

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF FINANCE
BUREAU OF INTERNAL REVENUE

April 11, 2003

REVENUE MEMORANDUM ORDER NO. 24-2003

SUBJECT: Revised Guidelines and Procedures for Testing and Acceptance
of In-house Developed and Outsourced Application Systems

TO : All Internal Revenue Officials and Employees Concerned

I. OBJECTIVES

This Order is being issued to:

- A. Prescribe guidelines and procedures in the acceptance of outsourced and in-house developed application systems.
- B. Ensure that outsourced and in-house developed application systems meet the requirements identified and conform to existing acceptable standards and acceptance criteria specified by the Bureau.
- C. Define and delineate the responsibilities of concerned offices.

II. DEFINITION OF TERMS

- A. Application System – refers to the program or group of programs designed for a particular function.
- B. Custom System Development – refers to the design and development of new application system based on the system requirements. The customized application system may be outsourced or developed internally.
- C. In-house Developed Application System – refers to the application system developed by the Bureau.
- D. Outsourced Application System - refers to the application system not developed by the Bureau.
- E. Packaged (off-the-shelf) System – refers to the ready-to-use application system acquired by the Bureau.
- F. Iterative System Development – refers to the design and development of enhancements to the existing application system.
- G. Per Phase System Development - is a development process wherein the developed system is divided into functionality. Development is divided into phases if the application system will take some time to complete.
- H. Integration Testing - testing performed to expose faults in the interfaces and in the interaction between integrated components.

- I. Terms of Reference (TOR) - a document stating the objectives, key business functions, input/output requirements, hardware/software requirements and the service level agreements of the system to be developed.
- J. System Requirement Specifications (SRS) – a high level documentation that contains the functional and technical solutions provided by the service provider/vendor based on TOR. (Refer to Annex A for the basic outline of SRS).
- K. Functional Specification Report (FSR) – documentation on functional requirements and defines the application flow of the system. (Refer to Annex B for the contents and basic outline of FSR).
- L. Technical Specification Report (TSR) – documentation on technical architecture and performance of the system. It defines the modification and testing approach, conversion plan and design. (Refer to Annex C for the content and basic outline of TSR).
- M. Detailed Design Report (DDR) – documentation on complete details of the application system design. (Refer to Annex D for the basic outline of DDR).
- N. Product Acceptance Advice - a document stating that a product meets the relevant acceptance criteria. (Refer to Annex E for the template).
- O. Product Rejection Advice – a document stating that a product does not meet the relevant acceptance criteria. (Refer to Annex F for the template).
- P. Product Acceptance Certificate - a certification stating that a product conforms to relevant acceptance criteria and is officially accepted. (Refer to Annex G for the template).
- Q. Ready-For-Use Memorandum – a memorandum stating that a particular functionality of the system meets the relevant evaluation criteria. (Refer to Annex H for the template).
- R. User Validation Certificate - a document stating that full functionality of the enhancement deliverable conforms to relevant user evaluation criteria. (Refer to Annex I for the template).
- S. Pilot Acceptance Certificate – a certification stating that the concerned site has complied with the exit criteria of Roll Out & Implementation Team. (Refer to Annex J for the template).

III. POLICIES and GUIDELINES

- A. For every application systems to be developed, a project team shall be created to ensure successful implementation of the project. A Revenue Special Order (RSO) shall be prepared to identify the composition and responsibilities of the team. The team shall be composed of the following:
 - 1. Project Manager
 - 2. Co-Project Manager
 - 3. Requirement Team (Process/System Owner or Expert Users)
 - 4. Development Team or BIR Counterpart for outsourced projects
 - 5. Acceptance Team (Technical and Functional Reviewers/Testers)

6. Support Team (Application Support, Technical Support, DBA, Systems Administrator)
7. Rollout Team

- B. All application systems whether in-house developed or outsourced including enhancements to existing application systems shall pass through functional and technical acceptance testing.
- C. Acceptance testing of the new application systems and enhancements to existing application systems shall cover the complete Systems Development Life Cycle (SDLC).

