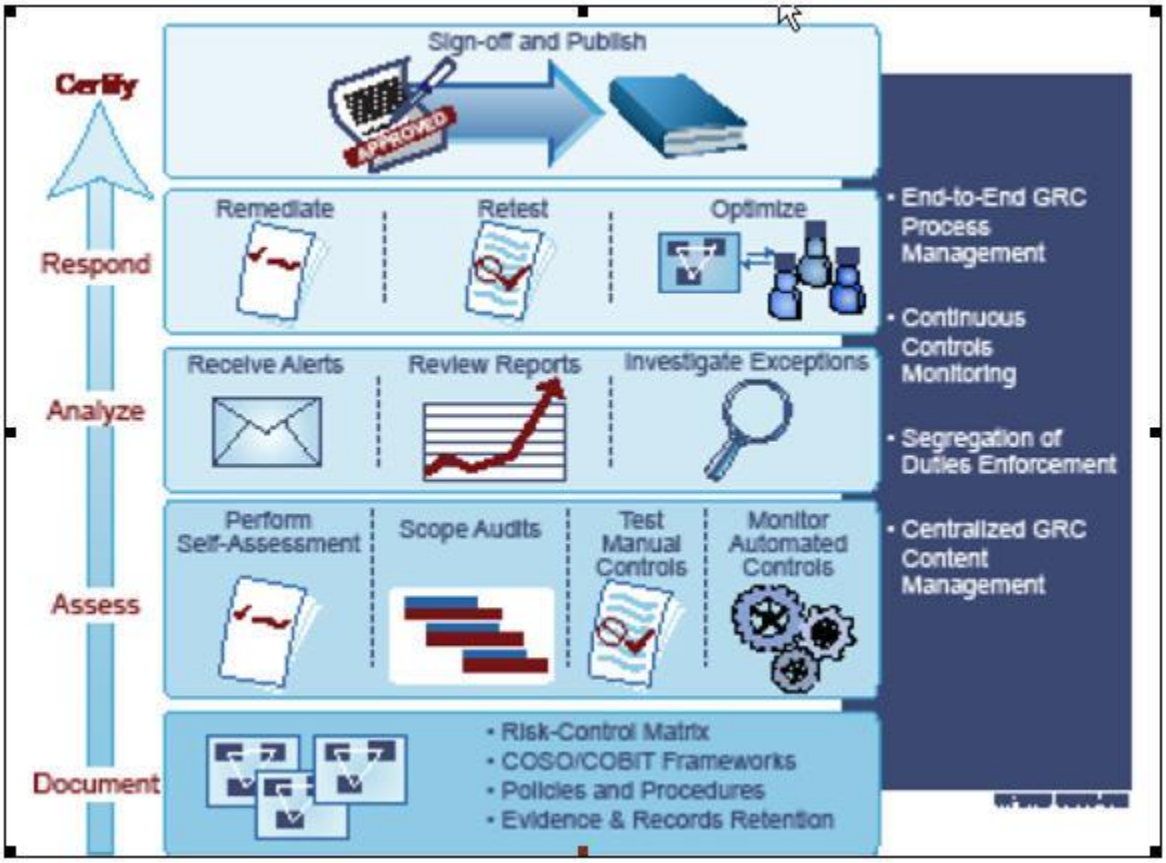


Figure 3 Oracle GRC Processes

Integrated GRC Approach Summary

Consider a three-phased approach to implementing the Oracle GRC:

- Identify IT security controls via walkthroughs and assessments,
- Map IT security controls to applicable laws and regulations.

This integrated GRC approach consists of assessing Oracle Financials security and control configurations for specific modules and the supporting infrastructure.

This assessment can help our clients establish the security baseline, identify control weaknesses, and develop achievable remediation actions. The results of this assessment can be leveraged to link key controls to applicable laws/regulations and control weaknesses.

Mapping our client's technical, operational, and management controls for financial and mixed financial systems to the applicable laws and regulations.

TruTek clients may also consider:

- Addressing compliance with policies and procedures
- Identifying gaps in IT documentation
- Identifying compliance and/or security control requirements