Documentation Consultants’

SDLCforms

Waterfall User Guide

Version 3.50

www.SDLCforms.com
Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Author</th>
<th>Change</th>
</tr>
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<tbody>
<tr>
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<td>1.0</td>
<td>Ken Fass</td>
<td>Initial release</td>
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<td>Ken Fass</td>
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<td>Ken Fass</td>
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<td>Rebecca C.</td>
<td>Added new Starter Package to document.</td>
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<tr>
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<td>3.0</td>
<td>Rebecca C.</td>
<td>Added 30 new forms to inventory.</td>
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<tr>
<td>11/15/16</td>
<td>3.10</td>
<td>Ken Fass</td>
<td>Added new Project Management Plan Template.</td>
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<tr>
<td>02/01/19</td>
<td>3.50</td>
<td>Rebecca C.</td>
<td>Added 7 more forms to the Ultimate Package</td>
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<tr>
<td>12/12/19</td>
<td>3.50</td>
<td>Rebecca C.</td>
<td>Streamlined document for ease of reading.</td>
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1 Introduction

This document is a User Guide for reviewing the purpose of each form or template in the Documentation Consultants’ SDLCforms documentation.

This User Guide includes:

- A brief overview of each form available in our inventory by project phase.
- A detailed explanation of each of the forms and templates in the SDLCforms inventory.

Audience

This document is intended for program managers, technical writers, developers, and quality assurance personnel who must complete Documentation Consultants’ SDLCforms documentation.
## 2 List of the Forms and Templates by Project Phase

<table>
<thead>
<tr>
<th>Form Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Concept / Initiation Phase</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Initiation Agenda</td>
<td></td>
<td>Provides initial project agenda for a &quot;kick-off&quot; meeting, whereby key stakeholders and sponsors, and key business and technology members are identified.</td>
</tr>
<tr>
<td>Project Charter</td>
<td></td>
<td>Provides the business goals, objectives, scope and management direction for starting the project in the Initiation phase. It sets project expectations and processes to ensure agreement on the project approach.</td>
</tr>
<tr>
<td>Business Case Document</td>
<td></td>
<td>Identifies whether there is a potential business value to the proposed project idea or initiative before the organization commits time, resources and expenditures.</td>
</tr>
<tr>
<td>Feasibility Study</td>
<td></td>
<td>A study that uses business and technical information and cost data to determine the economic potential and practicality (i.e., feasibility) of a project.</td>
</tr>
<tr>
<td>Value Proposition Template</td>
<td></td>
<td>Completing the Value Proposition Template will assist an individual/department determine if there is value in a proposed application, system or product, often provided by an outside vendor or contractor, and help in the final decision-making process. This template is used in conjunction with the Business Case Document.</td>
</tr>
<tr>
<td>Project or Issue Submission Form</td>
<td></td>
<td>A one-page summary that identifies the proposed project, opportunities, business goal, project scope and issues, and alternatives or recommendations.</td>
</tr>
<tr>
<td>Project Cost - Benefit Analysis</td>
<td></td>
<td>Provides information that will be performed in the project, including business objectives and project description, such as completion criteria, risk assessment, constraints, impact analysis, project success measures, critical success factors, project approach, roles and participants.</td>
</tr>
<tr>
<td>Project Team Definition</td>
<td></td>
<td>Identifies the business and technical groups and individuals responsible for the initiation, analysis, development, testing, installation and approval of the project.</td>
</tr>
<tr>
<td>Stakeholder Identification List</td>
<td></td>
<td>Stakeholder identification includes the processes required to identify the people, groups and organizations that could affect or be affected by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate strategies and tactics for effectively engaging stakeholders in a manner appropriate to the stakeholders’ interest and involvement in the project.</td>
</tr>
<tr>
<td>Initiate Project Checklist</td>
<td></td>
<td>This checklist provides sample information to use and verify that major initial project functions and tasks have been completed within the Concept phase in the Project Management Life Cycle.</td>
</tr>
<tr>
<td>Project Resource Plan</td>
<td></td>
<td>This document provides a centralized source for definition of all resources required for a project, including:</td>
</tr>
<tr>
<td>Concept of Operations (CONOPS)</td>
<td></td>
<td>The Concept of Operations, or CONOPS, is a Capabilities Needs Assessment investigation to gain a Users’ and Stakeholders’ perspective on a major change initiative. As such, it is both an analysis and a formal document that describes high-level capabilities requirements that have been identified as necessary to achieve the mission of the IT organization, and its subordinate organizations.</td>
</tr>
<tr>
<td>Form Name</td>
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</table>
| Project Management Plan Template  |      | The Project Management Plan describes the project management methods and tools employed within a project; which are often incorporated as a set of project management sub plans. The objective of a project management plan is to define the overall approach to execute, monitor and control, deliver and close the entire scope of work authorized for a project.  
It is good practice to have a formally agreed and version-controlled project management plan approved in the early stages of the project, and applied and updated throughout the project. Once completed, the plan should be agreed and approved by the project's clients, executive sponsors, the assigned project manager, and other key stakeholders.  
The project management plan typically covers the following chapters or sub plans:  
• Scope Management  
• Schedule Management  
• Financial Management  
• Quality Assurance Management  
• Resource Management for resources including personnel, equipment, tools, etc.  
• Communications Management  
• Project Change Management  
• Risk Management  
• Procurement Management. |
| Project Planning Phase            |      | **Project Management Office (PMO) Checklist**  
The Project Management Office Checklist provides the capability to determine if the Information Technology (IT) Program Management Office (PMO) has provided the functions and tools to achieve a successful environment in support of both executive management and the project managers responsible for individual IT projects.  
**Statement of Work**  
Provides information that will be performed in the project, including business objectives and project description, such as completion criteria, risk assessment, constraints, impact analysis, project success measures, critical success factors, project approach, roles and participants.  
**Project Approval Document**  
This document formalizes approval for the project by all contributors.  
**Cost Estimating Worksheet**  
This Excel spreadsheet provides the opportunity to estimate and budget various IT costs.  
**Development Estimating Worksheet**  
This Excel spreadsheet provides the opportunity to estimate development costs for prototyping, user interfaces / reports / databases / tables, objects and integration / jobs.  
**Project Capital vs. Expense Costs**  
This Excel spreadsheet provides the opportunity to estimate various capital and expense costs for a project including IT resources, external professional services, hardware, communications, software licenses, and supplies.  
**Configuration Management Plan**  
The Configuration Management (CM) Plan informs project stakeholders about how CM is used to manage the project, what tools are used, and how they will be implemented to achieve project success. |
<table>
<thead>
<tr>
<th>Form Name</th>
<th>Type</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Project Risk Information Data Collection Form</td>
<td></td>
<td>During the course of a project, potential risks can be identified by a myriad of sources. The Project Risk Information Data Collection Form’s purpose is to provide a vehicle for capturing detail information on any of those risks for analysis and evaluation. Summary information from this data collection is then encapsulated in the Project Risk Analysis Plan for weekly management review.</td>
</tr>
<tr>
<td>Risk Analysis Plan</td>
<td></td>
<td>Provides a medium to record a risk analysis of the project, and is used to keep track of potential risks that may jeopardize the project’s success or completion date.</td>
</tr>
<tr>
<td>Procurement Plan</td>
<td></td>
<td>Provides procedures and information to acquire hardware, software, vendors, or other needed items. It assists in determining what to acquire, when, and how...</td>
</tr>
<tr>
<td>Project Organization Chart</td>
<td></td>
<td>Know who the key “players” are on your project via a Visio graphical diagram identifying the PMO personnel, sponsors, stakeholders, and business analysts including the collaborating organizations such as Infrastructure, design, quality assurance, etc.</td>
</tr>
<tr>
<td>Roles and Responsibilities Matrix</td>
<td></td>
<td>Displays key project activities and details the responsibilities for each individual or role across every functional department.</td>
</tr>
<tr>
<td>Required Approvals Matrix</td>
<td></td>
<td>Provides a matrix of key project activities (e.g., functions, tasks, documents or phases), and who is responsible for approving them.</td>
</tr>
<tr>
<td>Activity Worksheet in Work Breakdown Structure Dictionary Form</td>
<td></td>
<td>The WBS Activity Worksheet is made available to Subject Matter Experts (SMEs) to define the scope of work required for each activity and task within the work breakdown structure. For the entries made in this worksheet, accurate activity and task descriptions can be compiled and tracked for variance during the course of a project.</td>
</tr>
<tr>
<td>Work Breakdown Structure Resource Planning Template</td>
<td></td>
<td>The Work Breakdown Structure Resource Planning Template provides a matrix of WBS tasks with the estimated duration of each task in hours with % of time required by the various skill sets to contribute to the tasks, summarized by total hours required for those skill sets.</td>
</tr>
<tr>
<td>Work Breakdown Structure</td>
<td></td>
<td>Provides a work breakdown structure table that includes the tasks to be completed within a small project in lieu of a more formal Project Plan.</td>
</tr>
<tr>
<td>COBIT Checklist and Review</td>
<td></td>
<td>The Sarbanes-Oxley Act, including COBIT Checklist and Review, provides for a standardized structure for Information Technology (IT) governance, accounting controls and compliance. COBIT Control Objectives focus on specific, detailed objectives related with each IT process.</td>
</tr>
<tr>
<td>Request for Information</td>
<td></td>
<td>A Request for Information (RFI) is used to solicit information from qualified vendors on the products and services they recommend addressing your business problem or functionality.</td>
</tr>
<tr>
<td>Root Cause Analysis</td>
<td></td>
<td>Identifies the root cause of a problem and the recommendations for a solution, including the date the problem was encountered, summary of the problem, duration of the problem, impacted business units and applications, and the recommended action and follow-up.</td>
</tr>
<tr>
<td>Project Plan</td>
<td></td>
<td>This MS Project document establishes both project execution and project control. It shows when and how a project's objectives are to be achieved by depicting the status of the major products, milestones, activities and resources required on the project.</td>
</tr>
<tr>
<td>List of Opportunities Summary</td>
<td></td>
<td>Provides a master list communication tool that summarizes project opportunities, including opportunity description, priority, target date for delivery, and owner.</td>
</tr>
<tr>
<td>Form Name</td>
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<tr>
<td><strong>System Requirements Phase</strong></td>
<td></td>
<td><strong>Managing Scope and Requirements</strong> Provides a checklist of numerous topics to help manage the scope and requirements for a project. The list works to gain customer agreement and scope creep that pushes out project completion and project costs.</td>
</tr>
<tr>
<td><strong>Business Requirements Document</strong></td>
<td></td>
<td>Defines the general business requirements for the project. Identifies business and end user requirements, problems or issues, project information, process information, and training and documentation requirements.</td>
</tr>
<tr>
<td><strong>Business Requirements Presentation to Stakeholders</strong></td>
<td></td>
<td>This document provides a PowerPoint presentation &quot;shell&quot; to incorporate and review the project business requirements with the stakeholders and business units sponsoring the project.</td>
</tr>
<tr>
<td><strong>Functional Requirements Document</strong></td>
<td></td>
<td>Defines the functional requirements for the project including the different levels of business and end user requirements, and the functional areas of the business processes.</td>
</tr>
<tr>
<td><strong>Software Architecture Plan</strong></td>
<td></td>
<td>This document provides a comprehensive architectural overview of the system, using a number of different architectural views to depict different aspects of the system. It is intended to capture and convey the significant architectural decisions which have been made on the system.</td>
</tr>
<tr>
<td><strong>Use Case Template</strong></td>
<td></td>
<td>Defines the business requirements for the project using a use case methodology, and includes problems or issues to be resolved, objectives or goals, solution(s) to be implemented, and why the solution is being implemented.</td>
</tr>
<tr>
<td><strong>Requirements Inspection Checklist</strong></td>
<td></td>
<td>Provides a sample quality assurance document to verify at a glance that major requirement functions and tasks have been completed.</td>
</tr>
<tr>
<td><strong>Requirements Traceability Matrix</strong></td>
<td></td>
<td>A method that is used to verify the association between the requirements shown in the Requirements / Specifications and other project documents, including design and testing documentation. Testing ensures that the requirements have been implemented correctly based on the design and Requirements Traceability Matrix.</td>
</tr>
<tr>
<td><strong>Requirements Changes Impact Analysis</strong></td>
<td></td>
<td>Provides detailed information to perform an impact analysis of requirement changes, including proposed change implications, system components and elements affected by the change, and estimated schedule and cost impacts.</td>
</tr>
<tr>
<td><strong>Training Plan</strong></td>
<td></td>
<td>Supports the use and maintenance of the specific system or application, and includes information about training courses and the tools and techniques that will be used.</td>
</tr>
<tr>
<td><strong>Service Level Agreement Template</strong></td>
<td></td>
<td>Formalizes an arrangement between your company and the client to deliver specific support services, at specific levels of support, and at an agreed-upon cost.</td>
</tr>
<tr>
<td><strong>System Design Phase</strong></td>
<td></td>
<td><strong>Systems Requirements Specifications</strong> Provides more details to the project’s high-level requirements, including detailed information so that the system can be built to satisfy the system requirements and quality. It includes product/functional requirements, user characteristics, operating environment, security and regulatory specifications, disaster recovery and data specifications.</td>
</tr>
<tr>
<td><strong>Analysis and Design Document</strong></td>
<td></td>
<td>Provides detailed information to perform an analysis and design of a system, including topics of current and future software architecture processes, interfaces, data flow, infrastructures, components, integration, and security.</td>
</tr>
<tr>
<td><strong>Application Development Project List</strong></td>
<td></td>
<td>Provides a list of 50+ tasks that need to be considered within an application development project.</td>
</tr>
<tr>
<td>Form Name</td>
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</tr>
<tr>
<td>Technical Requirements Document</td>
<td>Defines the technical requirements for the project to a sufficient level of detail to develop a system design and to allow testers to test the system.</td>
<td></td>
</tr>
<tr>
<td>Database Design Document</td>
<td>The Database Design Document maps the logical data model to the target database management system with consideration to the system’s performance requirements. The Database Design converts logical or conceptual data constructs to physical storage constructs (e.g., tables, files) of the target Database Management System (DBMS).</td>
<td></td>
</tr>
<tr>
<td>Website Planning Checklist</td>
<td>Provides a checklist of numerous topics to consider when designing and developing a new website.</td>
<td></td>
</tr>
<tr>
<td>User Interface Design Template</td>
<td>Provides a template for structured approach to fill in detailed business and technical information for design and development of a user interface (i.e., a screen).</td>
<td></td>
</tr>
<tr>
<td>Report Design Template</td>
<td>Provides numerous topics to fill in detailed business and technical information for the design and development of a report.</td>
<td></td>
</tr>
<tr>
<td>Code Review Checklist</td>
<td>The Code Review Checklist provides a company guideline for checking code including pass/fail parameters and recording any comments when the test fails.</td>
<td></td>
</tr>
<tr>
<td>Conversion Plan</td>
<td>Describes the strategies involved in the conversion of a system or application.</td>
<td></td>
</tr>
<tr>
<td><strong>Testing Phase</strong></td>
<td></td>
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</tr>
<tr>
<td>Documentation Quality Assurance (QA) Checklist</td>
<td>Provides the capability to perform a documentation quality assurance review prior to delivery and implementation.</td>
<td></td>
</tr>
<tr>
<td>Building Test Scenarios</td>
<td>Testing scenarios are hypothetical stories used to assist an individual to think through a complex problem or system. Scenarios are useful for surfacing requirements-related controversies, and to relate to those documented requirements.</td>
<td></td>
</tr>
<tr>
<td>Test Plan</td>
<td>This document provides a central artifact to govern the strategic approach of the test effort; it defines the general approach to be employed when testing the software and when evaluating the results of that testing. Planning documents will refer to the test strategy regarding the governing of detailed testing work. It also provides visible confirmation to test-effort stakeholders that adequate consideration has been given to the governing of the test effort and, where appropriate, to have those stakeholders approve the strategy.</td>
<td></td>
</tr>
<tr>
<td>System Quality Assurance Checklist</td>
<td>Verifies that various project management, methodology, testing, configuration management, and documentation and records management principles and standards have been applied to a project.</td>
<td></td>
</tr>
<tr>
<td>Website Testing Summary Template</td>
<td>Provides summary information and checklists for web quality assurance testing. Each checklist table provides questions or statements for which the tester responds with a Yes/No answer and respective comments where applicable. Completion of the checklists will help ensure the applications, functions, or features meet adequate quality assurance before being moved to production for end-user utilization.</td>
<td></td>
</tr>
<tr>
<td>System Test Plan</td>
<td>Documents all system requirements denoted in the requirements, specifications, and design documentation to plan and execute unit, system, and integration tests that ensure a high level of compliance.</td>
<td></td>
</tr>
<tr>
<td>User Acceptance Test Plan (UAT)</td>
<td>Provides management an overview of the system, applications, functions, and features that are to be tested in the UAT process. The plan and tests provide guidance to the management, staff, and business owners that the application works as expected.</td>
<td></td>
</tr>
<tr>
<td>Form Name</td>
<td>Type</td>
<td>Description</td>
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</tr>
<tr>
<td>Testing Bug Report</td>
<td></td>
<td>This report provides the ability to record details about an individual testing bug detected during unit, system, integration and user acceptance testing, including the bug name, area description, bug description, severity, status, priority, tester name, date tested, environment, test manager and tester names, method of testing, and who the bug was assigned to.</td>
</tr>
<tr>
<td>Testing Bug List</td>
<td></td>
<td>This list provides a status of all bugs detected during unit, system, integration and user acceptance testing, by defining the test case ID, bug name, bug description, severity, status, date tested, and type of testing method utilized.</td>
</tr>
<tr>
<td>Regression Testing Plan</td>
<td></td>
<td>Provides general information about systems or applications that require regression testing, including why testing is required, functional business areas affected and testing timeline.</td>
</tr>
<tr>
<td>Project Acceptance Document</td>
<td></td>
<td>The document formalizes acceptance of the project, and describes the products and services the customer received.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Project Monitoring and Control Phase</strong></td>
</tr>
<tr>
<td>Change Management Log</td>
<td></td>
<td>This document is used to record changes to the baseline, including the change type, priority, the owner's name, date submitted, if escalation is required, the date it was approved, and the action / resolution of the change.</td>
</tr>
<tr>
<td>Action Item Status</td>
<td></td>
<td>This document provides that status of all project action items, including the item number and description, the assigned, due and resolved dates, the owner, priority and a status of the item.</td>
</tr>
<tr>
<td>Risk Management Log</td>
<td></td>
<td>The Risk Management Log is a management tool that identifies, assesses, and records recommended actions that management must take to alleviate the risk potential down to acceptable levels. The log provides a framework in which potential problems that threaten the delivery of the anticipated benefits of a system or application are recorded.</td>
</tr>
<tr>
<td>Issue Identification and Resolution</td>
<td></td>
<td>This document is used to individually identify each issue that may impact a project, and identify who created and resolved the issue, the type of issue, potential alternatives and recommendations, provide an estimate of the resources, man hours and costs, and management actions that were taken to resolve the issue.</td>
</tr>
<tr>
<td>Issues Management Log</td>
<td></td>
<td>The Issue Management Log provides the ability to initially identify the issue, how the issue is assessed by the project team, and what the management responses / actions are to resolve the issue.</td>
</tr>
<tr>
<td>Project Milestone Status Form</td>
<td></td>
<td>This document provides a vehicle for capturing the latest status of due date, completion date, and the milestone/task status (in-process, completed or delinquent), milestones, goals, or tasks including the milestone/task description, person responsible for that milestone/task.</td>
</tr>
<tr>
<td>COBIT Objectives and Audit Activity Report</td>
<td></td>
<td>This document provides a tracking vehicle for defining and statusing COBIT (Control Objectives for Information and Related Technology) objectives and activities for auditing purposes.</td>
</tr>
<tr>
<td>Project Status Report</td>
<td></td>
<td>Summarizes the project status, including project activity, information about the project, planned activities for next period, and deliverable description and status; management changes, risks and issues status.</td>
</tr>
<tr>
<td>Meeting Summary</td>
<td></td>
<td>Documents the meeting date and time, participants, meeting minutes, conclusions and action items status.</td>
</tr>
<tr>
<td>Form Name</td>
<td>Type</td>
<td>Description</td>
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<td>---------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Production Turnover / Deployment Phase</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process Guide</td>
<td></td>
<td>Provides information about system, application or process instructions, procedures, and process flows, which are shown in step-by-step text format as well as visual graphics.</td>
</tr>
<tr>
<td>Installation Planning Guide</td>
<td></td>
<td>Provides information for the installation of the system, application or data, including installation strategy, planning and risk factors, and security.</td>
</tr>
<tr>
<td>Software User Guide</td>
<td></td>
<td>Provides training or reference information for using the system, product, application or data. The Guide explains the major components, benefits, access information, and navigation instructions.</td>
</tr>
<tr>
<td>System Administration Guide</td>
<td></td>
<td>Provides procedures and information to administer and maintain a system, product or application, and includes an overview, data assets, processing, server and database administration, and backup instructions.</td>
</tr>
<tr>
<td>Operations Guide</td>
<td></td>
<td>Provides procedures and information to run a system, product or application. It includes scheduled operations, unique tasks, troubleshooting, auditing, and best practices.</td>
</tr>
<tr>
<td>Production Implementation Plan</td>
<td></td>
<td>Provides the last step in formal approval and implementation of the project. It identifies the objectives, impacted devices, production delivery steps, technical support information, hardware and software components, testing and acceptance, rollback/contingency plan, and required training and documentation.</td>
</tr>
<tr>
<td>Production Turnover Approval</td>
<td></td>
<td>Provides a process that ensures changes to the production environment are planned, approved, tested, executed, and reviewed in a systematic efficient and controlled manner.</td>
</tr>
<tr>
<td><strong>Project Closure / Maintenance Phase</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lessons Learned Template</td>
<td></td>
<td>The Lessons Learned Template provides an opportunity for reflection after a project has been completed. It is highly beneficial to record what worked well with the project and where improvements can be made. Once the project has been completed, a Lessons Learned discussion should be scheduled with key stakeholders in the project to discuss what was learned from the project.</td>
</tr>
<tr>
<td>Transition Out Plan</td>
<td></td>
<td>The Transition Out Plan is used to describe how project deliverables will be brought to full operational status, and integrated into ongoing operations and subsequently maintained. Its purpose is to ensure that these deliverables will be used effectively to produce the requisite Business Value after project completion.</td>
</tr>
<tr>
<td>Post Project Review Survey Questionnaire</td>
<td></td>
<td>During the Project Closure / Maintenance phase of a project, the Project Management Office (PMO) conducts a survey to gather feedback on the project to improve performance on subsequent projects. This survey will assist the PMO in gathering project sponsors and team member's thoughts on the project.</td>
</tr>
<tr>
<td>Post Project Review</td>
<td></td>
<td>Upon completion of a project, good practice is to assess how you did on the project, in conjunction with a Lesson Learned Report. General questions are asked of the stakeholders and to determine how well you performed against the project schedule and budget.</td>
</tr>
<tr>
<td>Modification / Change Control Request</td>
<td></td>
<td>Used to review system / application change requests to evaluate and approve technically sound and secure &quot;changes&quot; to the production environment and to limit potential impact to business capabilities and/or IT operational capacity, architecture, infrastructure, compliance, and schedules.</td>
</tr>
<tr>
<td>Disaster Recovery Plan Information</td>
<td></td>
<td>Documents a disaster recovery plan as part of an overall contingency plan to complete that restoration task and keep the company running. A disaster recovery plan is required for any publicly traded company and companies that need to minimize loss under which the company site is unable to function under standard daily business procedures.</td>
</tr>
<tr>
<td>Form Name</td>
<td>Type</td>
<td>Description</td>
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<td>-----------------------------------------------</td>
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<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Certificate of Compliance and Acceptance of Deliverable</td>
<td></td>
<td>Deliverables provided by outside contractors and developers in accordance with a task order or purchase order, but can be used in any situation where you wish to review the status of deliverables by internal organizations on a given project. The Certificate of Compliance is generally used to accept and validate project.</td>
</tr>
<tr>
<td>Request for New Application / Enhancement</td>
<td></td>
<td>This document permits a business unit, other departments or auditors to initiate the process of requesting a new application or an enhancement to an existing application.</td>
</tr>
<tr>
<td>Product Retirement Plan</td>
<td></td>
<td>Provides detailed instructions for retirement of a system or application, and describes how the hardware, software, data, and documentation associated with the application will be detached from production and archived or migrated.</td>
</tr>
<tr>
<td>Global Application Support Summary</td>
<td></td>
<td>The Global Application Support Summary provides a vehicle to record critical design, development, production support, Infrastructure, and security data on all applications. The information recorded herein is used to update any IT applications defining your application environment.</td>
</tr>
</tbody>
</table>
3 Detailed Explanation of Forms and Templates