LIFE CYCLE PHASE	DELIVERABLES/ DOCUMENTATION	ACCEPTANCE VERIFICATION ACTIVITIES	OFFICE RESPONSIBLE
Requirements	<ul style="list-style-type: none"> ▪ System Requirements Specifications (SRS) ▪ Functional Specifications Report (FSR) ▪ Technical Specifications Report (TSR) 	<ul style="list-style-type: none"> ▪ Determine adequacy of requirements ▪ Determine consistency of design with standards ▪ Determine consistency of design with requirements 	<ul style="list-style-type: none"> ▪ Acceptance Team ▪ Requirement Team
Design	<ul style="list-style-type: none"> ▪ Detailed Design Report (DDR) ▪ Programs Specifications 	<ul style="list-style-type: none"> ▪ Determine efficiency of design ▪ Determine consistency of design with standards ▪ Determine consistency of design with requirements 	<ul style="list-style-type: none"> ▪ Acceptance Team ▪ Acceptance Team with BIR counterpart, if outsourced
Program (build/construction)	<ul style="list-style-type: none"> ▪ Source Code 	<ul style="list-style-type: none"> ▪ Determine adequacy of implementation ▪ Determine consistency with standards 	<ul style="list-style-type: none"> ▪ Acceptance Team ▪ Acceptance Team with BIR counterpart, if outsourced
Test	<ul style="list-style-type: none"> ▪ Application System 	<ul style="list-style-type: none"> ▪ Test application system (Functional and Technical Testing) 	<ul style="list-style-type: none"> ▪ Acceptance Team ▪ Acceptance Team with Requirement Team, if outsourced
System Implementation	<ul style="list-style-type: none"> ▪ Conduct of Training ▪ User Guide/Job Aid ▪ Operation Manual (OM) 	<ul style="list-style-type: none"> ▪ Confirm that training has been conducted ▪ Confirm that user guide has been prepared ▪ Implementation of the final system to the production environment 	<ul style="list-style-type: none"> ▪ TDD/Roll-out Team ▪ TMD/Developer ▪ Process/System Owner

Acceptance testing for succeeding life cycle shall not start until the previous deliverable/s has been signed-off. A Product Acceptance Certificate shall be issued for every deliverable/documentation accepted.

- D. The system developer shall prepare/document the above-mentioned deliverables. For in-house developed application, preparation of OM and User Guide/Job Aid shall be the responsibility of the Process/System Owner and Training Management Division respectively. Said deliverables shall pass the acceptance criteria and must be signed-off before the start of the next life cycle. Any modification/enhancement on said application system shall also be documented by updating the affected module/s and shall pass the acceptance process.

For iterative application systems, no enhancement shall be implemented unless the Change Request (CR) is signed/approved by the concerned officials.

- E. Deviation/change in policy, work plan, system design, user functionality, etc., shall be approved by concerned DCIRs (for major changes), Project Manager and other concerned officials (for minor changes).
- F. A kick-off/regular meeting with the offices concerned shall be conducted in order to address/resolve all issues pertaining to the project.
- G. Technical Data and Documentation Standards shall be followed by the developer in every phase of SDLC to have a single reference point for system development activities and to have a uniform systems building standards. (i.e naming standards, programming standards, etc.)
- H. Acceptance testing shall cover the review of necessary documentation and system and integration testing. The review process for a particular deliverable shall be guided by the Evaluation Criteria Checklist (Annex K) and Technical Data and Documentation Standards. Acceptance Team shall prepare their own test plan to be used for system and integration testing to check and ensure that the developed application system really meets the user requirements.
- I. The developer shall provide testing/working environment for acceptance testing.
- J. All issues found/encountered during testing shall be logged/posted in the Discrepancy Log Sheet (Annex L) and shall be classified as major or minor using the Condition Type and Severity Matrix (Annex M).
- K. Logged issues shall be addressed within seven (7) working days upon submission and re-testing shall be completed within seven (7) working days upon receipt of notice based on the severity of the issue.
- L. All issues shall be resolved before a particular phase can be signed-off. However, a product can still be signed off as long as the unresolved minor

issues are listed in the Conditions List (Annex N) attached to the Product Acceptance Certificate.

