System Coordination Office’s

“Best Management Practices”
For
Preparing and Conducting a Post Deployment Review

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1.0 Purpose

This document provides guidance for conducting Post Deployment Reviews (PDR) for IT investments. It is one in a series of Best Management Practices (BMP). The BLM is required to manage capital assets, including conducting "post-implementation reviews of capital programming and acquisition processes, and projects to validate estimated benefits and costs, and document effective management practices, i.e. lessons learned, for broader use." Conducting Post Deployment Review is part of Stage 4 Portfolio Development key practices of GAO's IT Investment Management Maturity model.

This document provides System Owners and PDR Team leaders with uniform requirements and specific instructions relating to Post Deployment Review (PDR) of IT investments to fully assess the documentation, lessons learned, and performance of systems developed under the IT investment management process.

PDR costs should be planned and included in the overall project costs, adhering to the PDR activities within the Exhibit 300 schedule template. (See Appendix 1 – Where Post Deployment Review Fits in IT Investment Management Process.)

2.0 Applicability

The guidance contained within this BMP applies to all IT investments that proceed through the BLM Information Technology Investment Management Process.

3.0 Management Objective

The objective is to establish a standardized, repeatable process for conducting post deployment reviews.

4.0 Post Deployment Review (PDR)

4.1 What Is The Purpose Of A PDR?

To assess system documentation and performance, efficiency, effectiveness, and lessons learned within the ITIM process.

To determine if the IT investment achieved the planned functionality and anticipated benefits. The PDR will also determine how well the system meets mission needs and supports the re-engineering efforts as originally identified.

4.2. When Should A PDR Be Conducted?

A PDR should be conducted within six to nine months after a system goes into operation, or when a project is terminated.

The six-to-nine-month time frame is recommended because the first six months are needed to get the system optimized before the users can determine how it is going to perform.

4.3 Who Should Be On The PDR Team?

For an effective and unbiased PDR, it is recommended that the PDR team should be comprised of people who were not on the team that developed the system. The System Owner should appoint a PDR Team Lead.

The PDR team members include:

- Business users
- System users
- AD's IRM Advisor
- NIRMC System Engineering
- SCO investment management team representative
- SCO data management team representative

The PDR team may also include:

- System Owner representative
- User Representative
- State-level Program Lead
- Documentation Lead
- Application and User Support Lead

When choosing the PDR team, the Team Lead should:

- Select team members with experience and knowledge pertinent to reviewing the system.
- Contact team members and supervisors to obtain agreement of availability to participate.

4.4 What Are The Steps In Conducting A PDR?

The PDR should require no more than 4 – 6 weeks to complete, and requires the following seven steps:

Table 1 – PDR Steps and Schedule

PDR Task Description	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
1. Initiate PDR						
2. Analyze Documentation						
3. Interview Key Stakeholders						
4. Measure Performance						
5. Perform User Surveys						
6. Perform Analysis						
7. Prepare and Issue Report						

4.4.1 Initiate PDR

The System Owner is responsible for identifying a PDR Team Leader. The PDR Team Leader works with the System Owner, AD's IRM Advisor, business process owner and the system user representative to develop a schedule for the planned review, identify areas that may receive special review emphasis, and acquire the project number for tracking all costs associated with the PDR. To initiate the PDR the PDR Team Lead is responsible for:

- Identifying resource requirements and establishing the PDR team (see Section 4.3 above for PDR team members).
- Establishing a schedule with planned start and finish dates (see Table 1).
- Identifying and scheduling a kickoff meeting.
- Identifying and communicating individual and team responsibilities.

4.4.2 Analyze Documentation

The PDR Team is responsible for gathering, reviewing, and analyzing documentation from the project files. Documentation may include any of the following:

- Project Plan
- Software Requirements Specification
- Software Test Description
- Interface Requirements Specification
- System Security Plan
- Software Design Document
- Software Test Report
- Software Users Guide
- Training Plan
- Training Manual
- Final Qualification Test
- Version Description Document
- Engineering Release Record
- Software Test Plan
- Implementation Plan
- Computer System Operator's Manual
- FQT Scripts
- Return On Investment
- Official Agency Record Designation
- Privacy Act Notice
- ITIB Project Oversight Records/Reports (SCO)

Documents must be reviewed for quality assurance:

- accuracy, clarity, completeness, and usability.
- adherence to requirements of Configuration Management (CM), and the Investment Management Process.

Report results of document reviews on Document Certification forms (see Appendix 2).