3.1 Introduction

Documentation Consultants forms and templates (written in Microsoft Word, Excel, Visio, Project and PowerPoint) support organizational processes, specifically business and information systems that use or wish to use a Software Development Life Cycle (SDLC) methodology.

SDLCforms consists of five optional packages, Starter, SmallBiz, JumpStart, Professional, and Ultimate, which are available in a wide-range of forms that let you start out small by expanding your existing processes to leap ahead into a new comprehensive methodology without the pain of endless hours of discussion, trial and error, and hundreds of thousands of dollars of consultant’s costs.

3.2 Description of Forms and Templates

The following table provides an overview of each phase and a description of the forms and templates in the phase and documentation within the SDLC phases. Use and completion of the various forms is dependent upon project complexity, management’s work philosophy, auditing requirements, and government regulations.
3.3 Project Concept/ Initiation Phase

3.3.1 Project Concept / Initiation Phase Overview

The project concept / initiation phase provides the high-level determination if the project is worthwhile, via a review of the project charter, business case, cost-benefit analysis, and definition of the team to move the project forward. This phase includes the work that is necessary to determine the feasibility of pursuing defined business strategies as funded programs and projects. The primary scope of work includes developing a business case, conducting a feasibility study, and performing a cost-benefit analysis. Once those activities are complete, and sponsoring executives have reviewed the analysis and made their final decision to proceed, the project manager will begin to form the project team and review and complete the project initiation checklist.

During this strategic assessment phase, businesses executives will review the mission and past strategies to look for areas of improvement, and possibly assess new market, product or service opportunities. However, there's another level of assessment that must occur before investment decisions can be made on which programs and projects to invest in.

These assessments delve deeper to determine organizational capabilities that are required to support the mission of the entity, and then determine the scope of work required to implement these capabilities, plus the feasibility and cost-benefit of investing in developing those capabilities. Such assessments occur during this phase.

Ideally, the concept phase will be conducted in the fiscal year preceding funding and approval of the actual project. The primary deliverable of this phase is the Business Case. Additional analysis performed during this phase include a cost benefit analysis and a feasibility study. These artifacts and related analysis are necessary for an executive management team to have the data they need to make sound determinations on the risks, return on investment (ROI), and benefits of funding proposed project.

The next activity considered should be the development of a business plan, especially where a new commercial offering is contemplated. The business case helps determine whether there is a unique value proposition that justifies investments in the proposed project idea or initiative, before the organization commits significant time, resources and expenditures.

Assuming the business case analysis indicates there is a unique and viable value proposition, the organization still needs to determine if the project is feasible. Business Analysts conducting a feasibility study assess business and technical information, projected costs and benefits, risks, issues and constraints to determine if the project is practical from an economic and technical perspective. In addition, where alternative solutions are available, the feasibility study will determine which proposed solution best fits the needs of the organization, and documents recommendations made by the business analysts.

In addition, a detailed cost-benefit analysis may be completed in this phase. The purpose of the cost for-benefit analysis is to provide executives and sponsors with the information and metrics they need determine whether the proposed project has sufficient value to justify commitment of time, resources,
and funds. While the feasibility study includes some cost-benefit information, the project cost/benefit analysis is more detailed and focused solely on economic value of the proposed solution.

Not every organization will have a Concept Phase; but it's a good idea - especially on large projects where Waterfall-based SDLC methodologies are contemplated. This is because Waterfall or other highly structured approaches must have a thorough understanding of requirements, costs, benefits, return on investment and feasibility prior to development, as there will be rare opportunities to question any of these assumptions until the product development cycle is complete.

This is not to imply that all risks are removed by including a concept phase. To the contrary, until a detailed functional and technical requirements analysis has been completed, during the Requirements and Design Phases, it is truly difficult to assess the total scope of work that may be involved in any given project. Nevertheless, the deliverables of the concept phase, as described in the previous paragraphs, help ensure that everyone involved with the project understands the parameters under which the project can be judged a success. From a practical perspective, no executive sponsor or customer is going to open up their checkbooks without some sort of limits imposed in terms of budget, time and resources, and expectations set on the deliverable that are required to make the project a success.

### 3.3.2 Project Concept/ Initiation Phase Forms & Templates

<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
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</thead>
</table>
| Project Initiation Agenda | Provides initial project agenda for a "kick-off" meeting, whereby key stakeholders, sponsors, and key business and technology members are identified.  
The agenda is the best opportunity for a project manager to energize his/her team, and to establish a sense of common objectives and to evaluate the project team. It provides entries to identify agenda topics and who on the project team will present detailed information on each topic.  
The Project Initiation Agenda contains the following topics:  
- Meeting Subject  
- Meeting Originator  
- Meeting Date & Time  
- Attendees  
- Documents to Read  
- Items Required  
- Attachments  
- Agenda Topic  
- Detailed Information  
- Presenter. |
<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
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</thead>
</table>
| Project Charter    | The Project Charter provides the business goals, objectives, and management direction for starting the project in the Initiation phase. It sets project expectations and processes to ensure agreement on the project approach. It outlines the project objectives, identifies the main stakeholders, and identifies the authority of the project manager. The Project Charter provides a high level single-page overview of a project for review by executive management. The document ensures that everyone involved in the project is aware of its purpose and objectives. The Project Charter contains the following topics:  
  - Business Case  
  - Opportunity Statement  
  - Business Goal(s)  
  - Project Scope  
    - In-scope processes  
    - Out-of-scope processes  
  - Project Team  
  - Stakeholders  
  - Project Milestones (by yearly quarter)  
  - Projected costs.                                                                                                                                                                                                                   |
| Business Case      | The Business Case Document identifies whether there is a potential business value to the proposed project idea or initiative before the organization commits time, resources, and expenditures. The Business Case Document commences with a detailed explanation of the business need, issue or problem and how it will be addressed and supported. Information includes quantitative and qualitative benefits, risks, requirements, procurement, lifecycle costs, schedule, quality, social, and environmental issues. It also includes other information such as financial gains, cost savings, potential market share, increased usability, and productivity that would help to determine program or project approval. The Business Case, in conjuncture with the Project Charter, is often used to present a case to executive management to determine whether a project will be evaluated in more depth to determine its immediate applicability for development. The Business Case Document contains the following topics:  
  - General Information  
    - Request Number  
    - IT Sponsor  
    - Stakeholders  
    - Purpose  
    - Project Description  
    - Benefits                                                                                                           |
### Form Name

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>▪ Recommendations and Alternatives</td>
</tr>
<tr>
<td>▪ Options/Alternatives</td>
</tr>
<tr>
<td>▪ Critical Success Factors</td>
</tr>
<tr>
<td>▪ Additional Comments</td>
</tr>
<tr>
<td>▪ Costs and Resources</td>
</tr>
<tr>
<td>▪ High Level Cost Estimate</td>
</tr>
<tr>
<td>▪ Related Projects</td>
</tr>
<tr>
<td>▪ Resources</td>
</tr>
<tr>
<td>▪ Key Milestones</td>
</tr>
<tr>
<td>▪ Authorization to proceed by stakeholders.</td>
</tr>
</tbody>
</table>

### Feasibility Study

The Feasibility Study contains business and technical information and cost data to determine the economic potential and practicality (i.e., feasibility) of a project using techniques that help evaluate a project and/or compare it with other projects.

