## ProjectProject Audit & Review Checklist

The following provides a detailed checklist to assist the PPO with reviewing the health of a project:

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| --- | --- |
| **Relevance (at this time)** | **Theory & Practice** |
| (How relevant is this attribute to this project or audit?) | (An indication of this attribute’s strength or weakness) |
|  |  |

ReviewReview

| Item | Attribute | Relevance | Practice | Assessment |
| --- | --- | --- | --- | --- |
| **1** | **Project Planning** |  |  |  |
| 1.1 | Does the project have a formal Project Plan? |  |  |  |
| 1.2 | Are the key elements of a Project Plan present?a. Project Definition & Scope?b. Project Objectives?c. Cost / Benefit Analysis?d. Staffing Requirements?e. Time Line?f. Risk Analysis?g. Critical Success Criteria (if we meet these, we've met our goals? | 5 |  |  |
| 1.3 | Have all stakeholders been identified? |  |  |  |
| 1.4 | Is a Stakeholder Management plan in place? Have project accountabilities & responsibilities been clearly defined? |  |  |  |
| 1.5 | Have the scope, objectives, costs, benefits and impacts been communicated to all involved and/or impacted stakeholders and work groups? |  |  |  |
| 1.6 | a) Have all involved stakeholders and work groups committed to the project? b) Have all necessary approvals been obtained? |  |  |  |
| 1.7 | Has a project Communications Plan been developed? |  |  |  |
| 1.8 | Are funding and staffing resource estimates sufficiently detailed and documented for use in planning and tracking the project? |  |  |  |
| 1.9 | Does a documented project organizational policy & plan (i.e. governance model) exist? |  |  |  |
| 1.10 | Have adequate resources been provided by management to ensure project success? |  |  |  |
| 1.11 | Is current scope of the project substantially different than that originally defined in the approved project plan? |  |  |  |
| 1.12 | Has the approach and development strategy of the project been defined, documented and accepted by the appropriate stakeholders? |  |  |  |
| 1.13 | Have project management standards and procedures been established and documented? |  |  |  |
| 1.14 | Is there a Steering Committee in place? |  |  |  |
| 1.15 | Is the Steering Committee active in project oversight? |  |  |  |
| 1.16 | Are there procedures in place to effectively manage interdependencies with other projects / systems? |  |  |  |
| **2** | **Project Management** |  |  |  |
| 2.1 | Have the key elements of a coherent project management strategy been established?a. Project tracking plan & methodologyb. Project status reporting structure & processc. Change Management plan & trackingd. Issues Management process & tracking plane. Risk Management Planf. Software Quality Assuranceg. Software Configuration Management |  |  |  |
| **2.2** | **Project Scheduling & Tracking** |  |  |  |
| 2.2.1 | Has a structured approach been used to break work effort into manageable components? |  |  |  |
| 2.2.2 | Are team members involved in the development of activity & task decomposition? |  |  |  |
| 2.2.3 | Are individual tasks of reasonable duration (8–40 hrs)? |  |  |  |
| 2.2.4 | Are milestone deliverables effectively tracked and compared to project plan? |  |  |  |
| 2.2.5 | Does the detailed project plan identify individual responsibilities for the next 4–6 weeks? |  |  |  |
| 2.2.6 | Have activity relationships and interdependencies within tasks been adequately identified? |  |  |  |
| 2.2.7 | Are target dates established for each milestone deliverable? |  |  |  |
| 2.2.8 | Are corrective actions taken when actual results are substantially different from detailed project plan? Describe. |  |  |  |
| 2.2.9 | Are changes in deliverable commitments agreed to by all affected groups & individuals? |  |  |  |
| 2.2.10 | Is the organization structure for both tracking & controlling project activities work products & costs (effort, schedule & budget) well defined and assigned to a specific individual? |  |  |  |
