QCS · TECH

WHITEPAPER
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ORACLE EBS MODERNIZATION

AI for Complex Oracle EBS Upgrades

How AI-assisted CEMLI analysis makes decades of customizations, integrations and technical debt visible, upgrade risk manageable, and modernization decisions better informed.

20+ yrs
of customizations in one client landscape analyzed from Git

2 days
to assemble a deployable remediation package in that engagement

4
capabilities: remediate, reconstruct, retire, trace

Human
review retained at every consequential step

Oracle E-Business Suite (EBS) upgrades are often planned around a code freeze. A freeze can stabilize the environment, but it does not reveal which customizations will be affected by the target release.

When impact analysis begins only after the upgrade is underway, teams can discover retrofit work late, with little time to estimate, staff, or test it. A more reliable approach is to assess the customization landscape first, then use the findings to shape the plan and set the freeze as a controlled project checkpoint.

FREEZE-FIRST

Freeze, upgrade, then discover what breaks during testing.

ASSESS-FIRST

Assess the CEMLI landscape, plan with evidence, then freeze as a controlled checkpoint.

01

The hidden work behind an EBS upgrade

Long-lived EBS environments contain years of extensions, integrations, reports, workflows, forms, and local adaptations. Collectively known as **CEMLIs** (Configurations, Extensions, Modifications, Localizations, and Integrations), these objects support business processes that may be poorly documented or understood by only a few specialists. Release changes can affect the database objects and application components on which custom code depends. For a move across several Release Update Packs (RUPs), teams must understand the cumulative changes between their source and target releases and relate them to their own inventory.

A freeze does not perform that analysis. Without an early view of impact, estimates rely on assumptions and testing becomes the first broad discovery mechanism. That can leave teams triaging unexpected failures while the project schedule is already committed. The issue is not simply the amount of retrofit work; it is the delay in making that work visible.

> KEY POINT
>
> A freeze stabilizes the environment. It does not reveal what will break.

02

Assess first, plan with evidence

AI-assisted analysis can compare a CEMLI inventory with release documentation and relevant application changes, then identify code that appears to depend on affected objects, APIs, tables, or workflow components. The result is a prioritized view of potential impact, with explanations that help technical and functional teams decide what to investigate. This analysis can inform estimates and test planning before the project enters its most time-sensitive phases.

KEY POINT

> Make retrofit work visible before the schedule is locked.

A structured assessment can produce:

A
Risk-rated findings

B
Suggested retrofit drafts, changes highlighted

C
Developer regression test starting points

D
Business-readable UAT scenarios

These are review materials, not approved production changes. Engineers validate technical correctness, functional owners confirm expected behavior, and the project team decides what to remediate, retire, or leave unchanged.

KEY POINT

> AI drafts accelerate the work. People approve the changes.

What AI-assisted analysis can unlock

01 Find and remediate changes across large code bases

CLIENT ENGAGEMENT

In one complex client landscape, an AI tool was connected to a Git repository containing thousands of custom-object files from an implementation built over more than two decades. The analysis identified potential remediation areas and supported safe, reviewable changes, including examples such as database object editioning and schema-prefix adjustments.

1,000s	20+ years	2 days
custom-object files in the repository	of implementation history	to a deployable remediation package

The schedule is specific to that engagement, but it illustrates how automation can compress repetitive discovery and preparation work when engineers remain responsible for review and release control.

02 Reconstruct process knowledge and test coverage

Discovery conversations, existing materials, and contextualized scripts can be combined to document process flows that were previously missing or incomplete. Mapping CEMLIs to process and sub-process levels gives teams a clearer view of where technical objects support business activity. The same structure can seed business-scenario inventories and initial test scripts, helping functional teams review coverage and identify gaps earlier.

03 Identify retirement opportunities

An upgrade is also a chance to question whether every customization is still needed. Usage evidence, existing documentation, and stakeholder input can help build a retirement inventory for obsolete objects, redundant programs, or jobs that no longer serve an active process. Retiring candidates can reduce maintenance effort and potentially lower system load, subject to validation of dependencies, ownership, and business need. The objective is not to delete objects based on an automated signal, but to give owners evidence for a deliberate decision.

WHY IT MATTERS

Less to maintain

Retirements can reduce maintenance effort and may lower system load.

Better processes

AI-assisted deep code analysis uncovers opportunities for standardization and adoption of more efficient alternatives to improve process execution.

A debt-free baseline

Most importantly, it creates a debt-free baseline for future upgrades, migrations and modernization.

04 Handle complex custom components with better context

Some customizations are difficult to retrofit because they span specialized application components and have limited documentation. EBS iProcurement customizations, for example, can be affected by changes to page regions and underlying components, as well as by newer page experiences such as Redwood. AI-assisted analysis can help teams trace how a customization is assembled, identify relevant change areas, and prepare remediation options. Specialists still need to validate compatibility, user experience, and supported implementation practices before changes are accepted.

04

A practical operating model

The strongest results come when AI is used as an accelerator inside a disciplined delivery process.

01	02	03	04	05	06
Inventory and access control	**Link findings to release evidence**	**Prioritize by criticality and exposure**	**Named reviewers sign off**	**Validate, regress and UAT**	**Approve, deploy, keep rollback**

Begin with an inventory and establish access controls for source repositories and project data. Connect findings to release-specific evidence, record assumptions, and prioritize by business criticality as well as technical exposure. Route each proposed change through named technical and functional reviewers. Validate fixes in controlled environments, run regression and UAT, and preserve normal approval, deployment, and rollback controls.

This approach also improves communication. Instead of a broad retrofit contingency, project leaders can discuss a prioritized set of findings, the evidence behind them, the owners needed to review them, and the tests that will confirm outcomes. Business stakeholders can hear about material risks while scope, staffing, and sequencing can still change. The freeze remains useful, but it follows discovery rather than standing in for it.

05

Start before the schedule is locked

For organizations planning an EBS upgrade, an early CEMLI-X assessment can help establish what is in the landscape, where change may matter, which customizations warrant review, and what testing should accompany remediation. It can also surface retirement candidates and missing process knowledge that affect the broader modernization plan. The output is a more grounded basis for scoping and decision-making, with human review retained at every consequential step.

NEXT STEP

If your next EBS upgrade is approaching, begin by assessing the CEMLI landscape before setting the freeze and finalizing the timeline. Contact us to scope a CEMLI-X assessment for your upgrade.

ABOUT QCS

Assess the landscape first. Then set the freeze.

QCS Tech Private Limited builds applications end to end, from web and mobile apps to enterprise integrations. On EBS upgrades, a CEMLI-X assessment establishes what is in your landscape, where change may matter, which customizations warrant review, and what testing should accompany remediation, with human review retained at every consequential step.

OUTPUT 01

Risk-rated findings

A prioritized view of potential impact, with the evidence behind each finding.

OUTPUT 02

Retrofit drafts

Suggested changes with differences highlighted, for engineers to validate.

OUTPUT 03

Test starting points

Developer regression tests and business-readable UAT scenarios.

OUTPUT 04

Retirement inventory

Candidates for retirement, with evidence for owners to decide on.

To scope a CEMLI-X assessment for your upgrade, contact the QCS team.

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