The Feasibility Study helps to answer various questions that could apply to a prospective project or study:

- How difficult will it be to build and whether the firm has enough experience using a specific technology, and whether the new system will perform adequately?
- How much time is available to build the new system, when can it be built, whether it interferes with normal business operations, type and amount of resources required, etc.?
- What are the contingencies and mitigation plans if the project takes too long to implement or does not work?
- Are there any environmental factors that need to be considered or will the company's own culture clash with the results of the project?
- Are there sufficient human resources available for project development and after it goes live? Do current work practices and procedures support a new system?
- Will the cost/benefit analysis determine the true expected benefits and savings and lead to the next step; a decision to design and implement the system?

The Feasibility Study contains the following topics:

- Introduction, Purpose, Objectives, and Scope
- System Overview and Background
  - System, Plant or Operational Details
  - Current Systems and Processes
  - Current Operations
  - Physical Environment
  - User Organization.
<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
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</thead>
</table>
| Deliverables and End Products
| Analysis, Solutions and Alternatives
| Approvals.                |

**Value Proposition Template**

Completing the Value Proposition Template will assist an individual/department determine if there is value in a proposed application, system or product, often provided by an outside vendor or contractor, and help in the final decision-making process. This template is used in conjunction with the Business Case Document.

The Value Proposition Template contains the following topics:

- Product or service offering
- Project description
- Target market
- Pain threshold
- Capabilities needed
- Required features
- Benefits
- Make vs. Buy decision.
The Project or Issue Submission Form is a one-page summary that identifies the proposed project, opportunities, business goals, project scope and issues, and alternatives or recommendations.

The Project or Issue Submission Form is used to identify at a high-level potential business / IT opportunities by identifying the business drivers, key systems impacted, and the programs, applications, and departments that are also impacted.

The business goals are also defined to reduce costs, increase efficiency, to satisfy regulatory requirements, or to comply with IT Governance mandates. In-scope and out-of-scope items are addressed to clearly define the objective of the project or issue, as well as identifying projected costs.

Additional entries are provided to identify a description of the project, any critical issues, and alternatives and recommendations that may provide a viable path.

---

The Project/Cost-Benefit Analysis identifies the proposed project, opportunities, business goals, project scope and issues, alternatives or recommendations, and authorization by key stakeholders.

The form identifies whether there is potential business value (i.e., financial gains/losses and risks) to the proposed project, idea or initiative to commit time, resources and expenditures, providing solution benefits and costs to obtain management approval and secure funding.

The Project/Cost-Benefit Analysis contains the following topics:

- **General Information**
  - Project Name
  - IT Sponsors
  - Stakeholders
  - Purpose
  - Project Description
  - Benefits
  - Assumptions and Constraints
  - Related Projects

- **Recommendations and Alternatives**
  - Recommendations
  - Options/Alternatives
  - Critical Success Factors

- **Costs and Resources**
  - Key Milestones
  - Resources
  - Schedule/Milestone Costs
  - Risks and Impact
  - Risk Analysis
  - Cost/Benefit Analysis

- **Authorization.**
<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Team Definition</td>
<td>This document identifies the business and technical groups and individuals responsible for the initiation, analysis, development, testing, installation and approval of the project.</td>
</tr>
<tr>
<td></td>
<td>The project team consists of resources assigned to work and achieve project deliverables and objectives. The team can consist of resources within one functional organization or be a cross-functional team with members from multiple organizations.</td>
</tr>
<tr>
<td></td>
<td>They are responsible for:</td>
</tr>
<tr>
<td></td>
<td>- Knowing the work to be accomplished.</td>
</tr>
<tr>
<td></td>
<td>- Scheduling the assigned activities.</td>
</tr>
<tr>
<td></td>
<td>- Finishing assigned work on-time, within budget, and with approval.</td>
</tr>
<tr>
<td></td>
<td>- Communicating status and outstanding issues.</td>
</tr>
<tr>
<td></td>
<td>The Project Team Definition contains the following topics:</td>
</tr>
<tr>
<td></td>
<td>- Meeting Overview</td>
</tr>
<tr>
<td></td>
<td>- Meeting Subject</td>
</tr>
<tr>
<td></td>
<td>- Meeting Originator</td>
</tr>
<tr>
<td></td>
<td>- Meeting Date &amp; Time</td>
</tr>
<tr>
<td></td>
<td>- Attendees</td>
</tr>
<tr>
<td></td>
<td>- Attachments</td>
</tr>
<tr>
<td></td>
<td>- Agenda Topic</td>
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<td></td>
<td>- Detailed Information</td>
</tr>
<tr>
<td></td>
<td>- Attachments</td>
</tr>
<tr>
<td></td>
<td>- Identification of Stakeholders</td>
</tr>
<tr>
<td></td>
<td>- Identification of Project Participants</td>
</tr>
<tr>
<td></td>
<td>- Milestone Schedule,</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stakeholder Identification List</th>
<th>The Stakeholder Identification List provides the capability to identify the people that could affect or be affected by any project, to analyze stakeholder’s expectations and their impact on the project, and to develop specific strategies and tactics for effectively engaging stakeholders to reflect the stakeholder’s interest and involvement in the project.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stakeholder identification includes the processes required to identify the people, groups and organizations that could affect or be affected by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate strategies and tactics for effectively engaging stakeholders in a manner appropriate to the stakeholders’ interest involvement in the project.</td>
</tr>
<tr>
<td></td>
<td>Creating an effective plan for managing stakeholders, stakeholders need to be clearly identified and assessed. Stakeholders are identified by performing a stakeholder analysis in which potential stakeholders and relevant information (interests, involvement, influence, and potential impact on project success) are gathered, documented and analyzed.</td>
</tr>
<tr>
<td>Form Name</td>
<td>Description</td>
</tr>
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<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| The Stakeholder Identification List | The Stakeholder Identification List helps ensure that stakeholders are effectively involved in project decisions and execution throughout the lifecycle of the project, by:  
  - Identifying who the stakeholders are by name, title, potential role, level of knowledge and level of commitment to the project.  
  - Determining the power and interest of each stakeholder and their impact on the project.  
  - Managing and controlling the stakeholders continually throughout the project. |
| Initiate Project Checklist | The checklist provides various checkoff items to verify that major initial project functions and tasks have been completed within the Initiation phase, which is the first phase in the Project Management Life Cycle.  
  The checklist provides for verification that all of the mandatory functions have been accomplished.  
  The Initiate Project Checklist contains the following topics:  
  - Purpose for Project  
  - Systems Development Life Cycle  
  - Project Concept Phase Checklist  
    - Mission Statement  
    - Market / Opportunity Assessment  
    - Business Case  
    - Feasibility Study  
    - Project Charter  
    - End of Initial Phase Management  
    - Review or Signoff  
    - Project Team  
    - Project Schedule |
| Project Resource Plan     | This document provides a centralized source for definition of all resources required for a project, including project team size, required resources, facility needs, resource types and sources, project team organization, resource assumptions, risks and mitigations.  
  The Project Resource Plan contains the following topics:  
  - Project team size  
  - Required resources / skill sets  
    - resource type  
    - source of personnel  
    - quantity  
  - Facility resources  
    - facility type  
    - need date |
<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>o quantity</td>
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<tr>
<td>o Personnel resource profile</td>
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<td>o Resource type</td>
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<td>o Source</td>
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<td>o Rate / Hour</td>
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<td>o Hours by month</td>
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<td>o Total hours</td>
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<tr>
<td>o Total Dollars</td>
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<tr>
<td>• Project team organization</td>
<td></td>
</tr>
<tr>
<td>• Resource assumptions, risks and mitigations</td>
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</tr>
<tr>
<td>• Stakeholder approvals</td>
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</tr>
</tbody>
</table>

### Concept Of Operations (CONOPS)

The Concept of Operations, or CONOPS, is a *Capabilities Needs Assessment* investigation to gain aUsers’ and Stakeholders’ perspective on a major change initiative. As such, it is both an analysis and a formal document that describes high-level capabilities requirements that have been identified as necessary to achieve the mission of the IT organization, and its subordinate organizations.

The CONOPS is primarily used as a communications document by the internal business customers. The CONOPS may also be used to help coordinate development of business cases as inputs to a Request for New Applications and/or Business Requirements Documents (BRD).

The purpose of the CONOPS is to help internal customer’s better express their business needs, in terms of capabilities required, and should therefore be process focused and system agnostic. If IT Systems needs are identified, the CONOPS can serve as a business needs assessment document. In that scenario, the CONOPS is a useful component within the project planning activities associated with the Concept/Initiation Phase of the Systems Development Life Cycle (SDLC).

The CONOPS provide direction for identifying parameters in the following areas:

- Capabilities needed
- Operation and Support Description
- Justification for and Nature of Change
- Potential Impacts
- Concepts for a Proposed System
- Scenarios
- Functional Capabilities
- Summary of Impacts
- Analysis of the Proposed System.
### Project Management Plan Template

The Project Management Plan describes the project management methods and tools employed within a project; which are often incorporated as a set of project management sub plans. The objective of a project management plan is to define the overall approach to execute, monitor and control, deliver and close the entire scope of work authorized for a project.

It is good practice to have a formally agreed and version-controlled project management plan approved in the early stages of the project, and applied and updated throughout the project. Once completed, the plan should be agreed and approved by the project's clients, executive sponsors, the assigned project manager, and other key stakeholders.

The project management plan typically covers the following chapters or sub plans:

- Scope Management
- Schedule Management
- Financial Management
- Quality Assurance Management
- Resource Management for resources including personnel, equipment, tools, etc.
- Communications Management
- Project Change Management
- Risk Management
- Procurement Management.

<table>
<thead>
<tr>
<th>Form Name</th>
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</table>
3.4 Project Planning Phase

3.4.1 Project Planning Phase Overview

The planning phase establishes an initial view of the intended software product that helps establish the basic project structure, feasibility, risks associated with the project, and describe management and technical methodologies.

This phase is where you will utilize the various tools to provide detailed planning over the life of the project to achieve the following objectives:

- Initially, before any detailed planning commences, the Program Management Office (PMO) must verify that mechanisms (such as accounting and procurement data) are in place to provide the data you will need to accurately collect and display data in the project, by utilizing a checklist for that purpose

- Establish and document a project organization chart defining the names of the project managers, sponsors, stakeholders, business analysts, testers, and affiliated organizations, so everyone understands who the players are on the project

- Define the roles and responsibilities of these individuals so it is clear as to everyone’s role. Once those roles are defined, create a required approvals matrix of the key project activities

- Fill in development and project estimating worksheets to determine costs. Review those costs to calculate and verify how much of those monies will be expended in capital or expense, as determined by regulatory taxing agency requirements and internal policies

- Establish a configuration management plan to manage the project baseline

- If necessary, prepare a procurement plan for any software, hardware or outside services that will be required in the project

- Prepare a statement of work defining the business objectives

- Prepare work breakdown structure (WBS) components in 3 steps:
  1. Provide a WBS activity worksheet to Subject Matter Experts (SMEs) so that they may initially define the scope of work required for each activity and task in the project
  2. Prepare a WBS resource planning template for WBS tasks containing the tasks broken down by estimated hours and % of time required by each skill set. When complete, determination can accurately be made of the total number of hours required of each skill set
  3. Prepare the Work Breakdown Structure delineating the tasks
Prepare a risk analysis plan defining the process for identifying and resolving risks. Prepare a risk information data collection form so that once risks are identified each risk can subsequently be quantified, analyzed and resolved.

Prepare a project plan to establish project control by defining the sequence, estimated schedule and responsibilities for implementing each task.

### 3.4.2. Project Planning Phase Forms & Templates

<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Project Management Office (PMO) Checklist** | The Project Management Office Checklist provides the capability to determine if the Information Technology (IT) Program Management Office (PMO) has provided the functions and tools to achieve a successful environment in support of both executive management and the project managers responsible for individual IT projects. The checklist contains the following topics:  
  - Purpose and intended audience  
  - Organizational responsibilities:  
    - Project Management Office (PMO)  
    - Project managers  
  - PMO framework, interfaces and tools illustration  
  - PMO framework, interfaces and tools Checklist  
  - Data required by Project Managers  
  - Project manager’s toolset illustration  
  - Project manager’s interfaces and toolset checklist. |
| **Statement of Work (SOW)**      | Provides information that will be performed in the project, including business objectives and project description, such as completion criteria, risk assessment, constraints, impact analysis, project success measures, critical success factors, project approach, roles and participants. The Statement of Work (SOW) must be agreed to by all stakeholders to complete a project. The SOW must contain sufficient detail so all stakeholders understand the required scope of work, the duration of work, and identification of the specific deliverables. The Statement of Work contains the following topics:  
  - Introduction  
    - Stakeholders and Contacts  
  - Business Objectives  
    - Business Need or Opportunity  
    - Business (Product) Description and Solutions |
## Deliverables
- Software Verification and Validation

### Project Description
- Completion Criteria
- Risk Assessment
- Constraints
- Dependency Linkages
- Impact
- Measures of Project Success
- Roles and Key Project Participants

### Project Estimates
- Estimated Schedule
- Resource Requirements - Team and Support Resources
- Estimated Costs

### Project Controls
- Risk / Contingency Management
- Issue Management
- Change Management

### Project Approval Document
The Project Approval Document formalizes approval for the project by the project sponsor and all stakeholders and contributors.

The Project Approval Document contains the following topics:

- **Overview**
  - Topic
  - Description

- **Project Description**

- **Approval Information**
  - Responsibility / Organization
  - Name
  - Approved Signature
  - Date

### Cost Estimating Worksheet
This Excel spreadsheet provides the opportunity to estimate and budget various IT costs (-10% - +25%).