| 2.2.11 | Are measurements and feedback mechanisms incorporated in tracking work effort & refining work estimating techniques? |  |  |  |
| 2.2.12 | Have procedures for identifying variances from estimates & adjusting the detailed work program been established? |  |  |  |
| 2.2.13 | Is project work proceeding in accordance with the original project schedule? |  |  |  |
| 2.2.14 | If not, have all project delays been adequately accounted for, communicated to all stakeholders and adjustments made in overall project schedule? |  |  |  |
| 2.2.15 | Is there general agreement & acceptance of the current status and progress of the project? |  |  |  |
| 2.2.16 | Is PERT / Critical Path or equivalent methodology being used? Can you see the critical path on the plan? |  |  |  |
| 2.2.17 | Is an industry recognized mechanized support tool(s) being used for project scheduling & tracking? |  |  |  |
| 2.2.18 | Is it possible to track all classes of project work (e.g. scheduled, un-scheduled, defect repair, etc.)? Can you compare work done to the baseline? |  |  |  |
| **2.3** | **Project Status Reporting** |  |  |  |
| 2.3.1 | Is project status reviewed with senior management at appropriate intervals? What are they?a. Overall statusb. Project performance (achievements & milestones)c. Open issuesd. Riskse. Action itemsf. Cost & time performance against plang. Quality metricsh. Client involvement |  |  |  |
| 2.3.2 | Are internal project status meetings held at reasonable intervals? |  |  |  |
| 2.3.3 | Are sub-project reviews held at reasonable intervals? |  |  |  |
| 2.3.4 | Have adequate procedures been put in place for project coordination and status reporting across project boundaries (ie. interdependent software development among interfacing systems)? |  |  |  |
| 2.3.5 | Do project teams & team members report on status / activities / progress? |  |  |  |
| **2.4** | **Project Estimating** |  |  |  |
| 2.4.1 | Are multiple estimation methods being employed? |  |  |  |
| 2.4.2 | Are current project time & resource estimates reasonable based on the current project stage? |  |  |  |
| 2.4.3 | Are actuals compared against estimates to analyze and correct variances? |  |  |  |
| 2.4.4 | Are software metrics formally captured, analyzed and used as a basis for other project estimates? |  |  |  |
| 2.4.5 | Is the PPO estimating methodology being used and followed? |  |  |  |
| 2.4.6 | Do the estimating techniques include any of the following features:a. Ranged estimates?b. Sensitivity analysis?c. Risk rating?d. Quality Assurance overheads?e. Contingency? |  |  |  |
| 2.4.7 | Are project team members involved in detailed estimating and scheduling? |  |  |  |
| 2.4.8 | Are stakeholders aware and supportive of the principles and practices of modern software estimation? |  |  |  |
| **2.5** | **Risk Management** |  |  |  |
| 2.5.1 | Was an original risk assessment completed? |  |  |  |
| 2.5.2 | Is there a process in place to monitor project risks? |  |  |  |
| 2.5.3 | Has provision been made to reassess project risks at various project stages? |  |  |  |
| 2.5.4 | Have all unresolved risks been documented?Have all unimplemented risk strategies been escalated to an issues log? |  |  |  |
| **3** | **Quality Management** |  |  |  |
| 3.1 | Does the project have a ‘Quality Culture’? |  |  |  |
| 3.2 | Is there a Quality Plan covering all Policies, Guidelines and Procedures? |  |  |  |
| **3.3** | **Quality Assurance** |  |  |  |
| 3.3.1 | Has an overall Quality Assurance Plan been developed for the project? |  |  |  |
| 3.3.2 | Does the plan address key project elements?a. Project Planning?b. Project Management?c. Software Quality Assurance (SQA) |  |  |  |
| 3.3.3 | Does the SQA process provide objective verification of adherence to applicable standards, procedures & requirements? |  |  |  |
