Enhanced Physical Inventory Adjustment Approval Processing in Oracle EBS

DC Oracle Applications User Group (DCOAUG)
June 17, 2016
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<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sue Demby</td>
<td>Specialist Senior</td>
<td>Over fifteen years of experience with designing, developing, and supporting many facets of system implementation and support for Oracle Database, EBS, and Business Intelligence.</td>
</tr>
<tr>
<td>Madhu Dash</td>
<td>Specialist Senior</td>
<td>Extensive experience in system implementation, enhancements, and support of Oracle EBS using Oracle technologies for Federal agencies.</td>
</tr>
<tr>
<td>Mauricio Castro</td>
<td>Consultant</td>
<td>Extensive experience implementing and supporting Oracle EBS solutions within the Federal government, from inception to deployment.</td>
</tr>
<tr>
<td>Victoria Shen</td>
<td>Business Technology Analyst</td>
<td>Experience providing Oracle EBS support for a federal agency’s manufacturing operations.</td>
</tr>
</tbody>
</table>
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- PeopleSoft
- Customer Relationship Management (CRM)
- Identity Management
- Engineered Solutions
- Service Oriented Architecture (SOA)
- Data Warehousing
- Business Reporting and Analytics
- Master Data Management
- Technical Infrastructure and Development
- Application Management Services
- Business Process Transformation
- Upgrades and Implementations
Situational Background

A Federal client initiated an integrated IT implementation to modernize its business processes and systems across the enterprise, and address challenges related to siloed systems, manual processes, and compliance issues.

**Challenge**

The client process for tracking physical inventory adjustments lacked traceability and was encountering long processing times due to high number of manual steps, an overly complex approval process, and the need to leverage paper audit trails.

**Solution**

Deloitte’s solution consisted of Oracle Application Framework (OAF) pages, security access controls, custom workflows, Oracle Application Programming Interfaces (APIs), and reporting that standardized the approval process, automated inventory adjustments, and provided a detailed audit trail for adjustments.

**Impact**

The newly streamlined process enhanced traceability of inventory, reduced processing times, and provided systematic tracking abilities to improve accuracy and traceability for inventory adjustments.
Architecture Design

Deloitte leveraged base Oracle E-Business Suite (EBS) capabilities and architecture components to provide a holistic and easy to use solution for the client.
An integrated process was developed to manage physical inventory adjustments, from inception through approval or rejection.

### End-to-End Process

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Request</td>
<td>Identify Needed Adjustment, Submit/Cancel Adjustment Request, Perform Physical Inventory</td>
</tr>
<tr>
<td>2. Departmental Approval</td>
<td>Validate the Adjustment, Approve/Reject/Return</td>
</tr>
<tr>
<td>3. Compliance Supervisory Approval</td>
<td>Physical Inventory Adjustment Reviewer, Receive and Review the Request, Security Office</td>
</tr>
<tr>
<td>4. Compliance Managerial Approval</td>
<td>Assign Investigations, Approve/Reject/Return</td>
</tr>
<tr>
<td>5. Adjust Inventory</td>
<td>Request the GL Account, Approve/Reject/Return, Issue / Receipt</td>
</tr>
</tbody>
</table>

**Integrated Oracle Workflow Mailer Notification**

Physical Count and Request Entry, Physical Count and Approve/Reject, Investigate and Approve/Reject, Cost and Approve/Reject, EBS System Process
Components of Solution

Solution was developed using standard Oracle technologies, including Oracle Application Framework.

**Request**

- Create Physical Adjustment request
- Specify the item number, locator, lot number, and adjustment quantity
- Enter the reason for adjustment and attach files, as needed
- Select the Department reviewer

**Review**

- View details for a Physical Adjustment request
- Approve/reject/cancel a request
- View the information that the requestor has submitted and the approval/rejection history of the request
- Assign the request to a staff member to investigate
- Return the request to the requestor, allowing for resubmission

**Search**

- Search for submitted Physical Adjustment requests using a vast array of search criteria, including:
  - Identification Number, Facility, Requested By, Requesting Section, Subinventory, Status, and Date Range
Components of Solution
Development of custom workflows and reports to streamline the approval process and improve traceability.