The Project Cost Estimate identifies project costs by:

- WBS / Task #
- Task / Activity Name
- Resource Class (Business analyst, developer, etc.)
- Hours
<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The Project Cost Estimate identifies costs by:</td>
</tr>
<tr>
<td></td>
<td>- IT Resources</td>
</tr>
<tr>
<td></td>
<td>- External professional services</td>
</tr>
<tr>
<td></td>
<td>- Hardware/communications and maintenance</td>
</tr>
<tr>
<td></td>
<td>- Software license fees and maintenance</td>
</tr>
<tr>
<td></td>
<td>- Other fees (travel, training, etc.)</td>
</tr>
<tr>
<td></td>
<td><strong>Formulas</strong></td>
</tr>
<tr>
<td></td>
<td>The embedded formulas include the following:</td>
</tr>
<tr>
<td></td>
<td>- IT Resources Project Cost = Staff Hours X Hourly Rate</td>
</tr>
<tr>
<td></td>
<td>- Professional Services Cost = Hours X Hourly Rate</td>
</tr>
<tr>
<td></td>
<td>- Hardware / Communications &amp; Maintenance Costs Subtotal = Total of individual items</td>
</tr>
<tr>
<td></td>
<td>- Software Licenses &amp; Maintenance Costs Subtotal = Total of individual items</td>
</tr>
<tr>
<td></td>
<td>- Other (Travel, Supplies, etc.) Costs Subtotal = Total of individual items</td>
</tr>
<tr>
<td></td>
<td>- Total = all of the above.</td>
</tr>
<tr>
<td></td>
<td>- Risk / Contingency Reserve = 15% (user definable) of Total</td>
</tr>
<tr>
<td></td>
<td>- Grand Total = All of the above.</td>
</tr>
<tr>
<td>Development Estimating Worksheet</td>
<td>This Excel spreadsheet provides the opportunity to estimate development costs for prototyping, user interfaces, reports, databases, tables, objects, and integration / jobs.</td>
</tr>
<tr>
<td></td>
<td>The Development Estimating Worksheet consists of two tabs: Development Estimation Worksheet and a Servers Pricing Calculator.</td>
</tr>
<tr>
<td></td>
<td>This Development Estimating Worksheet Excel spreadsheet consists of the following sections: Development Estimation Worksheet, Recommended Staffing, software &amp; Licensing costs, ongoing support costs, and summary total costs.</td>
</tr>
<tr>
<td></td>
<td><strong>Development Estimation Worksheet</strong></td>
</tr>
<tr>
<td></td>
<td>The Development Estimation Worksheet provides formulas to calculate the following topics:</td>
</tr>
<tr>
<td></td>
<td>- Estimating Topics</td>
</tr>
<tr>
<td></td>
<td>- Prototypes</td>
</tr>
<tr>
<td></td>
<td>- User Interface / Reports</td>
</tr>
<tr>
<td></td>
<td>- Tables</td>
</tr>
<tr>
<td></td>
<td>- Objects</td>
</tr>
<tr>
<td></td>
<td>- Integration / Jobs</td>
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<tr>
<td></td>
<td>- Conversion / Migration</td>
</tr>
<tr>
<td></td>
<td>- Configuration / Setup</td>
</tr>
<tr>
<td></td>
<td>- Documentation &amp; Discovery</td>
</tr>
<tr>
<td></td>
<td>- Miscellaneous Tasks...</td>
</tr>
<tr>
<td></td>
<td>- Calculate Total Development Resources</td>
</tr>
</tbody>
</table>
### Form Name | Description
--- | ---
**Recommended Staffing** |  
- Recommended Staffing
**Software and Licensing Costs** |  
- Software and Licensing Costs
**Ongoing Support Costs** |  
- Ongoing Support Costs
**Summary Total Costs** |  
- Summary Total Costs
**Servers Pricing Calculator** |  
The Servers Pricing Calculator provides formulas to calculate the following topics:
- Microsoft Active Directory Servers
- Microsoft IIS Servers
- Microsoft Exchange Servers
- Microsoft SQL Servers
- Oracle Database Servers.

### Project Capital vs. Expense Costs

This Excel spreadsheet provides the opportunity to estimate various capital and expense costs for a project including IT resources, external professional services, hardware, communications, software licenses, and travel and supplies.

The Project Capital and Expenses Costs can then be tracked against the budget allocated for the project.

The Project Capital Vs. Expense Costs contains the following topics:
- **Capital/Expense Worksheet**  
  - Project Management
  - Pre-Development Costs
  - Development Costs
  - Post-Development Costs
  - Hardware/Communications and Maintenance
  - Software Licenses
  - Software Maintenance
  - Other (Travel, supplies, etc.)
  - Subtotal
  - Contingency
  - Grand Total.
<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration Management Plan</td>
<td>The Configuration Management (CM) Plan informs project stakeholders about how CM is used to manage the project, what tools are used, and how they will be implemented to achieve project success.</td>
</tr>
<tr>
<td></td>
<td>The plan contains the following topics:</td>
</tr>
<tr>
<td></td>
<td>- Target audience</td>
</tr>
<tr>
<td></td>
<td>- Configuration management organization</td>
</tr>
<tr>
<td></td>
<td>- Activities and responsibilities</td>
</tr>
<tr>
<td></td>
<td>o Setting up project activities</td>
</tr>
<tr>
<td></td>
<td>o Project planning life cycle activities</td>
</tr>
<tr>
<td></td>
<td>o Management activities</td>
</tr>
<tr>
<td></td>
<td>- Decision process and responsibilities</td>
</tr>
<tr>
<td></td>
<td>o Project activities</td>
</tr>
<tr>
<td></td>
<td>o Process audit activities</td>
</tr>
<tr>
<td></td>
<td>- Configuration Control Board (CCB) responsibilities</td>
</tr>
<tr>
<td></td>
<td>- Individual Configuration Control Board responsibilities</td>
</tr>
<tr>
<td></td>
<td>- Configuration control process</td>
</tr>
<tr>
<td></td>
<td>o Configuration Control definition</td>
</tr>
<tr>
<td></td>
<td>o Configuration Control steps</td>
</tr>
<tr>
<td></td>
<td>- Configuration audits</td>
</tr>
<tr>
<td></td>
<td>- Configuration Management plan approval.</td>
</tr>
<tr>
<td>Risk Information Data Collection Form</td>
<td>During the course of a project, potential risks can be identified by a myriad of sources. The Project Risk Information Data Collection Form's purpose is to provide a vehicle for capturing detail information on any of those risks for analysis and evaluation. Summary information from this data collection is then encapsulated in the Project Risk Analysis Plan for weekly management review.</td>
</tr>
<tr>
<td></td>
<td>The form contains the following topics:</td>
</tr>
<tr>
<td></td>
<td>- Section 1: Risk Identification</td>
</tr>
<tr>
<td></td>
<td>- Section 2: Risk Root Cause Analysis</td>
</tr>
<tr>
<td></td>
<td>- Section 3: Risk Evaluation</td>
</tr>
<tr>
<td></td>
<td>- Section 4: Risk consideration and response.</td>
</tr>
</tbody>
</table>
Risk Analysis Plan

Provides a medium to record a risk analysis of the project, and is used to keep track of potential risks that may jeopardize the project's success or completion date.

The Project Risk Analysis template will help identify, evaluate, and manage risks you may face and assist in deciding whether your strategies could control the risk in a cost-effective way, i.e.,

- Identify risk, e.g., lack of resources, operational disruptions, access denial, procedural failures, quality problems; tasks take too long, cost over-runs, budget problems, and technical failure.
- Estimate the risk and probability of the event occurring.
- Manage the risk and crisis prevention.

The Project Risk Analysis contains the following topics:

- Purpose for Project

- Project Information
  - Project Description
  - Goals, Objectives, and Scope
  - Assumptions, Dependencies, and Constraints

- Risk Analysis Table in which the risk threat is identified, the priority score established, the risk mitigation strategy and date are recorded, and the contingencies / triggers defined.
Procurement Plan

Provides procedures and information to acquire hardware, software, vendors or other needed items. It assists in determining what to acquire, when, and how.

The Procurement Plan is used to provide information about the purchase of goods and services. It will help to decide how vendors will be selected, managing, costs, strategy, and who will be involved at each stage of the process.

The Procurement Plan contains the following topics:

- Introduction
  - Purpose, Scope, and Objectives
  - Project Background
  - Referenced Documentation

- Procurement Information
  - Customer / Contract Manager
  - Item(s) to be acquired and estimated value
  - Duration of contract or service
  - Market capability
  - Risks
  - Procurement timeline
  - Roles and responsibilities

- Procurement Strategy
  - Pricing strategy
  - Dollar limits
  - Purchase Order requisition thresholds
  - Procurement method
  - Competitive solicitation

Project Organization Chart

Know who the key “players” are on your project via a Visio graphical diagram identifying the PMO personnel, sponsors, stakeholders, and business analysts including the collaborating organizations such as Infrastructure, design, quality assurance, etc.

To compliment the traditional organization charts that define individual members within all business organizations, the Project Organization Chart permits you to graphically depict only the pertinent personnel directly involved in each project, including (but not limited to):

- PMO
- Project managers
- Sponsors
- Business analysts
- Infrastructure
- Database design / reporting
- Quality Assurance
## Roles and Responsibilities Matrix

Displays key project activities and details the responsibilities for each individual or role across every functional department. The matrix can optionally be created in a table or spreadsheet form within the document.

Projects come in different sizes and there are different ways and requirements on how people are organized. Multiple matrices are provided to help fill that need.

- **Small projects:** Little organizational structure is generally needed.
- **Large projects:** Many people are involved. It is important that people understand what they are expected to do, what role they are expected to fill, and the approval process.

**Responsibility Matrix:** This technique is used to define the general responsibilities for each project role (i.e., who does what), communicates the roles to the team, and ensures people know what is expected from them.

The Roles and Responsibilities Matrix contains the following topics:

- **Purpose**
  - Setting Up a Responsibility Matrix
  - Sample Matrix Roles and Responsibilities Description
  - Roles and Responsibility Matrix
  - Standard Roles and Responsibility Matrix
  - RACI Roles and Responsibility Matrix
Required Approvals Matrix

Provides a matrix of key project activities (e.g., functions, tasks, documents or phases), and who is responsible for approving them.

The Required Approvals Matrix contains the following topics:

- **Purpose for Project**
- Sample Roles and Responsibilities Descriptions
- Approval Matrix

<table>
<thead>
<tr>
<th>Business Case Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feasibility Study</td>
</tr>
<tr>
<td>Cost / Benefit Analysis</td>
</tr>
<tr>
<td>Project Approval Document</td>
</tr>
<tr>
<td>Project Charter</td>
</tr>
<tr>
<td>Functional Requirements</td>
</tr>
<tr>
<td>Technical Requirements</td>
</tr>
<tr>
<td>Requirements Traceability Matrix</td>
</tr>
<tr>
<td>Project Plan</td>
</tr>
<tr>
<td>Training Plan</td>
</tr>
<tr>
<td>System Design Document</td>
</tr>
<tr>
<td>Technical Design Document</td>
</tr>
<tr>
<td>Process Guide</td>
</tr>
<tr>
<td>Installation Guide</td>
</tr>
<tr>
<td>Software User Guide</td>
</tr>
<tr>
<td>System Administrators Guide</td>
</tr>
<tr>
<td>Operations Guide</td>
</tr>
<tr>
<td>Technical Test Plan</td>
</tr>
<tr>
<td>User Acceptance Test Plan</td>
</tr>
<tr>
<td>Product Acceptance Document</td>
</tr>
<tr>
<td>Production Turnover Approval</td>
</tr>
<tr>
<td>Project Feedback Analysis</td>
</tr>
<tr>
<td>Modification Request</td>
</tr>
</tbody>
</table>
### Activity Worksheet in Work Breakdown Structure Dictionary Form

The WBS Activity Worksheet is made available to Subject Matter Experts (SMEs) to define the scope of work required for each activity and task within the work breakdown structure. For the entries made in this worksheet, accurate and activity and task descriptions can be compiled and tracked for variance during the course of a project.

The Activity Worksheet in Work Breakdown Structure Dictionary Form contains the following topics:

- Task number, date issued and owner
- High level task description
- List of work activities
- Goals and objectives
- Identification of task deliverables
- Acceptance criteria
- Assumptions and constraints
- Skills and resources assigned to task(s)
- Materials required
- Estimated and actual task duration
- Estimated and actual task costs
- Estimated and actual due date
- Before and after task interdependencies
- Approvals.

### Work Breakdown Structure Resource Planning Template

The Work Breakdown Structure Resource Planning Template provides a matrix of WBS tasks with the estimated duration of each task in hours with % of time required by the various skill sets to contribute to the tasks, summarized by total hours required for those skill sets.

The skill sets include the following:

- Project Manager
- Business Analysts
- Architect
- GUI development
- Software development
- Database Development
- Quality Assurance / Testing.

The breakdown template includes the following task categories:

- Project WBS
- Business Process Analysis
- System Design
- Commercial Off-The-Shelf (COTS) Product Assessments
- Detail Software & Hardware Configurations
- System & Hardware Implementation
- Custom Software Development
### Work Breakdown Structure (WBS)

A method that is used to verify the association between the requirements shown in the Requirements / Specifications and other project documents, including design and testing documentation.

A work breakdown structure element may be a product, data, service, or any combination thereof. WBS is a hierarchical and incremental decomposition of the project into phases, deliverables and work packages. A WBS also provides the necessary framework for detailed cost estimating and control along with providing guidance for schedule development and control.

The Work Breakdown Structure contains the following topics:

- **Work Breakdown Structure:**
  - Project Name
  - Department
  - Preparer
  - Project Number
  - Project Manager
  - Task #
  - Task Name
  - Description
  - Group or Individual Responsible
  - Due By

### COBIT Checklist and Review

The Sarbanes-Oxley Act, including the COBIT Checklist and Review, provides for a standardized structure for Information Technology (IT) governance, accounting controls and compliance. COBIT Control Objectives focus on specific, detailed objectives related with each IT process.

COBIT provides management and business process owners with an Information Technology control model that helps to understand and manage the risks related with IT. COBIT helps link missing items between business risks, control needs, and technical issues.

COBIT Control Objectives focuses on specific, detailed control objectives related with each IT process. For each of the 30+ IT structure processes, there are detailed control objectives that align the overall structure with objectives from primary sources comprising standards and regulations relating to IT. It includes statements of the desired results or objectives to be achieved by implementing specific control procedures within an IT activity and, thereby, provides a clear policy and good practice for IT control throughout the industry and worldwide.

The COBIT Checklist and Review contains the following topics:

- **Introduction**
- **COBIT Control Objectives**
# Request for Information (RFI)

A Request for Information (RFI) is used to solicit information from qualified vendors on the products and services they recommend addressing your business problem or functionality.

An RFI is primarily used to gather information to help make a decision on what steps to take next. RFIs are therefore seldom the final stage and are instead often used in combination with the following: request for proposal (RFP), request for tender (RFT), and request for quotation (RFQ). In addition to gathering basic information, an RFI is often used as a solicitation sent to a broad base of potential suppliers for the purpose of conditioning suppliers’ minds, developing strategy, building a database, and preparing for an RFP or RFQ.

The Request for Information contains the following topics:

- Introduction and Purpose
- RFI Information
  - Confidentiality Information
  - RFI Process Stipulations
  - RFI Schedule
  - Vendor Presentation
- Business Opportunity Overview
  - Company Profile
  - Business Driver
  - Business Application Functions and Features
- RFI Response Configuration
- Vendor Response Information
  - General Vendor Information
  - Vendor Vision and Capability
- Product or Application Technical Information
  - Product or Application Technical Functions & Features
  - Hardware Requirements
  - Software Requirements
- Vendor Pricing Information
- Total Lifecycle Costs
Root Cause Analysis

Identifies the root cause of a problem and the recommendations for a solution, including the date the problem was encountered, summary of the problem, duration of the problem, impacted business units and applications, and the recommended action and follow-up.

RCA is applied to methodically identify and correct the root causes of events, rather than to simply address the symptomatic result. Focusing correction on root causes has the goal of entirely preventing problem recurrence. Conversely, RCFA (Root Cause Failure Analysis) recognizes that complete prevention of recurrence by one corrective action is not always possible.

The Root Cause Analysis contains the following topics:

- Summary
  - Date Problem Occurred
  - Summary of Problem
  - Duration of Problem
  - Impact of Problem
  - Business Units / Sites / Departments Impacted
  - Applications(s) Impacted
  - Sequence of Events
  - Recommended Action Items.

Project Plan

Establishes both project execution and project control. It shows when and how a project's objectives are to be achieved by depicting and statusing the major products, milestones, activities, and resources required on the project.

The Project Plan uses all of the capabilities provided within Microsoft's Project software to provide a maximum degree of control over your project. The Project Plan includes all facets of SDLC staging which you can quickly modify to conform to your project.

The project plan is created by the project manager based on input from the various members of the project team and the stakeholders. The plan must be reviewed and agreed upon by at least the project team and all stakeholders.

