

**Application Change Management Audit
Final Report
Report Nr. 16/09
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Introduction

In accordance with our 2009 Audit Plan, EDC Internal Audit performed an audit of application change management controls.

Audit Objectives & Scope

The overall objective of this audit was to evaluate the effectiveness of the controls in place to ensure application changes are documented, tested and authorized prior to migration into production. Within the context of this objective, consideration was given to the following ERM risks elements and mitigating controls: governance risk, system risk, fraud & ethical risk and compliance risk. The scope of our audit was limited to evaluating the design effectiveness of these controls for C3, CRS, CAS, FIRM, GAS, GLOBEX, MBC, MTIP, UFS and PS HR. For these applications, our evaluation of change management controls was limited to walkthroughs. The scope of our audit included detailed testing and therefore an evaluation of the operating effectiveness of change management controls for PS FIN and ACBS. Audit fieldwork was performed from August through October 2009.

Internal Audit Opinion

In our opinion, *Opportunities Exist to Improve Controls*¹ surrounding application change management. In certain cases, changes to the business applications are promoted to the production environment by the individual who designed and developed the change in the development environment. The ability to both design/develop changes and then migrate into production does not provide adequate segregation of duties. We also found that change management documentation is not always prepared and retained for PeopleSoft Financials including change request approvals and results of user acceptance testing. We have recommended that changes be promoted into production by someone independent of the development and testing efforts and that key change management artifacts be maintained in support of changes to PeopleSoft Financials.

Audit Findings & Recommendations

1. PeopleSoft Financials (PS FIN) - Application Change Management Controls

Artifacts to support changes to the PS FIN application are not always documented nor retained as part of the change management process. Specifically, we found that approved change requests, user acceptance testing, and approvals to migrate changes to production are not always documented nor retained. We also found that developers have the ability to promote changes into production libraries and do so as part of their migration practices. Collectively, these control deficiencies create a risk of erroneous and/or unauthorized changes being made to PS FIN without being detected on a timely basis. We have recommended that segregation of duties be maintained between development activities and migration to the production environment. In addition, key change management artifacts should be retained, including change request approvals, user testing results, and approvals to migrate to production.

¹ Our standard audit opinions are as follows:

- **Strong Controls:** Key controls are effectively designed and operating as intended. Best in class internal controls exist. Objectives of the audited process are most likely to be achieved.
- **Well Controlled:** Key controls are effectively designed and operating as intended. Objectives of the audited process are likely to be achieved.
- **Opportunities Exist to Improve Controls:** One or more key controls do not exist, are not designed properly or are not operating as intended. Objectives of the process may not be achieved. The financial and/or reputation impact to the audited process is more than inconsequential. Timely action is required.
- **Not Controlled:** Multiple key controls do not exist, are not designed properly or are not operating as intended. Objectives of the process are unlikely to be achieved. The financial and/or reputation impact to the audited process is material. Action must follow immediately.

Rating of Audit Finding - Major²

Action Owner - BSD Program Delivery Manager

Due Dates - All actions to be implemented by Q2 2010

2. Migration of Changes Into Production

In a number of cases, we found that changes were migrated to the production environment by the developer who also designed and developed the solution in the development environment. The ability to both design/develop changes and then migrate into production does not provide adequate segregation of duties. We also found in certain cases that the individuals providing approvals to migrate changes into production were not necessarily in a management capacity, nor nominated as the system owner for each application. As a result, approvers vary significantly in terms of their level, knowledge of the change, and independence from detailed development and/or testing activities. We recommend that changes be promoted into production by someone independent of the development and testing efforts. In addition, an approval matrix should be developed documenting the requisite approval authorities by application.

Rating of Audit Finding - Major

Action Owner - Client Business Partners and BSD Program Delivery Managers

Due Dates - Q1 2010

3. User Acceptance Testing

During the audit, we noted that user acceptance testing is sometimes performed by business analysts in the development team and not always by users in the business function. We also noted that user acceptance test results are not always documented and retained. We have recommended that regardless of the change profile (major, minor, and emergency), the appropriate user has either tested the change in a segregated environment, or at a minimum, has reviewed the results of testing performed by a business analyst. In emergencies, where user testing prior to releasing into production is not feasible, we recommend that users test the change, or verify that the results in production are acceptable subsequent to migration. This post production review should be documented and retained.

Rating of Audit Finding - Moderate

Action Owner - BSD Program Delivery Managers

Due Dates - Q1 2010

Conclusion

The audit findings and recommendations have been communicated to, and agreed to, by management, who has developed action plans that are scheduled for implementation no later than Q2 2010.

We would like to thank management for their support throughout the audit.

² The ratings of our audit findings are as follows:

- **Major:** a key control does not exist, is poorly designed or is not operating as intended and the financial and/or reputation risk is more than inconsequential. The process objective to which the control relates is unlikely to be achieved. Corrective action is needed to ensure controls are cost effective and/or process objectives are achieved.
- **Moderate:** a key control does not exist, is poorly designed or is not operating as intended and the financial and/or reputation risk to the process is more than inconsequential. However, a compensating control exists. Corrective action is needed to avoid sole reliance on compensating controls and/or ensure controls are cost effective.
- **Minor:** a weakness in the design and/or operation of a non-key process control. Ability to achieve process objectives is unlikely to be impacted. Corrective action is suggested to ensure controls are cost effective.