<table>
<thead>
<tr>
<th>Custom Workflow</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structured Approval Process Routing</strong></td>
<td><strong>Concurrent Program</strong></td>
</tr>
<tr>
<td>Utilizes specific responsibilities and custom lookup value sets to build a</td>
<td>Enables the Physical Inventory Adjustment Report to be executed</td>
</tr>
<tr>
<td>structured routing for the approval process with pre-defined roles and</td>
<td>ad-hoc or automatically called by a program</td>
</tr>
<tr>
<td>security levels for each level of approval</td>
<td></td>
</tr>
<tr>
<td><strong>Workflow Mailer Engine</strong></td>
<td><strong>XML Publisher</strong></td>
</tr>
<tr>
<td>Utilizes WF_MAIL to send embedded HTML alerts to related recipients when the</td>
<td>Produces a Physical Inventory Adjustment Form report in PDF</td>
</tr>
<tr>
<td>user performs actions on a Physical Adjustment Request</td>
<td>format</td>
</tr>
</tbody>
</table>

**Oracle Application Programming Interfaces (APIs)**

| Inventory Transaction Open Interface | Utilizes MTL_TRANSACTIONS_INTERFACE table and MTL_ONLINE_TRANSACTION_PUB.PROCESS_ONLINE tables within INV schema to process inventory transaction issuing/receiving |
Process Flows: Submitting Physical Adjustment Requests

Form to create and submit Physical Adjustment requests with attachments.

[Diagram of the form to create and submit Physical Adjustment requests]
Process Flows: Reviewing Physical Adjustment Requests

Form for reviewing Physical Adjustment requests.
Process Flows: Reviewing Physical Adjustment Requests

Report generated for a Physical Adjustment request.

Physical Inventory Adjustment Approval Form

<table>
<thead>
<tr>
<th>Control Number</th>
<th>Requesting Department</th>
<th>Subinventory</th>
<th>Request Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>XXXXXXX</td>
<td>XXXX</td>
<td></td>
<td>13-MAY-2016 13:04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ref. ID</th>
<th>Item Number</th>
<th>Locator</th>
<th>Serial/Lot Number</th>
<th>Submitted On-Hand Qty</th>
<th>Physical Count</th>
<th>Adj. Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>XXXX</td>
<td>XXXX</td>
<td>XXXX</td>
<td>1</td>
<td>0</td>
<td>-1</td>
</tr>
</tbody>
</table>

Reason for Adjustment
See Attachment.

<table>
<thead>
<tr>
<th>Name</th>
<th>Status</th>
<th>Review Date / Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requestor - Submitted</td>
<td></td>
<td>13-MAY-2016 13:04</td>
</tr>
<tr>
<td>Comments: See Attachment.</td>
<td></td>
<td>13-MAY-2016 13:39</td>
</tr>
<tr>
<td>Dept. Reviewer - Approved</td>
<td></td>
<td>16-MAY-2016 06:09</td>
</tr>
<tr>
<td>Supervisor - Assigned</td>
<td></td>
<td>16-MAY-2016 12:22</td>
</tr>
<tr>
<td>Phys. Inv. Adjustment Reviewer - Recommend Approval</td>
<td>16-MAY-2016 12:35</td>
<td></td>
</tr>
<tr>
<td>Supervisor - Recommend Approval</td>
<td></td>
<td>16-MAY-2016 12:46</td>
</tr>
<tr>
<td>Recommend Approval. Reviewed adjustment information and supporting documents.</td>
<td>16-MAY-2016 12:46</td>
<td></td>
</tr>
<tr>
<td>Manager - Approved</td>
<td></td>
<td>16-MAY-2016 12:46</td>
</tr>
</tbody>
</table>

Notes

XXXXXX

This report was generated on: 3-Jun-16 09:31
Process Flows: Querying Physical Adjustment Requests

Form for querying Physical Adjustment requests.

Select Physical Adjustment

Request Physical Adjustment

Specify the format of the data that is displayed in your result set.

Search View Type
- Show Summary View
- Show Detailed View

Simple Search

Note that the search is case insensitive

Control Number:
Facility:
Requested By:
Requesting Dept:
Subinventory:
Status:
From Date:
To Date:

Go  Clear

Manage Control # Facility Requested By Requesting Section Subinventory Line Quantity Status Date Requested

1 Dept. Reviewer - Pending Assignment 20-May-2016
2 Dept. Reviewer - Rejected 20-May-2016
3 Dept. Reviewer - Pending Review 19-May-2016
Training Approach

Different methods of training were employed to help foster user adoption for the solution within the agency.