- M. Product Acceptance Certificate shall be issued for application that has passed the acceptance criteria and shall have the following attachments:
 - 1. Product Acceptance Advice
 - 2. Conditions List if product was accepted with minor conditions
 - 3. Accomplished Evaluation Criteria Checklist
- N. Ready-For-Use Memorandum shall be issued if a particular functionality (partially developed) of the enhancement passed the evaluation criteria.
- O. User Validation Certificate shall be issued if full functionality of the enhancement passed the evaluation criteria.
- P. The application system rolled-out in production shall undergo pilot testing using live data. The head of the concerned pilot site shall be responsible for the issuance of Pilot Acceptance Certificate.

IV. PROCEDURES

A. CUSTOM DEVELOPED APPLICATION

- 1. Process/System Owner
 - 1.1 Work/discuss with the Development Team and Expert User in defining the user requirements and system design.
 - 1.2 Provide inputs on business requirements in the preparation of SRS for outsourced application.
 - 1.3 Review/comment the deliverables/documentations forwarded by the development team.
 - 1.4 Validate the test plan submitted by Acceptance Team.
 - 1.5 Sign Product and Pilot Acceptance Certificate.
 - 1.6 Prepare Operations Manual (OM).
- 2. Project Manager
 - 2.1 Prepare, update and disseminate work plan to team members/concerned offices.
 - 2.2 Join the Development Team, Expert Users and System Owner in defining user requirements and system design.
 - 2.3 Review/ensure that the SRS meet the requirements stated in TOR and the defined user requirements are met.

- 2.4 Inform the concerned offices of the scheduled walkthrough of developed system application prior to acceptance testing.
- 2.5 Coordinate with developer and Acceptance Team to resolve all issues raised.
- 2.6 Oversee the overall activities of the project team.
- 2.7 Sign Product Acceptance Certificate.
- 2.8 Coordinate with the Training Division on the conduct of training for the users of the application system being developed.
- 2.9 Submit management report to concerned offices.

3. Development Team

- 3.1 Work/discuss with Process/System Owner and Expert User in defining user requirements and system design.
- 3.2 For every systems development, prepare the following deliverables/documentations:
 - a. System Requirements Specifications (SRS)/Functional Specifications Report (FSR)
 - b. Technical Specifications Report (TSR)
 - c. Detailed Design Report (DDR)
 - d. Program Specifications
 - e. Source Code
 - f. Test Conditions (programming/system test)
 - g. Test Data
 - h. Critical Path (optional)
- 3.3 Forward the deliverables/documentations (SRS/FSR and Detailed Design Report) to Process/System Owner and Expert Users for their review.
- 3.4 Update/revise the deliverables/documentations based on the comments of Process/System Owner if any, otherwise, forward the reviewed deliverables/documentations to Acceptance Team for acceptance.
- 3.5 Develop a program based on the approved/signed off deliverables/documentation.
- 3.6 Perform unit and integration testing.
- 3.7 Prepare a letter request with necessary attachments and forward to Acceptance Team for the conduct of acceptance testing.
- 3.8 Conduct system walkthrough for Expert Users and Acceptance Team prior to the conduct of acceptance testing.
- 3.9 Prepare and maintain the working/testing environment for acceptance testing.
- 3.10 Fix/resolve issues raised by Acceptance Team and Expert Users.
- 3.11 Prepare migration request form with necessary attachment and forward to Database Administrator (DBA).

3.12 Prepare User Guide/Job Aid of the developed system application.
(for contractors only)

4. Expert Users

- 4.1 Work/discuss with Process/System Owner and Development Team in defining user requirements and systems design.
- 4.2 Review the deliverables forwarded by development team.
- 4.3 Attend walkthrough prior to acceptance testing.
- 4.4 Validate the test plan submitted by Acceptance Team.
- 4.5 Works with Acceptance Team in acceptance testing on the functionality of a particular application.
- 4.6 Log all issues found during acceptance testing.
- 4.7 Attend scheduled meeting to discuss and resolve issues.
- 4.8 Sign Product Acceptance/Rejection Advice.