4.4.3 Interview Key Stakeholders

The PDR Team is responsible for ensuring that all key stakeholders are interviewed. The PDR Team will interview key stakeholders in order to:

1. Validate users' understanding of the system's original goals, objectives, benefits and costs as described in business case ROI and project plan.
2. Determine if the system's objectives, goals, performance measures, and benefits have been achieved.
3. Identify system deficiencies and future enhancement requirements.

Key Stakeholders may include:

- System Owner
- National Program Lead
- State Program Lead
- ITIB

Summarize the stakeholder review comments within the body of the PDR report (Appendix 3). List each response in an appendix to the report.

See Appendix 4 for sample stakeholder questionnaires.

4.4.4 Measure Performance

The PDR Team is responsible for reviewing all performance measurement documentation. Project performance measures established in the Select Phase are compared to data generated during the Operations and Maintenance Stage. In the absence of certain statistics, the PDR team may perform on-site observations to measure specific criteria.

Performance measure documentation may include:

- Optimization and tuning: optimization-based procedures for transaction processing and reporting, where performance-driven indexes are set up from the start.
- System Responsiveness, Reliability, and Daily Use: measure response times for system functions; percent reliability rating over elapsed time in operation; and measured levels of daily use.
- Trouble Tickets: counts of individual trouble tickets reported in the Remedy tracking system. Counts based on the following 4 categories: high – stopping user functionality; medium – workaround was found for functionality; low – cosmetic request; and future request – changes

projected for a future revision. Remedy trouble tickets can be summarized in an appendix to the PDR report.

4.4.5 Perform User Surveys

The PDR Team is responsible for conducting qualitative surveys to determine user satisfaction with the system. The surveys measure the system's effectiveness in achieving stated goals, providing benefits, and in satisfying end users needs.

Executing the survey includes:

- design user survey questionnaires
- identify users to be surveyed
- distribute the survey questionnaires to users
- receive and document responses
- analyzing results (see Appendix 5)
- generating documentation – recording results in an appendix to the PDR report, which includes tallies of qualitative comments converted to numeric indicators, and also summaries of user comments.

Surveys can be sent via electronic mail to everyone who has a user ID in the system. The survey email also can inform field office staff to identify any additional users for inclusion in the survey.

Specific survey questions can be adapted for each type of user group: users, system administrators, managers, etc.

In addition, written user comments should be collected and summarized within the body of the PDR report.

See Appendix 5 for sample user survey questions.

4.4.6 Perform Analysis

The PDR Team is responsible for performing an analysis of all documentation, survey results, and performance measurements to determine if the system achieved its objectives.

Steps to analyze and evaluate results from sections 4.4.2 through 4.4.5 above.

1. Is all documentation accurate, clear, complete, and usable? Do documents adhere to requirements of Configuration Management (CM), and IT Investment Management Planning?
2. Evaluate and summarize stakeholder questionnaire results and comments. Do the results and comments indicate that the system achieved its objectives? Are there deficiencies in the system which must be improved?

3. What do the combined qualitative user surveys and comments say about user satisfaction with the system, and about system efficiency and effectiveness?
4. Evaluate the performance measures. Do system optimizing procedures bring the system up to expected performance levels? Are the system response times and reliability ratings acceptable? Evaluate trouble tickets: are there high and medium level trouble tickets which must be resolved before the system efficiently and effectively achieves its objectives?

4.4.7 Prepare And Issue Report

The PDR team is responsible for preparing and issuing the PDR report. The PDR Team prepares the report for System Owner approval and submits it to the SCO, CIO, and the ITIB. (See Appendix 3 for PDR report format.)

4.5 PDR Results

The System Owner, business process owner, and SCO review the PDR report. The PDR report findings and recommendations may be incorporated into a new Investment Proposal, into system software, or, as needed, into the Bureau's IT Investment Management Manual and Handbook.

The System Owner makes decisions about actions and issues contained in the report, and follow-up actions regarding the operational system. The SCO takes lessons learned and modifies the ITIM process as applicable.

Upon acceptance of the PDR report by the System Owner, the PDR team is released.

5.0 Post Deployment Review Roles and Responsibilities

System Owner:
Assigns PDR Team Lead. Provides guidance to PDR Team Lead.

SCO Investment Management Team Representative:
Participates in post deployment review process as member of PDR Team.

SCO Data Management Team Representative:
Participates in post deployment review process as member of PDR Team.

Project Manager:
Participates in post deployment review process when requested by the PDR Team Leader. Identifies other members of project team for input as needed.

System User(s):
Responds to PDR questionnaire and interview questions.

Business User(s):

Reviews system performance. Responds to PDR questionnaire and interview questions.