On-Site Training for Designated Users
- Worked with department heads to identify impacted users
- Executed ‘Train-the-Trainer’ approach
- Provided instructor-led live training and support, separated by user group

Quick Reference Guides
- Created illustrative guides for creating and approving Physical Adjustment requests
- Customized guides by role (e.g., requestor, accountability office, product security office)
- Distributed guides to users at training sessions

Driving Adoption from Within
- Promoted user adoption through demos to over 100 employees across offices
- Automated the Physical Adjustment Request process
- Supported business owner in promoting usage of automated system over paper forms

Tailored training approach enabled quick user adoption.
Impact of Implementation

Our customized solution can provide users with an automated process for viewing, approving, and tracking inventory adjustment requests, including automated transactions to increase accuracy.

- Provides visibility into historical records of Physical Adjustment requests.
- Establishes a required approval workflow within the system to update inventory quantities.
- Reduces approval process duration from three weeks to one day.
- Provides customized reporting to support audits and compliance.
- Reduces paper usage through automation of approval process and electronic reports.
### Summary

An innovative solution was implemented to improve ease of use, scalability, traceability, and accuracy.

<table>
<thead>
<tr>
<th></th>
<th>Before Enhancement</th>
<th>Solution using Standard Oracle Workflow</th>
<th>Deloitte Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average Lead Time</strong></td>
<td>2-3 weeks</td>
<td>-</td>
<td>Within a week</td>
</tr>
<tr>
<td><strong>Process Interface</strong></td>
<td>Paper trail approval process</td>
<td>Paper trail records and workflow notifications</td>
<td>Custom Oracle Applications user interface and email notifications</td>
</tr>
<tr>
<td><strong>System Architecture</strong></td>
<td>Non-existent</td>
<td>Mixed complexity</td>
<td>Simple</td>
</tr>
<tr>
<td><strong>Automation</strong></td>
<td>Non-existent</td>
<td>Semi-automated</td>
<td>Automated</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Potential manual entry errors</td>
<td>Accurate</td>
<td>Highly accurate</td>
</tr>
<tr>
<td><strong>Systematic Traceability</strong></td>
<td>Non-existent</td>
<td>Less user friendly</td>
<td>User-friendly and full request traceability</td>
</tr>
<tr>
<td><strong>O&amp;M Resource Requirement</strong></td>
<td>Paper trail storage</td>
<td>Workflow expert, Application Admin, paper trail storage</td>
<td>Application Admin</td>
</tr>
</tbody>
</table>
Process Flows: Submitting Physical Adjustment Requests

Process flow for submitting Physical Adjustment requests.

1. Start
2. Navigate to Request Physical Adjustment
3. Select Requesting Dept.
4. Select Subinventory
5. Select Department Reviewer
6. Enter Item Number
7. Enter Locator
8. Enter Serial / Lot Number
9. Enter Actual Physical Count
10. Add More Adjustments?
    - Yes: Go to step 11
    - No: Go to step 12
11. Add Adjustments?
    - Yes: Go to step 13
    - No: Go to step 14
12. Click "Submit" button
13. Open "Add Attachments" page
14. Add attachment to request
15. System changes request status to “Submitted”, assigned to Department Reviewer for evaluation
16. Finish
Process Flows: Reviewing Physical Adjustment Requests

Process flow excerpt for Physical Inventory Adjustment Reviewer.

Start
Navigate to Select Physical Adjustment
Query Physical Adjustment request
Select “Manage” button
Review Physical Adjustment Request and Attachments

Add Attachments? Yes
Navigate to “Add Attachments” page
Upload Attachments

No

Review Decision?
Recommend Approval
Enter comments justifying decision
Click “Submit” button
Request Assigned to Compliance Supervisor, “Recommend Approval” status given

Recommend Return
Enter comments justifying decision
Click “Submit” button
Request Assigned to Compliance Supervisor, “Recommend Return” status given

Recommend Rejection
Enter comments justifying decision
Click “Submit” button
Request Assigned to Compliance Supervisor, “Recommend Rejection” status given

Finish

User Action
System Activity
Decision Point

Legend

Review options vary by user role
Process Flows: Reviewing Physical Adjustment Requests

Process flow excerpt for Compliance Manager.

Review Decision?

- Return to Requestor
- Reject
  - (Optional) Enter comments justifying decision
  - Click “Submit” button
  - Request rejected, cannot be resubmitted
- Approve
  - Click “Submit” button
  - Initiate Account Alias Issue / Receipt transaction for items in request
  - Status set to “Approved”, request is closed
- Return to Compliance Supervisor
  - (Optional) Enter comments justifying decision
  - Click “Submit” button
  - Request assigned to Compliance Supervisor for further review
- Finish
Process Flows: Querying Physical Adjustment Requests

Process flow for conducting a Physical Adjustment request query.

Legend

User Action
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