The plan is sequenced by the following phases:

- Project Initiation
- Project Planning
- Requirements Definition
- System Design and Development
- Testing and Acceptance
- Installation
- Production Turnover
- Post Production.
Microsoft Project features that have been integrated into this pre-filled version of the Plan include the following:

- **Task**
  - Task Name
  - Duration
  - Percent Complete
  - Priority
  - Start Date
  - Finish Date

- **Predecessors**
  - ID
  - Task Name
  - Type Lag

- **Resources**
  - Resource Name
  - Units

- **Constraints**
  - Deadline
  - Constraint Type
  - Constraint Date
  - WBS Code
  - Earned Value Method

<table>
<thead>
<tr>
<th>List of Opportunities Summary</th>
</tr>
</thead>
</table>

The List of Opportunities Summary is a tool that summarizes project opportunities, including opportunity description, priority, target date for delivery, and owner.

The List of Opportunities Summary contains the following topics:

- **Opportunity**
  - Topic / Phase
  - Opportunity Description
  - Priority (High/Medium/Low)
  - Target Date
  - Actual Date
  - Owner
  - Comments
3.5 System Requirements Phase

3.5.1 System Requirements Phase Overview

This phase starts with gathering the high-level requirements and refining them according to project goals.

These requirements define the major functions of the intended application or system. Major functions include critical processes to be managed, including mission critical inputs, outputs, and reports. The Requirements Definition Phase of the SDLC includes the scope of work necessary to define, analyze and document business and end-user requirements. When developing under a structured type of SDLC, requirements may be further refined within Functional and Non-Functional Requirements documents.

System requirements definition or analysis phase requires deeper thought, when compared to the feasibility studies and cost benefit analysis efforts described in the concept phase, in terms of understanding the capabilities, features and functions end-users will need to support the business enterprise.

The requirements phase is typically divided into two distinct activities: requirements gathering and requirements analysis. In addition, depending on the type of product under development, these two activities are required across business, end-user, functional, and technical needs.

But there's much more to requirements than these rather straightforward activities. Often times, in order to derive the needs of the organization it's useful to first document how things are currently done today. This type of requirements analysis is referred to as the current state or "as is" assessment. The as is assessment helps the business analyst not only document how things are currently done, but also delve deeper into understanding how and where things are not working very well.

Next, the business analyst(s) will work with stakeholders, end-users and customers to determine what capabilities they require to be more effective in the work or activities they perform, and will therefore seek feedback on how things could be done better in the future. This type of analysis provides a description of the future state, and is often described as a "to be" assessment. This type of analysis can also be called a capability needs assessment.

Once the as is assessment and to be analysis are complete, the business analyst will turn their attention to developing a "gap analysis." This is an important step that determines the magnitude of change that is required to move the "system" from how things are done today to how they need to be done in the future. Here we are intensely using the term the system again because the scope of change management any or all the enablers of the business

As an example, a new business requirements document may drive changes in the software that facilitates the business process.
However, the software itself can drive changes to the business process, either by providing performance support to the end-users, making the process more efficient, adding new capabilities, and/or providing information more readily than was available before.

The business requirements for the implementation of new features and functions may require changes to the underlying IT infrastructure, including servers, networks, storage devices, etc. Since we are changing business processes the skills and roles of our people may have to change. And, of course, it's possible that new equipment and technologies are also involved to implement the new business requirements. In short, what may have initially seemed as a relatively simple business requirement can evolve into quite a complex system indeed.

Professional project managers will see this kind of complex project dynamics if they spent any time in IT at all. As a real-world example, this author has managed a project where there were eight seemingly simple business sponsor requirements (e.g. Customer) - each requirement described in one or two paragraphs - drove no less than 70 work orders of new features and functions that had to be implemented in the existing software.

The complexity of the system led to evaluation and procurement of new software testing and performance tools, as manual methods became increasingly slow and expensive. New servers had to be procured and deployed, and no less than four business processes and their related procedures had to be updated to accommodate the new business changes. And of course, the systems documentation and user guides also had to be updated, plus new training aids and wikis to support the overall deployment had to be developed and deployed.

### 3.5.2 System Requirements Phase Forms & Templates

<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing Scope and Requirements</td>
<td>Provides a checklist of numerous topics to help manage the scope and requirements of a project. The list works to gain customer agreement and avoid scope creep that pushes out project completion and project costs.</td>
</tr>
<tr>
<td>Checklist</td>
<td>Managing the project scope, requirements, and meeting customer expectations are major factors in the success of a project. Poor scope definition, stakeholder analysis, and weak sponsorship could lead to costly and untimely project failure.</td>
</tr>
<tr>
<td></td>
<td>This checklist helps you to manage project scope and requirements, e.g.,</td>
</tr>
<tr>
<td></td>
<td>- Identify project stakeholders</td>
</tr>
<tr>
<td></td>
<td>- Ensure the requirements are documented</td>
</tr>
<tr>
<td></td>
<td>- Obtain commitment on deliverables, schedules, and resources</td>
</tr>
<tr>
<td></td>
<td>- Handle changes to the project scope</td>
</tr>
<tr>
<td></td>
<td>- Acquire early agreement on project scope to avoid scope creep</td>
</tr>
<tr>
<td></td>
<td>- Foresee and manage risks</td>
</tr>
</tbody>
</table>
### Business Requirements Document (BRD)

The Business Requirements Document (BRD) defines the general business and different levels of requirements, including the business and end user requirements, problems or issues, project information, process information, training, and documentation requirements.

The most common objectives of the Business Requirements Document (BRD) are to:

- Gain acceptance of these requirements from all stakeholders
- Provide a foundation to communicate how the solution will satisfy the customer’s business needs
- Provide input into the next phase of the project
- Describe, in both an overall perspective and through functional requirements, how the customer’s needs will be met by the solution.

The BRD can be perceived as the most important document within the SDLC process, as unless it is clearly defined in easily understood business terms, major project schedule and budget slippages will rapidly occur.

The Business Requirements Document contains the following topics:

- **Project Information**
  - Project Description
  - Project Approach
  - Goals, Objectives, and Scope
  - Business Drivers
  - Stakeholders
  - Assumptions, Dependencies, and Constraints
  - Risks
  - Costs
  - Delivery Dates

- **Process Information**
  - Current Processes
  - New Processes or Future Enhancements

- **Requirements Information**
  - High-Level Business Requirements
### Form Name: Business Requirements Presentation to Stakeholders

This document provides a PowerPoint presentation "shell" to incorporate and review the project business requirements with the stakeholders and business units sponsoring the project.

The presentation slides contain the following topics:

- Why business requirements are critically important
- Project information
  - Project background
  - Project description
  - Project approach
- Goals, objectives and scope
- Project stakeholders
- Assumptions, dependencies and constraints
- Project Costs
  - Cost item
  - Project cost – capital or expense
  - Annual maintenance / administration / support costs
- Milestone delivery dates
- Current and future process flows
- High level business requirements
- System interfaces
- Infrastructure requirements
- Other requirements.
Functional Requirements Document

Defines the functional requirements for the project including the different levels of business and end user requirements, and the functional areas of the business processes.

Functional requirements specify particular results of a system and may be calculations, technical details, data manipulation and processing and other specific functionality that define what a system is supposed to accomplish. This is contrasted with non-functional requirements which specify overall characteristics such as cost and reliability.

Behavioral requirements describing all the cases where the system uses the functional requirements are captured in use cases.

Functional requirements are supported by non-functional requirements (also known as quality requirements), which impose constraints on the design or implementation (such as performance requirements, security, or reliability). The plan for implementing functional requirements is detailed in the system design. The plan for implementing non-functional requirements is detailed in the system architecture.

The Functional Requirements Document: contains the following topics:

- **Purpose**
  - Project Description
  - Project Approach
  - Goals, Objectives, and Scope
  - Business Drivers
  - Stakeholders
  - Assumptions, Dependencies, and Constraints
  - Risks
  - Costs
  - Delivery Dates

- **Process Information**
  - Current Processes
  - New Processes or Future Enhancements

- **Requirements Information**
  - Functional Requirements
  - Infrastructure Requirements
  - Other Requirements
  - Non-Functional Requirements

- **Interfaces**
  - System Interfaces
  - Software Interfaces
  - Hardware Interfaces
Software Architecture Plan

This document provides a comprehensive architectural overview of the system, using a number of different architectural views to depict different aspects of the system. It is intended to capture and convey the significant architectural decisions which have been made on the system.

The Software Architecture Plan contains the following topics:

- Scope
- Definitions, acronyms and abbreviations
- References
- Overview of document
- Architectural representation
- Architectural goals and constraints
- Use-Case view
- Logical view
- Overview of design model
- Architecturally significant design packages
- Process view
- Deployment view
- Implementation view
- Data view
- Size and performance
- Quality.

Use Case Template

Defines the business requirements for the project using a use case methodology, and includes problems or issues to be resolved, objectives or goals, solution to be implemented, and why the solution is being implemented.

This template provides information to prepare a use case requirement document. A use case describes "who" can do "what" with the system. The use case technique is used to capture a system's behavioral requirements by detailing scenario-driven situations through the functional requirements.

Use cases, stated simply, provide a description of sequence of events that lead to a system doing something useful. Each use case describes how the actor (i.e., initiator of the interaction) will interact with the system to achieve a specific goal. One or more scenarios may be generated from a use case toward achieving the goal.

The Use Case Template contains the following topics:

- Purpose for Project
- Project Information
  - Project Approach
  - Goals, Objectives, and Scope
  - Business Drivers
  - Stakeholders
Requirements Inspection Checklist

Provides a sample quality assurance document to verify at a glance that major requirement functions and tasks have been completed.

It is imperative that an inspection of the requirements and specifications be performed to ensure correctness and quality. Errors and omissions may dramatically affect the timeliness, quality, and costs of the project.

The Requirements Inspection Checklist contains the following topics:

- **Purpose**

- **Requirements Checklist**
  - General Information
  - Correctness
  - Requirements Traceability
  - Interfaces
  - Behavioral requirements
  - Non-Behavioral requirements
  - Other Information.
Requirements Traceability Matrix

The matrix is used to verify the association between the requirements shown in the Requirements / Specifications and other project documents, including design and testing documentation. Testing ensures that the requirements have been implemented correctly based on the design and the Matrix.

Requirements traceability refers to the ability to describe and follow the life of a requirement, i.e., through all phases of development such as requirements, specification statements, design, tests, models, and developed components.

In most cases, Information Technology (IT) staff is concerned with making sure all individual requirements are identified and lead to complete testing.

For requirements tracing and resulting reports to work, the requirements must be of good quality. Requirements of poor-quality transfer work to subsequent phases of the Systems Development Life Cycle (SDLC), increasing costs, extending the schedule, and creating disputes with the customer.

The Requirements Traceability Matrix contains the following topics:

- Purpose
- Requirements Checklist
  - General Information
  - Interfaces
  - Behavioral Requirements
  - Non-Behavioral Requirements
  - Correctness
  - Requirements Traceability
  - Other Information

Requirements Changes Impact Analysis

Provides detailed information to perform an impact analysis of requirement changes, including proposed change implications, system components and elements affected by the change, and estimated schedule and cost impacts.

The goal of impact analysis (the Requirements Changes Impact Analysis form) is to determine what would be affected by a particular change. This includes identifying the requirements or specifications that will be modified and indicating any dependencies and relationships.

This template helps with the following:

- Implications of the proposed change
- System elements affected by the proposed change
- Effort of estimation for a change
- Impact analysis reporting.

The Requirements Changes Impact Analysis contains the following topics:

- Purpose
- Product or system information
- Reason and description of requirements changes
- Assumptions, dependencies, and constraints
- List of stakeholders
### Risks
- Proposed changes checklist
- System components and elements affected by change
- Estimated schedule and cost impact.

### Training Plan

Supports the use and maintenance of the specific system or application, and includes information about training courses and the tools and techniques that will be used.

The Training Plan includes definition of the objectives of the training, what the training will consist of, who will be trained, the schedule and approvals.

The Training Plan contains the following topics:

- **Overview**
  - Introduction
  - Scope

- **Training**
  - Training Approach
  - Training and Environment Requirements
  - Training Courses
  - Training
  - Technical Support Training Course Topics
  - User Training Course Topics
  - Training Schedule

- **Approval and Signoff**
Service Level Agreement Template (SLA)

<table>
<thead>
<tr>
<th>Illustration of Service Level Agreement Template</th>
</tr>
</thead>
</table>

Formalizes an arrangement between your company and the client to deliver specific support services, at specific levels of support, and at an agreed-upon cost. A common feature of an SLA is a contracted delivery time (of the service or performance).

The primary objective of the Service Level Agreement Template is to identify those services that are included and NOT included in the agreement, identify the names of the applications covered under the agreement, and how the agreement may be terminated. It also will stipulate how the agreement is amended, the required levels of effort, and how the agreement is renewed. The vendor will also be required to provide metrics reporting.

SLAs commonly include segments to address a definition of services, performance measurement, problem management, customer duties, warranties, disaster recovery, and termination of agreement. In order to ensure that SLAs are consistently met, these agreements are often designed with specific lines of demarcation and the parties involved are required to meet regularly to create an open forum for communication. Contract enforcement (rewards and penalties) should be rigidly enforced, but most SLAs also leave room for annual revisitation so that it is possible to make changes based on new information.

Within the agreement, the following general terms and conditions are specified:

- Term of agreement
- Organizations
- Approvals
- Key Contacts
- Dependence on other organizations
- Roles and responsibilities.

A list of the applications covered under the agreement, identifying the application name, disaster recovery tier, normal availability schedule, maintenance schedule, severity level, and pertinent comments.

The levels of support required of the vendor are addressed to identify, troubleshoot, and resolve production issues, as well as support time guidance.
3.6 System Design Phase

3.6.1 System Design Phase Overview

The design phase starts with approved requirements as its initial input. Design elements are built for each requirement or requirement set. Design elements describe the software functions and features in detail. It usually includes functional diagrams, screen layouts, business rules, business process diagrams, and an entity-relationship diagram with a full data dictionary.

Design elements describe the software in sufficient detail that the developer can build the software with minimal additional input.

The technical specialists begin to translate the requirements into specific design solutions that will create the systems, features, and functions that are necessary to achieve the business and functional requirements.

In the previous requirements definition phase, the focus was on defining specific capabilities desired by and in support of the organization, and its customers and end-users. In the system design phase, the attention turns to defining systems and technical requirements.

This is also the phase where prototyping is likely to occur, as a prototype can serve as a bridge between requirements, design and development. A prototype can be as simple as a mockup of the proposed screen layouts, while a more complex prototype may have selected business rules instantiated as work flows within the application with active fields to capture and show data or information.

Once the project is approved and properly planned, for a fairly large project, requirements gathering, analysis and documentation can take 6 to 8 weeks to complete. In addition, the Design Phase can also take 6 to 8 weeks to complete, with perhaps a couple of weeks in overlap between the Requirements and Design Phases. What this means is the first 10 to 12 weeks of the project will be spent on requirements and design related activities before development can start. Add in another 2 to 4 weeks for initial project planning and development should not be expected to start until 12 to 14 weeks into the project.