5. Acceptance Team

- 5.1 Check the completeness of the documents submitted by the developer following the Technical Data and Documentation Standards.
- 5.2 Review and accept the deliverable/s submitted by the development team.
- 5.3 Receive letter request from the Development Team for the conduct of acceptance testing..
- 5.4 Attend walkthrough of the application system prior to acceptance testing.
- 5.5 Prepare test plan to be used in system and integration testing and forward to Process/System Owner/Expert Users for validation.
- 5.6 Perform acceptance system testing procedures ensuring that the system/user requirements are met.
- 5.7 Log all issues found during testing and transmit to Project Manager and developer for proper action.
- 5.8 Attend scheduled meeting to discuss logged issues.
- 5.9 Conduct re-testing of resolved issues.
- 5.10 Prepare, sign and route the following:
 - a. Product Acceptance or Rejection Advice.
 - b. Product Acceptance Certificate
- 5.11 Keep the original copies of the said documents and provide copy to the following offices:
 - a. Office of DCIR – ISG
 - b. ACIR ISDS/ISOS
 - c. System Owners
 - d. Expert Users

6. Roll-out Team

- 6.1 Schedule kick-off meeting regarding implementation of the project.
- 6.2 Monitor pre and post roll – out activities of the project.
- 6.3 Prepare Pilot Acceptance Certificate and route to concerned offices.

7. Revenue Data Center (RDC)/Revenue District Office (RDO) - Pilot Site

- 7.1 Evaluate the rolled - out application system.
- 7.2 Sign Pilot Acceptance Certificate.

B. ITERATIVE SYSTEM DEVELOPMENT

1. System Users

- 1.1 Log/report any problem or proposed enhancement to Help Desk.
- 1.2 Discuss details of proposed enhancement with System Owner and developer for proper validation and evaluation.
- 1.3 Validate the test plan submitted by Acceptance Team.
- 1.4 Work with the Acceptance Team in validation testing of a particular enhancement.
- 1.5 Log all issues raised during validation testing.
- 1.6 Attend scheduled meetings to discuss logged issues.

2. Process/System Owner

- 2.1 Initiate the preparation of CR and accomplish the pertinent portion intended for them.
- 2.2 Coordinate with system/expert users/developer and conduct meeting/s to discuss details and the requirements needed to properly evaluate the proposed enhancement/s.
- 2.3 Validate the test plan submitted by Acceptance Team.
- 2.4 Sign User Validation Certificate.

3. Development Team

- 3.1 Receive and analyze issue/problem raised by the users.
- 3.2 Coordinate with System Owner and users in the validation and evaluation of proposed enhancements.
- 3.3 Receive copy of approved Change Request (CR) from the concerned Process/System Owner.
- 3.4 Conduct detailed analysis of approved enhancement.

- 3.5 Update the deliverables/documentations affected by the enhancement being developed.
- 3.6 Forward the applicable deliverables/documentations to Process/System Owner and Expert Users for their review.
- 3.7 Forward the updated and reviewed deliverables/documentations to Acceptance Team for acceptance.
- 3.8 Develop enhancement and perform system testing.
- 3.9 Prepare letter request with necessary attachment and forward to Acceptance team for the conduct of validation testing.
- 3.10 Provide and maintain working/testing environment for the end users and acceptance team to execute testing.
- 3.11 Attend meeting and resolve issues/conditions raised on the deliverable/s.
- 3.12 Fix/resolve issues raised by Acceptance Team and Expert Users.
- 3.13 Prepare migration request form with the necessary attachment and forward to DBA.

4. Acceptance Team

- 4.1 Review and accept the updated deliverables/documentations submitted by development team.
- 4.2 Receive letter request, CR and the necessary attachments from development team for the conduct of validation testing..
- 4.3 Check the completeness of the documents submitted by development team.
- 4.4 Prepare test plan to be used in validation testing and forward to Process/System Owner/Expert Users for validation.
- 4.5 Work with system users in validation testing of a particular enhancement.
- 4.6 Log all issues found during testing and transmit to development team for proper action.
- 4.7 Attend scheduled meeting to discuss logged issues.
- 4.8 Prepare an RFU memo confirming that a particular phase/release is ready for migration to production and issue User Validation Certificate when the deliverable/s have already met the requirements identified in the Change Request and relevant acceptance criteria.
- 4.9 Prepare and route User Validation Certificate.
- 4.10 Provide the process owner, development team and DBA a copy of RFU memo and User Validation Certificate.