Team Lead

Works closely with System Owner on roles and responsibilities, goals and objectives. Develops PDR schedule. Coordinates meetings and reviews. Ensures PDR schedule, actions, and products are completed.

Team Members

Carries out reviews, interviews. Conducts analysis of surveys and documentation. Provides input for report.

State Level Program Lead:

Participates as member of PDR Team. Recommends state users as system evaluators and questionnaire respondents.

AD's IRM Advisor:

Provides comments on the draft PDR report.

Appendix 1 – Where A PDR Fits In IT Investment Management Process

Activity ID	Activity Description	Planned Start Date	Planned Finish Date	Actual Start Date	Actual Finish Date	Percent Complete
1	SELECT PHASE					
1.1	IT Clearinghouse Review Stage					
1.2	Investment Proposal Stage					
1.2.1	Present and Obtain ITIB Approval					
1.3	Business Case Development Stage					
1.3.1	Present and Obtain ITIB Approval					
1.4	Acquisition Plan Development Stage					
1.5	Project Plan Development & Review Stage					
2	CONTROL PHASE					
2.1	Project Definition Stage					
2.1.1	Conduct Functional/User Requirements Review					
2.1.2	Conduct Project Definition Completion Review					
2.2	System and/or Service Acquisition Stage					
2.3	System Design Stage					
2.3.1	Conduct Critical Design Review					
2.4	System Development or Construction Stage					
2.4.1	Conduct Test Readiness Review					
2.5	User and System Acceptance Testing Stage					
2.5.1	Conduct Transition/Deployment Readiness Review					
2.5.2	Present and Obtain ITIB Approval					
2.6	Transition and Deployment Stage					
2.6.1	Conduct Operational Readiness Review					
3	EVALUATE PHASE					
3.1	Operations and Maintenance Stage					
3.2	Planned Releases					
3.3	Post Deployment Review Stage					
3.3.1	Initiate PDR					
3.3.2	Analyze Documentation					
3.3.3	Interview Key Stakeholders					
3.3.4	Measure Performance					
3.3.5	Perform User Surveys					
3.3.6	Perform Analysis					
3.3.7	Prepare and Issue Report					

Appendix 2

Documentation Certification
- sample -

System:
Document Name:
Document Id:
Date of Version:

Certification is required for each document supporting the system. This 'Certificate for Review' must be filled out for *each* document in the system. This form should be filled out by the Project or Technical Lead to confirm that the document under review has met all the requirements and it will be held as certification confirmation.

The document is accurate – The base lined document meets all applicable requirements outlined in the Land & Resources Projects Office template, which incorporates requirements of Configuration Management, Life Cycle Management and the Systems Coordination Office.

☑ Concur

☐ Non Concur, explanation required:

The document is current – The base lined document reflects the latest system changes.

☑ Concur

☐ Non Concur, explanation required:

All signatures and/or electronic approvals obtained:

Version: Date Signed

All signatures and/or electronic approvals not obtained:

Explain:

Project Manager or Lead: **Hard Copy Signature on File** Date: **--------**

Appendix 3

PDR Report Format

The PDR Report should contain the following:

Title page, including title, date, version, document number, address.

PDR Acceptance page containing signatures.

The findings contained in this document reflect the post deployment assessment of the XXXXX project documentation and performance.

Title	Signature	Date
PDR Team Leader		
User Representative		
System Owner’s Representative		
System Owner		

System Identification

System Name	
System Abbreviation	
Project Office	
Project Manager	
Project Sponsor	
System Owner	
System Users	
System Developer(s)	

Executive Summary
1.0 System Overview
2.0 Document Overview
3.0 Review Team Membership
4.0 PDR Schedule and Costs
5.0 Referenced Documents
  5.1 Government Documents
  5.2 Non-Government Documents
6.0 Review of System Documentation
  6.1 Deliverable Documents
  6.2 Certification Process
7.0 Stakeholder Interviews
8.0 System Performance / Functionality
9.0 Statistics
  9.1 Review of Optimization/Tuning Procedures
  9.2 System Responsiveness, Reliability, Daily Use
  9.3 Trouble Tickets
10.0 User Survey Results
  10.1 Field User

Appendix 4

Example Stakeholder Questionnaires

Ask stakeholders to provide input to questions specifically targeted to their assessment of the system's efficiency, effectiveness, planned functionality, and development process.