Short changing these activities in a Structured, Waterfall approach to development will almost always lead to Scope Creep, as the project team will not have taken sufficient time to fully gather, analysis, document and vet their findings. Scope creep is where the project expands beyond the approved budget and schedules - not a good thing to have happen.
### 3.6.2 System Design Phase Forms & Templates

<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Systems Requirements Specifications</strong></td>
<td>Provides more details to the project's high-level requirements and detailed information so that the system will be built to satisfy the system requirements and quality. It includes product/functional requirements, user characteristics, operating environment, security and regulatory specifications, disaster recovery, and data specifications. A business analyst (BA), sometimes titled system analyst, is responsible for analyzing the business needs of their clients and stakeholders to help identify business problems and propose solutions. Within the systems development life cycle domain, the BA typically performs a liaison function between the business side of an enterprise and the information technology department or external service providers. The System Requirements Specifications contains the following topics:</td>
</tr>
<tr>
<td><strong>Introduction</strong></td>
<td></td>
</tr>
<tr>
<td>• Purpose</td>
<td></td>
</tr>
<tr>
<td>• Scope</td>
<td></td>
</tr>
<tr>
<td>• Roles and Responsibilities</td>
<td></td>
</tr>
<tr>
<td><strong>System Requirements Specifications</strong></td>
<td></td>
</tr>
<tr>
<td>• Product Functional Specifications</td>
<td></td>
</tr>
<tr>
<td>- Functional System Specifications</td>
<td></td>
</tr>
<tr>
<td>- Software Specifications</td>
<td></td>
</tr>
<tr>
<td>- Hardware Specifications</td>
<td></td>
</tr>
<tr>
<td>Form Name</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| **Analysis and Design Document** | Provides detailed information to perform an analysis and design of a system, including topics on current and future software architecture processes, interfaces, data flow, infrastructures, components, integration, and security. This template takes a systems approach to information system analysis and design. It uses the sequential software development process where progress flows from the top to the bottom, like a waterfall through the phases of Conception, Initiation, Analysis, Design, Construction, and Testing. The initial stages provide a validation to the project whereby costly errors and poor design are caught early reducing rework and costs downstream. The Analysis and Design Document contains the following topics:  
  - Overview of system, infrastructure, and software  
  - Design assumptions and support considerations  
  - Summary of changes from inception  
  - Business and application impact  
  - Current software architecture  
  - Proposed software architecture  
  - Security and audit considerations  
  - Architecture design  
  - Interface design  
  - Design, development, and integration  
  - Application layer information  
  - Implementation and software execution  
  - Infrastructure impact  
  - Future improvements  
  - Approvals. |
| **Application Development Project Checklist** | Provides a list of 50+ tasks that need to be considered within an application development project. The Application Development Project Checklist is a management planning tool that helps project and development management to routinely ensure they are meeting project timelines and deliverables. It provides a quick view of the tasks and functions within the respective work stages. A successful delivery includes meeting or beating budget estimates, timelines, or exceeding standards of quality, and achieving the highest level of overall customer satisfaction. Management is also responsible for continuously defining and monitoring project assumptions, communicating task deliverables and status, and managing project variables, namely scope, budget, and timeline. The Application Development Project Checklist contains the following topics:  
  - Project or system definition  
  - Application overview and purpose  
  - Assumptions, dependencies, and constraints  
  - List of stakeholders |
<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risks</td>
<td></td>
</tr>
<tr>
<td>Application development checklist:</td>
<td></td>
</tr>
<tr>
<td>- Project definition</td>
<td></td>
</tr>
<tr>
<td>- Analysis phase</td>
<td></td>
</tr>
<tr>
<td>- Design phase</td>
<td></td>
</tr>
<tr>
<td>- Development phase</td>
<td></td>
</tr>
<tr>
<td>- Testing phase</td>
<td></td>
</tr>
<tr>
<td>- Implementation phase</td>
<td></td>
</tr>
<tr>
<td>- Evaluation phase</td>
<td></td>
</tr>
</tbody>
</table>

### Technical Requirements Document

Defines the technical requirements for the project. It contains all of the requirements for the system in sufficient level of detail to develop a system design and to allow testers to test the system.

The Technical Requirements Document provides information that state the technical requirements, which pertain to the technical aspects that your system must fulfill, such as the total complement of activities, hardware, software, test, integration, functions, features, capabilities, operations, performance-related issues, reliability issues, and availability issues.

A Technical Requirements Document satisfies the following criteria:

- Contains a complete description of the software’s purpose and functionality
- Details as to how the software will perform in terms of speed, response time, availability, portability, maintainability, recovery speed and more
- Use cases of how users will use the software
- A definition of how the application with interact with other hardware and program
- Non-functional requirements (e.g.: performance engineering requirements, quality standards, or design constraints)

The Technical Requirements Document contains the following topics:

- Overview
  - Purpose and Scope
  - Referenced Documentation
  - Requirement Assumptions and Support Considerations

- Specific Technical Requirements
  - Technical Requirements
    - System Requirements
    - Network Requirements
    - Database Requirements
    - User Interface Requirements
    - System Interfaces Requirements
    - Security Requirements.
The Database Design Document maps the logical data model to the target database management system with consideration to the system's performance requirements. The Database Design converts logical or conceptual data constructs to physical storage constructs (e.g., tables, files) of the target Database Management System (DBMS).

The Database Design Document contains the following topics:

- Document objectives
- Intended audience
- Key personnel
- Data owners
- Assumptions, constraints and dependencies
- System Overview
  - Database management system configuration
  - Database software utilities
  - Support software
- Architecture
  - Hardware architecture
  - Software architecture
  - Datastores
- Database-Wide design decisions
  - Interfaces
  - Key factors influencing design
  - Behavior
  - DBMS platform
  - Security and availability
  - Distribution
  - Backup and restore operations
  - Maintenance
- Database administrative functions
  - Responsibilities
  - Database identification
  - Applications / systems using the database
  - Relationships to other databases
  - Schema information
  - Physical design
  - Physical structure
  - Entity mapping
  - Mapping rules
  - Operational implications
  - Data transfer requirements
  - Data formats
  - Business rules
  - Storage
- Backup and recovery
  - Detailed database design
- Data software objects and resultant data structures
- Database management system files
- Reporting requirements.

**Website Planning Checklist**

Provides a checklist of numerous topics to consider when designing and developing a new website.

The Website Planning Checklist provides information to help you focus on what you want to achieve by having a web site. It helps you avoid spinning your wheels or spending money on services you don't need, list the capabilities you want the site to have, and consider the cost factors associated with those capabilities. Your answers will help determine if the plan, design, and costs will justify the results.

The Website Planning Checklist contains the following topics:

- **Purpose and Introduction**
- **Planning Checklist:**
  - Audience Analysis
  - Audience Profile
  - Strategy - Competitor Analysis
  - Strategy - Determine your approach
  - Site content
  - Advertising and maintenance
  - Site structure
  - Organizing your information
  - Navigation
  - Text headings and in-text links
  - User interface design techniques
  - Testing.

**User Interface Design Template**

The User Interface Design Template provides a vehicle to document all of the parameters that are necessary to define a screen design or redesign prior to the start of any programming activities.

Within the document you can define the screen details (names, screen description, major purpose/function, etc.), tab design, definition of each field, action/command buttons, any special rules, actions, formats, color schemes, popup and error messages, and navigation rules.

The User Interface Design Template contains the following topics:

- The application or product name
- The product or system overview
- The reason for the redesign or new product development
- The screen name and processing to be performed by the screen
Any assumptions, dependencies or constraints on the design

Risks

List of stakeholders

Security restrictions.

The following parameters are identified for each screen design:

<table>
<thead>
<tr>
<th>Field Type</th>
<th>Field type and name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Type</td>
<td>Data types</td>
</tr>
<tr>
<td>Length</td>
<td>Associated functions and processes</td>
</tr>
<tr>
<td>Required Fields</td>
<td>Define required vs. optional fields</td>
</tr>
<tr>
<td>Calculations</td>
<td>Define any calculations or formulas</td>
</tr>
<tr>
<td>Display Only Fields</td>
<td>Define the databases and tables to be utilized</td>
</tr>
<tr>
<td>Dropdown/List Boxes</td>
<td>Define all dropdown, list or combo boxes</td>
</tr>
<tr>
<td>Field navigation</td>
<td>Field tab sequence</td>
</tr>
<tr>
<td>Default Data</td>
<td>Identify special or unique processes, functions, fields or actions</td>
</tr>
<tr>
<td>Font name and style</td>
<td>Font name and regular, bold, bold italic or italic</td>
</tr>
<tr>
<td>Font color and size</td>
<td>Define color code and point size</td>
</tr>
<tr>
<td>Rules</td>
<td>Any special rules governing development</td>
</tr>
<tr>
<td>Buttons</td>
<td>Define all command or action buttons</td>
</tr>
<tr>
<td>Pop-up messages</td>
<td>Define action and content of popup messages</td>
</tr>
<tr>
<td>Formats</td>
<td>Date and time formats</td>
</tr>
<tr>
<td>Events</td>
<td>Define next event to occur</td>
</tr>
</tbody>
</table>
Report Design Template

Provides numerous topics to fill in detailed business and technical information for the design and development of a report.

Within the document you can explain the purpose of the report, the development reason, and the report details, including the intended audience, who can run the report, frequency, report input parameters (parameter, input data type, and text input), report fields (field name, description, database or table source, calculated field, the formulas and or functions), group field information, sort order, page header and footer contents.

The Report Design Template contains the following topics:

- The application or product name
- The product or system overview
- The reason for the redesign or new product development
- Report name and development reason for content of report
- Frequency of report and security/accessibility
- Where is the report run from?
- Any assumptions, dependencies or constraints on the design

The following parameters are identified for the report:

- Risks
- List of stakeholders
- Security restrictions.

The template provides easy-to-fill tables to define the following parameters for each report:

<table>
<thead>
<tr>
<th>Input parameters</th>
<th>Input data types &amp; specific text to appear on report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculations</td>
<td>Define any calculations or formulas</td>
</tr>
<tr>
<td>Report fields on report</td>
<td>Description</td>
</tr>
<tr>
<td></td>
<td>Database of table data derived from</td>
</tr>
<tr>
<td></td>
<td>Field result based on calculation (yes/no)?</td>
</tr>
<tr>
<td></td>
<td>Describe formula or calculation</td>
</tr>
<tr>
<td>Group field information</td>
<td>Description of grouping</td>
</tr>
<tr>
<td></td>
<td>Print group name in header/footer?</td>
</tr>
<tr>
<td>Sort order information</td>
<td>Report sort fields</td>
</tr>
<tr>
<td></td>
<td>Description of sort fields</td>
</tr>
<tr>
<td></td>
<td>How is sort performed?</td>
</tr>
<tr>
<td>Report and Page header and footer</td>
<td>Description of report and page headers and footers</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>Report sample</td>
<td>Provide sample of report format</td>
</tr>
</tbody>
</table>

**Code Review Checklist**

The Code Review Checklist provides a company guideline for checking code including pass/fail parameters and recording any comments when the test fails.

The Code Review Checklist contains the following topics:

- Structure
- Documentation
- Variables
- Style
- Architecture
- Arithmetic operations
- Loops and branches
- Defensive programming
- Maintainability
- Requirements and functionality
- System and library calls
- Reusability
- Robustness
- Security
- Control structures
- Resource leaks
- Error handling
- Timing
- Validation and test
- Hardware.
## Conversion Plan

Describes the strategies involved in the conversion of a system or application. This plan describes the overall approach, assumptions, and processes that will be used in the data conversion. It includes an inventory and cross reference of source and target data elements, schema, metadata and all self-describing files; process for data extraction, transformation and loading for each data source; tools needed to execute the conversion; and strategy for data quality assurance and control.

The Conversion Plan is implemented as follows:

- The conversion team uses this document to communicate to the client the strategy for successfully converting a system to another system.
- The conversion team uses this document as a roadmap for performing the conversion. All members of the team, both the project team and stakeholders, should understand and follow the same strategy.
- The project manager uses this document to understand how the conversion team plans to perform the conversion, and how the conversion effort may impact the overall project.

The Conversion Plan contains the following topics:

- Introduction
  - Purpose and Scope
  - Referenced Documentation

- Conversion Information
  - System Overview
  - System Conversion Overview
  - Conversion Description
  - Types of Conversion
    - Conversion Strategy
    - Conversion Risk Factors
  - Conversion Tasks
    - Conversion Planning
    - Pre-Conversion Plans
    - Major Tasks and Procedures
  - Conversion Schedule
  - Security

- Conversion Support
  - Hardware
  - Software
  - Facilities
  - Materials
  - Personnel
3.7 Testing Phase

3.7.1 Testing Phase Overview

Software features and functions are tested during the test phase, generally in a separate test environment. There are various types of tests (e.g., unit, integration, system, stress), but all test cases are run to verify the correctness and completeness of the software. Successful test execution validates the efficiency and effectiveness of the requirements and design.

The testing phase actually overlaps with requirements, design and development phases. It's critical that the test plan, test scenarios and test cases reflect all the business, end-user, customer, and architecture and design requirements - as defined within the Requirements traceability matrix (RTM). There are many types of testing that may have to be included in the overall test plan.

For example, there is at least one self-proclaimed expert who state there are at least 100 different types of software test that can be conducted. Over the course of your project management careers you may be exposed any number of these testing requirements. However, the most basic testing requirements include the following: (In typical order of the testing)

The Testing Phase of the SDLC includes the scope of work necessary to analyze and document testing requirements to ensure the solution will implement desired capabilities and perform in accordance with all customer, business, and end-user requirements. End-users will test and validate conformance of the user interfaces, screens, data fields, data flows, and reports that enable the business processes and/or user functionality. Technical testers will ensure the underlying hardware, software, network, database, work flow, and security components conform to architectural, design and performance requirements.

Independent Software Quality Assurance (QA) tests will confirm the development team has followed the organization's quality processes and procedures, and that the solution meets established quality metrics. Another independent group will conduct IV&V Tests to verify the solution meets requirements, and validates the system meets the customer's needs. Defects and bugs that are uncovered during testing will be documented and prioritized. All critical defects will be fixed prior to going into production.
### 3.7.2 Testing Phase Forms & Templates