C. CUSTOMIZED PACKAGED APPLICATION (off-the-shelf)

1. Project Manager

- 1.1 Prepare, update and disseminate work plan to team members/concerned offices.
- 1.2 Coordinate with the Process/System Owner and vendor in relation to the software to be purchased/acquired.
- 1.3 Coordinate with Process/System Owner and users on user requirements to be customized.
- 1.4 Oversee the overall activities and attend meeting/s regarding the project.
- 1.5 Review/comments on the documentation forwarded by the developer/vendor.
- 1.6 Inform the concerned offices of the scheduled product presentation/walkthrough prior to acceptance testing.
- 1.7 Receive letter request from Developer/Vendor and forward to Acceptance Team for the conduct of acceptance testing.
- 1.8 Coordinate with vendor and Acceptance Team/Expert Users to resolve all issues raised.
- 1.9 Sign Product Acceptance Certificate.
- 1.10 Request DBA to migrate the customized packaged application.
- 1.11 Coordinate with vendor on the conduct of training for the users of the application.

2. Process/System Owner

- 2.1 Coordinate with the Project Manager and vendor in relation to the software to be purchased/acquired.
- 2.2 Provide inputs on user requirements for customization.
- 2.3 Attend meeting/s regarding the project.
- 2.4 Review/comments on the documentation forwarded by the developer/vendor.
- 2.5 Monitor the functional issues raised.
- 2.6 Validate the test plan submitted by Acceptance Team.
- 2.7 Sign Product Acceptance Certificate.

3. Developer/Vendor

- 3.1 Work/discuss with users on customization of the packaged application.
- 3.2 Prepare and forward the necessary documentation (System Documentation and Job Aid) to the Project Manager and Process/System Owner for their review.

- 3.3 Update/revise the documentation based on the comments of Project Manager and Process/System Owner if any, otherwise, forward to Acceptance Team for acceptance testing.
- 3.4 Develop/customize the application system.
- 3.5 Perform system and integration testing.
- 3.6 Conduct product presentation/walkthrough prior to acceptance testing.
- 3.7 Prepare letter request for acceptance testing and forward to Project Manager.
- 3.8 Fix/resolve issues raised on the customization.
- 3.9 Inform the Project Manager/Acceptance Team of the resolved issues for re-testing.

4. Expert User

- 4.1 Attend product presentation/walkthrough prior to acceptance testing.
- 4.2 Validate test plan submitted by Acceptance Team.
- 4.3 Works with the Acceptance Team in acceptance testing on the functionality of a particular application.
- 4.4 Ensure that the user requirements are met.
- 4.5 Log all issues found during acceptance testing.
- 4.6 Sign Product Acceptance/Rejection Advice.

5. Acceptance Team

- 5.1 Check the completeness of the documents submitted by the developer/vendor.
- 5.2 Review and accept the documentation submitted.
- 5.3 Receive letter request from Project Manager for the conduct of acceptance testing.
- 5.4 Attend product presentation/walkthrough prior to acceptance testing.
- 5.5 Prepare test plan to be used in system testing and forward to Process/System Owner/Expert Users for validation.
- 5.6 Perform acceptance testing procedures.
- 5.7 Log all issues found during acceptance testing.
- 5.8 Conduct re-testing of resolved issues.
- 5.9 Prepare, sign and route the following:
 - a. Product Acceptance or Rejection Advice
 - b. Product Acceptance Certificate

5.10 Keep the original copies of the said documents and provide copy to the following offices:

- a. Office of DCIR – ISG
- b. ACIR ISDS/ISOS
- c. System owners
- d. Expert Users

V. REPEALING CLAUSE

All revenue issuances or portion/s thereof, inconsistent herewith are hereby revoked and/or amended accordingly.

VI. EFFECTIVITY

This Order takes effect immediately.

(Original Signed)
GUILLERMO L. PARAYNO JR.
Commissioner of Internal Revenue