| 3.3.4 | Are all key components of an SQA plan present?a. SQA Planb. Software Configuration Management (SCM)c. Software development standards & methodsd. Methodologye. Testing Standards & Methodologyf. Data Architecture Standardsg. Data Naming Conventionsh. Technology Architecturei. Software Metrics |  |  |  |
| 3.3.5 | Are the results of SQA reviews provided to affected groups & individuals? |  |  |  |
| 3.3.6 | Are adequate resources provided for the SQA function? Are SQA resources experienced? |  |  |  |
| 3.3.7 | Are the SQA processes in place and being effectively used? |  |  |  |
| 3.4 | Is there a set of procedures defining the scope, procedures and deliverables defining Quality Control? |  |  |  |
| 3.5 | Are quality metrics defined? |  |  |  |
| 3.6 | Is there a set of procedures to capture, analyze and act on quality metrics? |  |  |  |
| **3.7** | **Software Configuration Management (SCM)** |  |  |  |
| 3.7.1 | Has SCM been implemented for this project? |  |  |  |
| 3.7.2 | Has an industry recognized SCM software version management & control tool been implemented? |  |  |  |
| 3.7.3 | Is SCM version management and control effectively linked with the testing function to ensure integration and regression testing have been performed? |  |  |  |
| 3.7.4 | Has an automated Change Management tool been implemented? |  |  |  |
| 3.7.5 | Is the SCM function adequately staffed? |  |  |  |
| 3.7.6 | Is the Testing Coordination function separate from the development staff? |  |  |  |
| **4.0** | **Management Procedures** |  |  |  |
| **4.1** | **Vendor Management** |  |  |  |
| 4.1.1 | Is there a formal set of procedures (for status reporting, contract negotiation & review, time/invoice reconciliation, etc.) supporting Vendor Management? |  |  |  |
| **4.2** | **Issues Management** |  |  |  |
| 4.2.1 | Is there a formal set of procedures supporting Issues Management? |  |  |  |
| 4.2.2 | Is there any form of automated support for Issues Management? |  |  |  |
| 4.2.3 | Are issues raised, assessed, actioned, and resolved in a timely and efficient manner? |  |  |  |
| **4.3** | **Stakeholder Management** |  |  |  |
| 4.3.1 | Is there a formal set of procedures supporting Stakeholder Management? |  |  |  |
| 4.3.2 | Is it standard practice to formally commit stakeholders to the project via agreements? |  |  |  |
| 4.3.3 | Does a comprehensive set of Stakeholder Agreements exist? Do we have statements delineating what each stakeholder has agreed to do? |  |  |  |
| **5.0** | **Resourcing** |  |  |  |
| 5.1 | Are all resource assumptions documented? |  |  |  |
| 5.2 | Does the project team have the skills necessary to successfully complete current project(s) and support the application? |  |  |  |
| 5.3 | Have arrangements been made to obtain special expertise or competence by consulting or referencing:a. Similar projects?b. Published materials?c. Personnel with expertise?d. Outside experts? |  |  |  |
| 5.4 | Have the personnel with the necessary skills and competence been identified and has agreement for their participation in the project been reached with the appropriate management? |  |  |  |
| 5.5 | Is there a project organization chart showing the reporting relationships and responsibilities for each position? |  |  |  |
| 5.6 | Has a proper project work location been established that will allow the team to work together with user personnel? |  |  |  |
| 5.7 | Does the detailed work plan match the complexity of tasks with the capabilities of personnel? |  |  |  |
| 5.8 | Has allowance been made for vacations, holidays, training (learning time for each team member), staff promotions & staff turnovers? |  |  |  |
| 5.9 | Has adequate time for orientation & training of project staff been provided for in relation to technical nature of the Application and the experience levels of project personnel? |  |  |  |
| 5.10 | Has appropriate allowance been made for the effect of the learning curve on all personnel joining the project who do not have the required prior industry, functional & technical expertise? |  |  |  |
| 5.11 | Are the appropriate IT resources adequate to meet planned commitments? |  |  |  |