<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Documentation QA Checklist Template</strong></td>
<td>Provides the capability to perform a documentation quality assurance review prior to delivery and implementation.</td>
</tr>
</tbody>
</table>
| **Description**                                | The primary objective of the Documentation Quality Assurance Checklist is that all documentation should be reviewed for quality assurance prior to delivery and implementation. It is imperative that the documentation is technically correct and complete, uses a consistent format, is written at the appropriate audience level, and is free of spelling and grammatical errors. The Quality Assurance (QA) Checklist provides directions for examining each of the following parameters:  
  - QA Topic:  
    - Document Properties  
    - Track Changes  
    - Title Page  
    - Table of Contents  
    - Headers and Footers  
    - Heading and Section Titles  
    - Spelling and Grammar Check  
    - Document content, format, and style  
    - Acronyms  
    - Appendices  
    - Contact Information  
    - Cross-References  
    - Footnotes  
    - Graphics  
    - Hyperlinks  
    - Index  
    - Page and Section Breaks  
    - Page Numbers  
    - Process and Workflow Charts  
    - Special Characters  
    - Table of Figures  
    - Tables and Charts  
    - Terminology.  |
| **Building Test Scenarios**                    | Testing scenarios are hypothetical stories used to assist an individual to think through a complex problem or system. Scenarios are useful for surfacing requirements-related controversies, and to relate to those documented requirements. The Test Scenario instructions contain the following topics:  
  - Difference between a test case and a test scenario  
  - The ideal test scenario  |
<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Plan</td>
<td>This document provides a central artifact to govern the strategic approach of the test effort; it defines the general approach to be employed when testing the software and when evaluating the results of that testing. Planning documents will refer to the test strategy regarding the governing of detailed testing work. It also provides visible confirmation to test-effort stakeholders that adequate consideration has been given to the governing of the test effort and, where appropriate, to have those stakeholders approve the strategy. The Test Plan contains the following topics:</td>
</tr>
<tr>
<td></td>
<td>• Features to be and not to be tested</td>
</tr>
<tr>
<td></td>
<td>• Description of the testing approach.</td>
</tr>
<tr>
<td></td>
<td>• Identifying and justifying unit, integration, UAT, operational readiness, and beta tests</td>
</tr>
<tr>
<td></td>
<td>• Measuring the extent of testing</td>
</tr>
<tr>
<td></td>
<td>• Dependencies, assumptions and constraints</td>
</tr>
<tr>
<td></td>
<td>• Notification and escalation procedures</td>
</tr>
<tr>
<td></td>
<td>• Measures and metrics</td>
</tr>
<tr>
<td></td>
<td>• Testing tasks</td>
</tr>
<tr>
<td></td>
<td>• Suspension criteria and resumption of testing</td>
</tr>
<tr>
<td></td>
<td>• Approvals.</td>
</tr>
<tr>
<td>Form Name</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>System Quality Assurance Checklist</td>
<td>Verifies that various project management, methodology, testing, configuration management, and documentation and records management principles and standards have been applied to a project. Records the following parameters on each of the following topics:</td>
</tr>
<tr>
<td></td>
<td>□ Project Management (PM):</td>
</tr>
<tr>
<td></td>
<td>□ Procedural controls</td>
</tr>
<tr>
<td></td>
<td>□ Resources</td>
</tr>
<tr>
<td></td>
<td>□ Documented activities</td>
</tr>
<tr>
<td></td>
<td>□ Tracking and oversight.</td>
</tr>
<tr>
<td></td>
<td>□ Methodology:</td>
</tr>
<tr>
<td></td>
<td>• Software methodology</td>
</tr>
<tr>
<td></td>
<td>• Application or written controls</td>
</tr>
<tr>
<td></td>
<td>• Technical reviews during development</td>
</tr>
<tr>
<td></td>
<td>□ Testing</td>
</tr>
<tr>
<td></td>
<td>□ Requirements information</td>
</tr>
<tr>
<td></td>
<td>□ Design information</td>
</tr>
<tr>
<td></td>
<td>□ Code listing</td>
</tr>
<tr>
<td></td>
<td>□ Performance and maintenance history</td>
</tr>
<tr>
<td></td>
<td>□ Purchased software products and service</td>
</tr>
<tr>
<td></td>
<td>□ Compatibility with bundled product</td>
</tr>
<tr>
<td></td>
<td>□ Virus free entry</td>
</tr>
<tr>
<td></td>
<td>□ Hardware methodology</td>
</tr>
<tr>
<td></td>
<td>□ Application of written controls</td>
</tr>
<tr>
<td></td>
<td>□ Technical reviews</td>
</tr>
<tr>
<td></td>
<td>□ Testing</td>
</tr>
<tr>
<td></td>
<td>□ Purchased hardware products and service</td>
</tr>
<tr>
<td></td>
<td>□ Compatibility with bundled product</td>
</tr>
<tr>
<td></td>
<td>□ Testing:</td>
</tr>
<tr>
<td></td>
<td>□ Procedural controls</td>
</tr>
<tr>
<td></td>
<td>□ Test document and structure</td>
</tr>
<tr>
<td></td>
<td>□ Testing in the user environment</td>
</tr>
<tr>
<td></td>
<td>□ Software</td>
</tr>
<tr>
<td></td>
<td>□ Product maintenance</td>
</tr>
<tr>
<td></td>
<td>□ User manual</td>
</tr>
<tr>
<td></td>
<td>□ Configuration Management:</td>
</tr>
<tr>
<td></td>
<td>□ Planned and user activity</td>
</tr>
<tr>
<td></td>
<td>□ Change and version management</td>
</tr>
<tr>
<td>Form Name</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Status of Change Management items</td>
<td></td>
</tr>
</tbody>
</table>

**Documentation and Records Management:**
- Documents that direct work activity
- Technical and user documentation
- Supporting record
- Electronic documents and records.

### Website Testing Summary Template

Provides summary information and checklists for web quality assurance testing. Each checklist table provides questions or statements for which the tester responds with a Yes/No answer and respective comments where applicable. Completion of the checklists will help ensure the applications, functions, or features meet adequate quality assurance before being moved to production for end-user utilization.

The Website Testing Summary Checklist includes functional testing, usability testing, interface testing, compatibility testing, performance testing, and security testing.

The template identifies the following parameters to determine if the website testing meets adequate testing and quality assurance.

**General Website QA Review:**
- Site and Page Design
- Navigation
- Search
- Text and Typography
- Links
- Graphics.
## Form Name

<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Test Plan</td>
<td>Documents all system requirements denoted in the requirements, specifications, and design documentation to plan and execute unit, system, and integration tests that ensure a high level of compliance. A test plan is a systematic approach to testing a system. This template helps document the strategy that will be used to verify and ensure that a product or system meets its design specifications and other requirements. The test plan documents the major elements of a test strategy that should be described in the test plan: Test Approach, Coverage, Environment, Methods, and Responsibilities. The System Test Plan contains the following topics:</td>
</tr>
</tbody>
</table>

- **Purpose for Project**
  - Reference Documents

- **System Test Description**
  - Test Goals and Objectives
  - Test Entrance and Exit Criteria
    - Entrance Criteria
    - Exit Criteria

- **System Test Approach**
  - Scope of System Testing
    - Test Categories
  - Risk Assessment

- **Test Environment**
  - Hardware
  - Software
  - Tools

- **Test Plan Schedule**

- **Testing Matrix**
  - Assumptions, Pre-Conditions, Risks
  - Test Instructions
  - Test Completion Summary
  - Associated Defects
User Acceptance Test Plan (UAT)

Provides management an overview of the system, applications, functions and features that are to be tested in the User Acceptance Test Plan (UAT) process. The plan and tests provide guidance to management, staff, and business owners that the application works as expected.

User Acceptance Testing is that phase of software development in which the software, which previously should have undergone both system and “Alpha” testing, is tested from the viewpoint of the targeted audience or business representation.

Utilization of the UAT accomplishes many goals, but most importantly, it measures the quality of the application being tested. Several factors contribute to the importance of making UAT testing absolutely mandatory for any software development effort, including the following:

- Reducing the cost of developing the application. Minimal savings that might occur in the early stages of the development cycle by delaying testing efforts are almost certainly bound to increase development costs later.

- Ensuring that the application behaves exactly as expected. For the vast majority of programs, unpredictability is the least desirable consequence of using an application.

- Reducing the total cost of ownership. By providing software that looks and behaves as shown in your documentation, your customers require fewer hours of training and less support from product experts.

- Developing loyalty and word-of-mouth market share. Finding success with a program that offers the kind of quality that only thorough testing can provide is much easier than trying to build a customer base on defect-riddled code.

The User Acceptance Test Plan contains the following topics/entries:

**Purpose**
- Reference Documents

**User Acceptance Test Description**
- Test Goals and Objectives
- Test Entrance and Exit Criteria
  - Entrance Criteria
  - Exit Criteria
- Test Deliverables

**UAT Test Approach**
- Scope of UAT Testing
- Test Categories
- Risks, Dependencies, Assumptions, and Constraints
<table>
<thead>
<tr>
<th>Functional Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Functionality Included</td>
</tr>
<tr>
<td>• Functionality Excluded</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Test Environment</td>
</tr>
<tr>
<td>• Hardware</td>
</tr>
<tr>
<td>• Software</td>
</tr>
<tr>
<td>• Tools</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Test Plan Schedule</td>
</tr>
<tr>
<td>• Roles and Responsibilities</td>
</tr>
</tbody>
</table>

### Testing Bug Report

This report provides the ability to record details about an individual testing bug detected during unit, system, integration and user acceptance testing, including the bug name, area description, bug description, severity, status, priority, tester name, date tested, environment, test manager and tester names, method of testing, and who the bug was assigned to.

The Testing Bug Report contains the following entries:

- Project general description
- List of team members
- The Milestone ID
- Definition of milestone, goal, function or task
- Responsible person
- Due date
- Completion Date
- Milestone status (in-process, completed or delinquent).

### Testing Bug List

This list provides a status of all bugs detected during unit, system, integration and user acceptance testing, by defining the test case ID, bug name, bug description, severity, status, date tested, and type of testing method utilized.

The Testing Bug List contains the following entries:

- Bug reporting date
- Test Case ID (if applicable)
- Bug ID
- Bug name
- Bug description
- Severity level (High, Medium, low)
- Bug Status (New, open, closed, pending, completed, on hold)
- Tester name
- Date tested
- Test procedure method of testing.
Regression Testing Plan

Provides general information about systems or applications that require regression testing, including why testing is required, functional business areas affected, and testing timeline.

Regression testing is a type of software testing that seeks to uncover new software bugs, or regressions, in existing functional and non-functional areas of a system after changes such as enhancements, patches or configuration changes, have been made to them.

The Regression Testing Plan includes a definition of regression testing, types of regression testing, the regression test approach, scope of regression testing, test categories, and risks, dependencies, assumptions and constraints.

The Functional testing sections identify the major activities, techniques, assumptions, constraints, and tools to be used to test major applications. A Test Plan Schedule identifies each task description, number of days allocated for testing, and the start and end dates.

Test instructions identify the step number, test instructions, expected result, whether the test passed or failed, and any comments.

The Regression Testing Plan contains the following topics:
- Total number of defects opened during testing
- Number of defects fixed during testing
- Number of defects to be fixed after system implementation
  - Number of other defects that will not be fixed or will be dropped.

Project Acceptance Document

The document formalizes acceptance of the project, and describes the products and services the customer received.

This is the final step in the process after an application goes “Live,” and is important to ensure that your customers are satisfied that the project has provided the benefit they perceived in that project.

The Project Acceptance Document contains the following topics:
- Topic
  - Project Name
  - Project Number
  - Department or Business Unit Name
  - Department or Business Unit Cost Center
  - Sponsor Name and Telephone Number
  - Project Manager Name and Telephone Number

- Project Description
- Statement of Acceptance
- Signatures
3.8 Project Monitoring and Control Phase

3.8.1. Project Monitoring and Control Phase Forms & Templates

The project monitoring and control phase is where you become the watchdog over the project via data collected from project, technical, and weekly status meetings, including the identification of risks, issues and action items that may be identified as the project evolves.

It is important to accurately keep record of changes that have occurred to the baseline over the life of the project.

These changes will be very important when you are assessing what modifications to your processes, in conjunction with lessons learned sessions with stakeholders, are required to improve subsequent projects.

Tools that should be utilized and continually updated include:

- A Change Management Log to record those changes
- An Action Item Status containing action items that you will most likely assign and track in your weekly status meetings. This continuous status will afford you the opportunity to keep your foot on the neck of individuals to ensure they complete these action items accurately and in a timely manner
- Record risks in a Risk Management Log capturing the risk, impact on the project, probability of occurrence, timeline, the response and action completed to resolve any risks before they become a threat to completion of the project within budget and schedule
- Issues are one of the most critical aspects accounting for project failure. First of all, utilize a form to collect pertinent data on any potential issue, and then add all issues to an issue management log to ascertain the status of any issue at a glance
- Keeping track of project milestones is another critical factor. Identify all project milestones in a project milestone status form, and continually update same with any changes to that baseline, including the milestone/task status
- Whenever the project manager or technical managers hold meetings, the minutes of these meetings should be documented in a meeting summary for wide dissemination
- The risks, issues and action item status will all be displayed in a project status report to ensure that all stakeholders are continually aware of the status of these items
<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Management Log</td>
<td>This document is used to record changes to the baseline, including the change type, priority, the owner's name, date submitted, if escalation is required, the date it was approved, and the action / resolution of the change.</td>
</tr>
<tr>
<td></td>
<td>The log consists of the following parameters:</td>
</tr>
<tr>
<td></td>
<td>• Change number</td>
</tr>
<tr>
<td></td>
<td>• Change type</td>
</tr>
<tr>
<td></td>
<td>• Change description</td>
</tr>
<tr>
<td></td>
<td>• Priority (critical, high, medium, low)</td>
</tr>
<tr>
<td></td>
<td>• Owner</td>
</tr>
<tr>
<td></td>
<td>• Date submitted</td>
</tr>
<tr>
<td></td>
<td>• Is escalation required?</td>
</tr>
<tr>
<td></td>
<td>• Date change approved</td>
</tr>
<tr>
<td></td>
<td>• Action or resolution.</td>
</tr>
<tr>
<td>Action Item Status</td>
<td>This document provides that status of all project action items, including the item number and description, the assigned, due and resolved dates, the owner, priority and a status of the item.</td>
</tr>
<tr>
<td></td>
<td>The status consists of the following parameters:</td>
</tr>
<tr>
<td></td>
<td>• Description and impact on project</td>
</tr>
<tr>
<td></td>
<td>• Date assigned</td>
</tr>
<tr>
<td></td>
<td>• Owner</td>
</tr>
<tr>
<td></td>
<td>• Priority (high, medium, low)</td>
</tr>
<tr>
<td></td>
<td>• Due date</td>
</tr>
<tr>
<td></td>
<td>• Current status</td>
</tr>
<tr>
<td></td>
<td>• Date resolved.</td>
</tr>
<tr>
<td>Risk Management Log</td>
<td>The Risk Management Log is a management tool that identifies, assesses, and records recommended actions that management must take to alleviate the risk potential down to acceptable levels. The log provides a framework in which potential problems that threaten the delivery of the anticipated benefits of a system or application are recorded.</td>
</tr>
<tr>
<td></td>
<td>The Risk Management Log contains the following topics:</td>
</tr>
<tr>
<td></td>
<td>■ Initial Risk Information</td>
</tr>
<tr>
<td></td>
<td>• Risk Description / Risk Event Statement</td>
</tr>
<tr>
<td></td>
<td>• Responsibility for the risk</td>
</tr>
<tr>
<td></td>
<td>• Date reported and date updated</td>
</tr>
</tbody>
</table>
### Risk Assessment Data

- **Impact (High / Medium / Low)**
- **Specific impact of risk**
- **Probability of occurrence (High / Medium / Low)**
- **Timeline (Near term / Medium / Far Term)**
- **Status of response**
  - Plan developed but not enacted
  - Plan enacted but effect not determined
  - Plan enacted and effective

### Risk Response / Action

- Completed action
- Planned future actions
- Risk status.

### Issue Identification and Resolution

This document is used to individually identify each issue that may impact a project, and identify who created and resolved the issue, the type of issue, potential alternatives and recommendations, provide an estimate of the resources, man hours and costs, and management actions that were taken to resolve the issue.

The Issue Identification and Resolution contains the following topics:

- Issue identification
- Issue type
- Complete description of issue
- Potential impact if issue not resolved
- Assignment of issue
- Resolution alternatives
- Resolution recommendations
- Resources required
- Management action to resolve issue.

### Issues Management Log

The Issues Management Log provides the ability to initially identify the issue, how the issue is assessed by the project team, and what the response / actions are to resolve the issue.