Example PDR questions for the System Owner Representative/National Program Lead:

1. What was your involvement in the various phases/stages of the project?
2. From your viewpoint, did the project meet its anticipated goals, objectives, cost, and performance measures?
3. Does the new system improve your business processes?
4. Does the new system meet your expectations for improved efficiency and/or improved customer service?
5. Was there any major deferred functionality?
6. Is the estimated annual costs for operations and maintenance acceptable from a budgetary standpoint?
7. Does the system provide the necessary information to perform effective program management?
8. Does the system provide the necessary information to prevent the majority of past (ad hoc) data calls?
9. Did the project come close to meeting the original estimated return on investment?
10. If you were to start the project over again, what would you do differently?

Example PDR questions for the Project Manager:

1. What aspects of the working relationship between you and the Project Sponsor, AD's IRM Advisor, and/or the User Representative could have been improved?
2. Were there phases/stages or tasks that took longer or cost significantly more than expected? Why?
3. Where there any project risks that materialized that were not identified and/or anticipated?
4. If you were to start the project over again, what would you do differently?

Example PDR questions for the State Office Program Leads:

1. What was your involvement in the various phases/stages of the project?
2. From your viewpoint, did the project meets its anticipated goals, objectives, cost and performance measures?
3. Does the new system improve your business processes?
4. Does the new system meet your expectations for improved efficiency and/or improved customer service?
5. Was there any major deferred functionality?
6. Does the system provide the necessary information to perform effective program management?

7. Does the system provide the necessary information to prevent the majority of past (ad hoc) data calls?

Example PDR questions for the Help Desk Point of Contact:

1. What type of Help Desk questions/trouble tickets has the new system generated?
2. When talking to the users, what are their top 5 major issues/complaints?

Appendix 5

Sample User Survey Questions

1	Position:	2	Title:

3	How often have you used the system for:	N/A	Daily	Weekly	Monthly	Seldom	
	Trans Entry/Correction						
	Reporting						
	Ad hoc Query						
4	System meets your needs:	N/A	1	2	3	4	5
	Trans Entry/Correction						
	Reporting						
	Ad hoc Query						
5	The system performance (speed in your office is adequate for:	N/A	1	2	3	4	5
	Trans Entry/Correction						
	Reporting						
	Ad hoc Query						
6	The system is easy to navigate:	N/A	1	2	3	4	5
	Trans Entry/Correction						
	Reporting						
	Ad hoc Query						
7	System is user friendly	N/A	1	2	3	4	5
	Trans Entry/Correction						
	Reporting						
	Ad hoc Query						
8	The following system documentation is adequate:	N/A	1	2	3	4	5
	Software User Guide						
	Ad hoc Training Manual						
9	You can go directly from the Software User Guide to accomplishing the following:	N/A	1	2	3	4	5
	Trans Entry/Correction						
	Reporting						
	Ad hoc Query						
10	The training was adequate:	N/A	1	2	3	4	5
	Trans Entry/Correction						
	Reporting						
	Ad hoc Query						
11	Help desk support is adequate:	N/A	1	2	3	4	5
	Prompt Service						
	Accuracy of information given						

		Agree	Disagree
12	The data has been accurate		
13	The data has been available on a timely basis		

Example form for evaluating user responses

Survey Results for Users

Question		Possible Selections						Total	Users	Weighted Average
3	How often have you used the system for:	N/A	Daily	Weekly	Monthly	Seldom				
	Trans Entry/Correction									
	Reporting									
	Ad hoc Query									
4	System meets your needs:	N/A	1	2	3	4	5			
	Trans Entry/Correction									
	Reporting									
	Ad hoc Query									
5	The system performance (speed in your office is adequate for:	N/A	1	2	3	4	5			
	Trans Entry/Correction									
	Reporting									
	Ad hoc Query									
6	The system is easy to navigate:	N/A	1	2	3	4	5			
	Trans Entry/Correction									
	Reporting									
	Ad hoc Query									
7	System is user friendly	N/A	1	2	3	4	5			
	Trans Entry/Correction									
	Reporting									
	Ad hoc Query									
8	The following system documentation is adequate:	N/A	1	2	3	4	5			
	Software User Guide									
	Ad hoc Training Manual									
9	You can go directly from the Software User Guide to accomplishing the following:	N/A	1	2	3	4	5			
	Trans Entry/Correction									
	Reporting									
	Ad hoc Query									
10	The training was adequate:	N/A	1	2	3	4	5			
	Trans Entry/Correction									
	Reporting									
	Ad hoc Query									
11	Help desk support is adequate:	N/A	1	2	3	4	5			
	Prompt Service									
	Accuracy of information given									
	Weighted average of all user's responses (Questions 4-11)									