| 5.12 | Are enough systems & user personnel assigned to the project? |  |  |  |
| 5.13 | Are the people assigned to the project sufficiently qualified? |  |  |  |
| 5.14 | Are project managers participating in the project adequately to know its true status first hand?a. Is a qualified person sufficiently involved in each critical area?b. Are communication lines working? |  |  |  |
| 5.15 | Is a senior systems department representative allocated to each user department to provide liaison and support?Does the project have both a business team leader and a technical team leader? |  |  |  |
| 5.16 | Do the project team have a good understanding of the existing and/or proposed hardware / software environments? |  |  |  |
| 5.17 | Are project leaders committed to this project full time? |  |  |  |
| 5.18 | Are project team members committed full-time? |  |  |  |
| 5.19 | Is the Production Support function adequately resourced? Is the Production Support function resourced full-time? |  |  |  |
| 5.20 | Is there a production support plan, with a plan for transition from development to production? |  |  |  |
| **6.0** | **Users** |  |  |  |
| 6.1 | Is user involvement adequate? |  |  |  |
| 6.2 | Are the people assigned to the project sufficiently qualified? |  |  |  |
| 6.3 | Is there a formal Service Level Agreement (SLA) with the appropriate client departments? |  |  |  |
| 6.4 | Does the SLA define:a. The Project/Application Scope?b. The objectives of the Agreement?c. The business areas to be supported?d. The systems / applications to be supported? e. The basis for costs and charges?f. The extent of user participation?g. The frequency of progress reporting – i.e. weekly, bi-weekly, monthly, etc.?h. The form of the final report?i. The work plan(s)? |  |  |  |
| 6.5 | Are the project team members located locally to the users? |  |  |  |
| 6.6 | Has the provision been made for training staff, including:a. Formal training related to the project?b. On the job training?c. Formal training not related to the project?d. Vendor training? |  |  |  |
| 6.7 | Are users adequately trained and are all training requirements filled? |  |  |  |
| **7.0** | **Development Approach** |  |  |  |
| **7.1** | **Methodologies** |  |  |  |
| 7.1.1 | Is a recognized development method(s) been followed? |  |  |  |
| 7.1.2 | If more than one method has been implemented, does a documented process exist for effective integration between / among methods? |  |  |  |
| 7.1.3 | Is the selected method appropriate for the Application, Technical and Data Architectures? |  |  |  |
| **7.2** | **CASE** |  |  |  |
| 7.2.1 | Are CASE tools being used? |  |  |  |
| 7.2.2 | Does the CASE ‘integration strategy’ include a process for reverse integration (i.e. updating the analysis tool if a change is made at the design level)? |  |  |  |
| 7.3 | Are structured requirements & design reviews and/or walkthroughs in use? |  |  |  |
| 7.4 | Are detailed design and code inspections in use? |  |  |  |
| **7.5** | **Analysis & Design** |  |  |  |
| 7.5.1 | Are requirements & design standards in place? |  |  |  |
| 7.5.2 | Are specifications clearly traceable from physical design to logical requirements? |  |  |  |
| 7.5.3 | Are the requirements and design methods suitable for the type of application & environment? |  |  |  |
| 7.5.4 | Do the design specification documents reference:a. Purpose / scope?b. Glossary of terms?c. Requirements specifications?d. Modular decomposition diagrams?e. Technical environment specification?f. Constraints?g. Testing & Data Conversion strategy? |  |  |  |
| **7.6** | **Development/Construction** |  |  |  |
| 7.6.1 | Are coding standards in place? |  |  |  |
| 7.6.2 | Is there a clearly documented relationship between logical (conceptual) design and technical design? |  |  |  |
| 7.6.3 | Is design and code re-use supported? |  |  |  |
| 7.6.4 | Are program control procedures in place? |  |  |  |
| 7.6.5 | Are there procedures to govern unit test cases, conditions, expected results, logs & sign-offs?  |  |  |  |
| 7.6.6 | Do adequate development and test environments exist? |  |  |  |
| **7.7** | **Testing** |  |  |  |
| 7.7.1 | Which of the following test phases are covered by the methodology:a. Unit Testing?b. System Testing?c. Integration Testing?d. User Acceptance Testing? |  |  |  |
| 7.7.2 | Is a test strategy in place? |  |  |  |
| 7.7.3 | Do detailed test plans/cases exist? |  |  |  |
| 7.7.4 | Are all necessary Quality Control procedures in place? |  |  |  |
| 7.7.5 | Is there an audit trail of all tests and results? |  |  |  |
| 7.7.6 | Are effective testing tools incorporated? |  |  |  |
| 7.7.7 | Is adequate allowance made for regression testing? |  |  |  |
| 7.7.8 | Is adequate allowance made for defect repair both before and after implementation? |  |  |  |
| 7.7.9 | Will the following components of systems testing be carried out:a. Communications?b. Volume?c. Stress?d. Recovery?e. Usability?f. Operations?g. Environment?h. Security?i. Efficiency/performance? |  |  |  |
| **8.0** | **Application Architecture** |  |  |  |
| 8.1 | Are object-based design and layered architecture principles being employed? |  |  |  |
| 8.2 | Does the application conform to recognized industry architecture standards? |  |  |  |
| 8.3 | Is the application being implemented using client / server architecture? |  |  |  |
| 8.4 | Is business process re-engineering being undertaken in parallel with and/or as part of this project? |  |  |  |
| 8.5 | Are there limitations to business operation flexibility due to the chosen Application Architecture? |  |  |  |
| 8.6 | Are application interfaces designed in such a way as to facilitate maintenance and change? |  |  |  |
| 8.7 | Does the Application Architecture support information needs at all levels of user operations (Strategic / Tactical / Operational)? |  |  |  |
| **8.8** | **Client / Server** |  |  |  |
| 8.8.1 | Are there design limitations which are impacting service delivery and/or performance? |  |  |  |
| 8.8.2 | Is the current architecture scalable? |  |  |  |
| **9.0** | **Data Architecture and Standards** |  |  |  |
| 9.1 | Is the project operating under a formal set of data architecture standards? |  |  |  |
| 9.2 | Does a formal data architecture and model exist for the application? |  |  |  |
| 9.3 | Has a fully attributed data model been developed for the application? |  |  |  |
| 9.4 | Has the data model been integrated with the other user and system views of the data? |  |  |  |
| 9.5 | Is an industry recognized mechanized tool being used to support the data modelling area? |  |  |  |
| 9.6 | Has a set of data naming conventions and/or standards been established? |  |  |  |
| 9.7 | Is an active data dictionary in place? |  |  |  |
| 9.8 | Is the data dictionary fully integrated with the development method? |  |  |  |
| 9.9 | Has the DBMS been optimized to support any of the following:a. OLTP?b. Decision Support / EIS?c. Data Warehousing? |  |  |  |
| 9.10 | Is the DBMS cost effective against expectations as defined in the Business Case? |  |  |  |
| 9.11 | Is the DBMS portable across target platforms? |  |  |  |
| 9.12 | Does DBMS vendor support meet formal agreements and/or expectations? |  |  |  |
| 9.13 | Is there (or has there been) significant interruptions to development or support activities due to DBMS behavior? |  |  |  |
| 9.14 | Does or will the DBMS support extensibility appropriate for current and future business needs? |  |  |  |
| 9.15 | Is there a clear upgrade path to future Phases of the DBMS? |  |  |  |
| 9.16 | If an alternative DBMS is being considered, is there a proven conversion path? |  |  |  |
| 9.17 | Is the DBMS consistent with SOE? |  |  |  |
| 9.18 | Is the DBMS regarded as ‘State-of-the-Art’? |  |  |  |
| **10.0** | **Technical Architecture** |  |  |  |
| 10.1 | Is the choice of hardware platform consistent with the Standard Operating Environment (SOE)? |  |  |  |
| 10.2 | Is the software environment consistent with SOE? |  |  |  |
| 10.3 | Is the development language platform-independent? |  |  |  |
| 10.4 | Is the mixture of technologies proven, stable and easily supportable? |  |  |  |
| 10.5 | Is TCP/IP or other industry recognized application interface standard being employed? |  |  |  |
| 10.6 | Does the user interface employ GUI representation? |  |  |  |
| 10.7 | Is the application software cost effective against expectations as defined in the Business Case? |  |  |  |
| 10.8 | Is the application software portable across target platforms? |  |  |  |
| 10.9 | Does the application software vendor(s) support meet formal agreements and/or expectations? |  |  |  |
| 10.10 | Is there (or has there been) significant interruptions to development or support activities due to application software behavior? |  |  |  |
| 10.11 | Does or will the application software support extensibility appropriate for current and future business needs? |  |  |  |
| 10.12 | Is there a clear upgrade path to future Phases of the application software? |  |  |  |
| 10.13 | Is the software regarded as ‘State-of-the-Art’? |  |  |  |
| **11.0** | **Platforms** |  |  |  |
| 11.1 | Has the cost effectiveness of the platforms been measured & compared against estimates in the Business Case? |  |  |  |
| 11.2 | Is there adequate project-based technical support? |  |  |  |
| 11.3 | Is there adequate vendor-based technical support? |  |  |  |
| 11.4 | Do the platforms meet reliability requirements? |  |  |  |
| 11.5 | Does the mixture of platforms support portability of software and DBMS? |  |  |  |
| 11.6 | Do the platforms represent ‘State-of-the Art’? |  |  |  |
| 11.7 | Are the platforms considered efficient in transaction processing and data storage? |  |  |  |
| 11.8 | Are the platforms the SOE? |  |  |  |
| 11.9 | Do Service Level Agreements exist for Platform (Hardware) Support? |  |  |  |
| **12.0** | **Networks & Communications** |  |  |  |
| 12.1 | Has the cost effectiveness of the networks been measured & compared against estimates in the Business Case? |  |  |  |
| 12.2 | Is there adequate project-based technical support? |  |  |  |
| 12.3 | Is there adequate vendor-based technical support? |  |  |  |
| 12.4 | Do the networks meet reliability requirements? |  |  |  |
| 12.5 | Do the networks represent ‘State-of-the Art’? |  |  |  |
| 12.6 | Do the networks support business needs in terms of bandwidth? |  |  |  |
| 12.7 | Are all components of the networks in accordance with the SOE? |  |  |  |
| 12.8 | Do Service Level Agreements exist for Network Support? |  |  |  |
| **13.0** | **Production & Operations Support** |  |  |  |
| 13.1 | Do adequate operations procedures exist? |  |  |  |
| 13.2 | Are operations support measures in place for:a. OLTPb. Inquiries & Decision Supportc. Utilities & back-ups |  |  |  |
| 13.3 | Do formal & documented procedures exist for:a. User (security) maintenance?b. Acceptance of applications to Production Support? |  |  |  |
| 13.4 | Is the Production Support (Application Maintenance) function well defined? |  |  |  |
| 13.5 | Are any of the following types of maintenance carried out on a planned basis:a. Perfective maintenanceb. Preventative maintenancec. Adaptive maintenance |  |  |  |
| 13.6 | Are Service Level Agreements in place between the Support Functions and the user departments? |  |  |  |
| 13.7 | Is production problem resolution supported by:a. Formal and agreed procedures?b. Accurate time & cost estimating?c. Prioritization?d. Tracking?e. Reporting? |  |  |  |
| 13.8 | Are Maintenance Metrics defined and in place?(These metrics may include: defect rates; problems per no. of users; defects per module/system; defects per Function Point; mean time to repair defect; mean cost to repair defect) |  |  |  |
| 13.9 | Is there an improvement program in place? |  |  |  |
| 13.10 | Are Help-desk functions well-defined, efficient and adequately resourced? |  |  |  |

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