The Issue Management Log consists of 3 sections to document each issue:

1. Initial Issue Information
2. Issue Assessment Data

The Initial Issue Information section contains entries to identify the issue number, enter the Risk ID number (if applicable), a complete description of the issue, who is responsible, the priority, and the date it was opened.
<table>
<thead>
<tr>
<th><strong>Form Name</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The Issue Assessment section identifies the impact, what type of issue (development, database, etc.) and the target resolution date. The Issue Response / Action section identifies the resources required to resolve the issue, detailed alternatives or recommendations, and the action taken by management.</td>
<td></td>
</tr>
</tbody>
</table>
| **Project Milestone Status Form** | This document provides a vehicle for capturing the latest status of due date, completion date, and the milestone/task status (in-process, completed or delinquent), milestones, goals, or tasks including the milestone/task description, person responsible for that milestone/task. The Milestone Status Form contains the following topics:  
  - Project general description  
  - List of team members  
  - The Milestone ID  
  - Definition of milestone, goal, function or task  
  - Responsible person  
  - Due date  
  - Completion Date  
  - Milestone status (in-process, completed or delinquent). |
| **COBIT Objectives and Audit Report** | The Sarbanes-Oxley Act, including COBIT Checklist and Review, provides for a standardized structure for Information Technology (IT) governance, accounting controls and compliance. COBIT Control Objectives focus on specific, detailed objectives related with each IT process. The Audit Objectives and Status report contains the following topics:  
  - Control Objective ID  
  - Control Objective Name  
  - Control Activity ID  
  - Control Activity Name  
  - Applicable to SOX  
  - Status (complete, pending, incomplete)  
  - Description of the Control Activity. |
<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Project Status Report** | Summarizes the project status, including project activity, information about the project, problems or delays, issues, planned activities for next period, and deliverable description and status. It also contains sections for reporting on WBS metrics and tasks, changes, issues and risks.  
The Project Status Report is generally used to communicate weekly or bi-weekly project status to your customers, the PMO and IT management.  
The Project Status Report contains the following topics:  
- Distribution  
- General Overview of Project Status  
- Administration  
- Project Activity  
- Problems or Delays Encountered  
- Issues to be Resolved  
- Planned Activities  

In addition, the report statuses the following activities:  
- Deliverables  
- Work Breakdown Structure current week’s and previous week’s completion metrics  
- Completed, past due and upcoming WBS tasks  
- Open, approved and rejected changes  
- Open and closed issues  
- Open and closed risks.                                                                                                                                                                                                                                                   |
| **Meeting Summary** | The Meeting Summary documents the meeting date and time, participants, meeting minutes, conclusions, and action items status.  
The Meeting Summary contains the following topics:  
- Meeting Subject  
  - Meeting Originator  
  - Meeting Date / Time  
  - Attendees  
- Meeting Overview  
- Discussion about meeting topics  
- Any conclusions  
- Identification of potential issues or risks  
- Action item status: the status, description, person responsible, due date and any comments.                                                                                                                                                                                   |
3.9 Production Turnover / Deployment Phase

3.9.1 Production Turnover / Deployment Phase Overview

This phase provides for production installation and customer acceptance of the software, and requires that all test cases were run to verify the successful software execution, correctness, and completeness.

The Production Turnover/ Deployment Phase of the SDLC includes the scope of work necessary to deploy the final solution into its target production environments plus create guides for installation, system administration, system operations and end-user functionality. In addition, a detailed plan needs to be created for implementing the solution across the organization. The Production Implementation Plan is especially important when the solution will be deployed across a number of environments that are maintained by different organizations.

In addition, a production turnover approval process is required to ensure the receiving organizations have agreed the solution is operating as intended, that their sustainment organizations are trained and ready to assume responsibility for maintaining the solutions, that their help desk organizations are properly trained and ready to support end-users, and formal acknowledgment that the customers or end-user organizations have assumed full control over the solutions.

This approval may not come until after a warranty period has expired to ensure the sustainment and supporting organizations have had adequate time for knowledge transfer, and that no critical bugs show up in the deployed solution.

This phase includes activities spanning deployment of the solution and production turnover to the support and product sustainment groups. Deployment typically involves installation and configuration of software on centralized servers that can be accessed by end-users across the corporate networks or via Internet access.

However, today software is also deployed as a component of standalone products, equipment or systems. In those cases, deployment will also include the activities to ship the product out to customers and inter-users, plus assembly of the final solution, where required.

The folks who manage the production environment and sustain the deployed solution are not usually the development people who were maintaining the engineering and test environments or the software during the development and testing phases. In the production turnover phase, various "Guides" are developed and provided to the production support team to help them understand how to install, maintain, backup and recover the system.

The production support staff also has to be trained fully before they can install and manage the new software or system. In addition, for business-critical applications, it's important that every step involved in standing up the new system, migrating production data, testing the new system, and bringing down the old system are planned, approved and managed carefully.
The consequences of a failure at this stage are the shutdown of critical business processes that are enabled by the system, and resulting disruption to the business as a whole. Finally, inter-users must also be trained on both the new system or system enhancements and any changes to the affected business processes.

### 3.9.2 Production Turnover / Deployment Phase Forms & Templates

<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| Process Guide | Provides information about the system, application or process instructions, procedures, and process flows, which are shown in step-by-step text format as well as visual graphics to explain the action performed. A process guide is used to communicate the process management guidelines to support a specific process. It could serve as the source of guidelines for a wide range of audiences, e.g., a process to be followed by a company, department, business unit, or customer service. Your guide can certainly include a lot of information but you should always keep your organization’s needs and interests in mind when you create a process guide. The Process Guide contains the following topics:  
  - Introduction  
  - Purpose and Scope  
  - Background  
  - Audience  
  - Referenced Documentation  
  - Process Information  
  - Major Procedures, Tasks, and Functions  
  - Other Process Information. |
| Installation Planning Guide | Provides information for the installation of the system, application or data, including installation strategy, planning and risk factors, and security. An Installation Planning Guide is an essential document when the installation process is sufficiently complex to require a documented plan. Key elements of the plan often encompass the installation strategy, risk factors, schedule, information about files and scripts, backup and recovery procedures, hardware, software and network inventory, and especially the tasks and procedures that must be executed to ensure a successful installation. The Installation Planning Guide contains the following topics:  
  - Introduction  
  - Purpose  
  - Objectives  
  - Key Stakeholders and Points of Contact |
## Form Name

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation Information</td>
</tr>
<tr>
<td>- System Overview</td>
</tr>
<tr>
<td>- Installation Overview</td>
</tr>
<tr>
<td>- Scope</td>
</tr>
<tr>
<td>- Environment</td>
</tr>
<tr>
<td>- Installation Risk Factors</td>
</tr>
<tr>
<td>- Security</td>
</tr>
<tr>
<td>- Pre-Installation Plans and Requirements</td>
</tr>
<tr>
<td>- Installation Schedule</td>
</tr>
<tr>
<td>Installation Instructions</td>
</tr>
<tr>
<td>- Major Phases</td>
</tr>
<tr>
<td>- Tasks and Procedures</td>
</tr>
<tr>
<td>- Backup Procedures</td>
</tr>
<tr>
<td>- Rollback and Recovery Procedures</td>
</tr>
<tr>
<td>- Change Control Procedures</td>
</tr>
<tr>
<td>Installation Support</td>
</tr>
<tr>
<td>- Hardware Inventory</td>
</tr>
<tr>
<td>- Software inventory</td>
</tr>
<tr>
<td>- Network Inventory</td>
</tr>
<tr>
<td>- Facilities</td>
</tr>
</tbody>
</table>

### Software User Guide

Provides training or reference information for using the system, product, application or data. Explains the major components, benefits, access information, and navigation instructions.

The Software User Guide helps you develop a software manual, which is a technical communication document to help people understand a software application or IT system. Most user guides use simple language with short sentences and contain both a written guide and the associated images or screenshots of how the program should look.

The user guide contains both a written guide and the associated images. It includes screenshots of the human-machine interface(s), and includes clear, simplified diagrams. The language used is matched to the intended audience, with technical terms kept to a minimum or explained thoroughly.

It is important that the writer create the document with careful attention as to the intended audience.

The Software User Guide contains the following topics:

- **Introduction**
  - Purpose and Scope
  - Background
  - Audience
  - Referenced Documentation
<table>
<thead>
<tr>
<th>Form Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| What Is the (Application, System or Process) | • Major Components, Functions, and Features  
• Benefits  
• Users  
• Authorization Profile |
| Access Information | • General Information A User Should Know |
| Navigation | • Navigating Menus  
• Navigate Main Summary  
• Action Item Description and Uses |
| Major Procedures, Tasks, and Functions |

**System Administration Guide**

Provides procedures and information to administer and maintain the system, product or application, and includes an overview, data assets, processing, server and database administration, and backup instructions.

As opposed to the Software User Guide, the System Administration Guide is targeted at a technical audience, generally for Infrastructure or technical support personnel.

The System Administration Guide helps you develop a technical communication document, to administer a software application or IT system. Most system administration guides use both simple and technical language with short sentences and contain both a written guide and associated images or screenshots of how the program should look, feel, and run.

The guide includes, e.g., information on how to start and stop the system, troubleshoot unexpected shutdowns, system operations, user accounts and security, administration tasks, user and technical configurations, manage transaction logs and repository space, make and restore backups, use utility commands, interface with other systems, etc.

The System Administration Guide contains the following topics:

- Introduction  
  • Purpose  
  • Objectives  
  • Referenced Documentation  

- General System Information  
  • Overview  
  • Data Assets  
  • Processing  
  • Environment
### Form Name

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- Administration and Maintenance
  - Server Administration
  - Account Administration
  - System & Software Administration and Maintenance
  - Database Administration and Maintenance
  - Backup

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### Operations Guide

Provides procedures and information to administer and run the system, product or application. Includes scheduled operations, unique tasks, troubleshooting, auditing, and best practices.

The operations guide is the authoritative guidebook of how things are done in your business. It gives you an effective way of communicating policy and procedures.

Content will vary from business to business, but the structure of an operations manual is universal. It should be comprised of the following sections:

- Company History, Vision & Organization
- Products & Services
- Policies
- Position Statements
- Systems (Action Plans)

The Operations Guide contains the following topics:

- Introduction
  - Purpose and Objectives
  - Audience

- General System Information
  - Overview
  - Key Contacts
  - Environment and Assets
    - Facilities
    - Hardware Inventory
    - Software Inventory
    - Network Inventory
    - Interfaces

- Operations, Administration, and Maintenance
  - Processing Overview
  - Responsibility
  - Operations Calendar
  - Operating Procedures
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| Maintenance and Troubleshooting       | - Change Management  
- Configuration Management  
- Server Administration  
- Account Administration  
- System & Software Administration and Maintenance |

**Production Implementation Plan (PIP)**

The Production Implementation Plan provides planning information for production approval and implementation of the project, and describes the steps necessary to place the project into production. It identifies the objectives, impacted devices, production delivery steps, technical support information, hardware and software components, testing and acceptance, rollback/contingency plan, and required training and documentation.

Its main purpose is to ensure when the application is uploaded to production, the transition will be without impact to the other applications and the production environment.

The Production Implementation Plan contains the following topics:

- Production Implementation  
  - Description/Objective  
  - Impacted Devices  
  - Production Delivery  
  - Technical Support Information  
  - Potential Impacts  
  - Software Components & Implementation Steps  
  - Hardware Components  
  - Hardware Implementation Steps  
  - Testing and Acceptance  
  - Rollback and Contingency  
  - Required User Training and Documentation  
  - Other Emergency Contacts.

**Production Turnover Approval**

The Production Turnover Approval process is intended to ensure that:

- All systems and code are tested in a quality assurance (QA) manner and the production environment works as planned before being approved and released to production.

- All systems and code are approved by key personnel and groups affected (e.g., developers, testers, business management, and IT management) prior to production release.

- Problems found during production migration are controlled (e.g., rollback procedures are instituted) to ensure the production environment is not adversely affected.
The Production Turnover Approval contains the following topics:

- **Introduction**
  - Purpose
  - Project / System Overview
  - Scope

- Production Turnover Approval Request

- Approval and Signoff
3.10 Project Closure / Maintenance Phase

3.10.1 Project Closure / Maintenance Phase Forms & Templates

This phase provides for the business and technical personnel to evaluate how well the project was executed, and to quickly request minor changes once the production baseline has been established.

This final phase of the systems development life cycle is required to achieve the following objectives:

- Effectively transition the solution to the receiving organization
- Ensure the organization has a record of all critical design, development, production support, infrastructure, and security data on all components of the solution
- Track and ensure knowledge have been effectively transferred to all sustainment and support personnel as well as end-users
- Obtain formal acceptance of the system from the customer
- Capture both project and product-oriented lessons learned during the project
- Implement a process to capture new customer's desired enhancements
- Implement an effective Disaster Recovery Program
- Implement a process to retire the solution when the system no longer meets organizational needs
### 3.10.2 Project Closure / Maintenance Phase Forms & Templates

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| Lessons Learned Template | The Lessons Learned Template provides an opportunity for reflection after a project has been completed. It is highly beneficial to record what worked well with the project and where improvements can be made. Once the project has been completed, a Lessons Learned discussion should be scheduled with key stakeholders in the project to discuss what was learned from the project. The Lessons learned Template provides the following entries:  
- **Project close-out discussions**  
  - Attendees  
  - Project’s biggest successes  
- **Lessons learned that worked well or didn’t work well:**  
  - Knowledge area  
    - Project initiation  
    - Project planning  
    - Project management  
    - Staffing  
    - Project communications  
    - Project funding  
    - Project costs  
    - Schedule compliance  
    - Project roles and responsibilities  
    - Risk management  
    - Procurement  
    - Requirements definition  
    - Scope creep  
    - Development  
    - Quality assurance testing  
    - Training  
    - Documentation  
  - Approvals. |
Transition Out Plan

The Transition Out Plan is used to describe how project deliverables will be brought to full operational status, and integrated into ongoing operations and subsequently maintained. Its purpose is to ensure that these deliverables will be used effectively to produce the requisite Business Value after project completion. The transition process is a sum of the work to be done to create an effective support apparatus.

The Transition Out Plan contains the following topics:

- Transition Approach
- Transition Plan Objectives
- Transition Team Organization
- Transition Process Tasks
- Knowledge Transfer Process
- Product Delivery
  - Rollout Plan
  - Data Migration
- Communication Plan
- Transition Schedule
- Handover and Acceptance.

Post Project Review

During the Project Closure / Maintenance phase of a project, the Project Management Office (PMO) conducts a survey to gather feedback on the project to improve performance on subsequent projects. This survey will assist the PMO in gathering project sponsors and team member's thoughts and perspectives on the project. This questionnaire is often used in conjunction with the Post Project Review in summarizing findings.

Recipients of the survey questions can answer each question by selecting from a range of responses from “Strongly Agree” to “Strongly Disagree.”

The types of questions asked are organized as follows:

- Section 1: General Project Issues
- Section 2: Project Communications
- Section 3: Scheduling and Estimating
- Section 4: Design and Implementation
- Section 5: Test Processes
- Section 6: Training and Documentation
- Section 7: General Process Questions.
Post Project Review

Upon completion of a project, good practice is to assess how you did on the project, in conjunction with a Lesson Learned Report. General questions are asked of the stakeholders and to determine how well you performed against the project schedule and budget. This survey will assist the PMO in gathering project sponsors and team members’ thoughts and perspectives on the project. The Post Project Review can be utilized as a standalone document or in conjunction with the Post Project Survey Questionnaire, which provides the ability to gather responses from all stakeholders prior to holding a meeting to answer the issues raised in this document.

The Post Project Review contains 10 sections that record answers about the following topics:

- General project Issues
- Project Communications
- Scheduling and Estimating
  - Project phase schedules and actual completion dates
- Design and Implementation
- Test Processes
- Training and Documentation
- General process Questions
- Project Costs
- Project cost items budgets vs. actuals
- Approval section.

Modification / Change Control Request

Used to review system / application modification requests to evaluate and approve technically sound and secure "changes" to the production environment and to limit potential impact to business capabilities and/or IT operational capacity, architecture, infrastructure, compliance, and schedules.

The Modification Request provides information to request and justify a modification (change) request. The request is a document containing a call for an adjustment of a system; it is a major part of the change management process. It states what needs to be accomplished, but not how the change should be carried out.

Change requests are typically requested for the following reasons:

- Problem reports that identify bugs that must be fixed.
- System enhancement requests from users.
- Events in the development of other systems.
- Changes in the underlying structure and/or standards (e.g., a new operating system).
- Senior management requests.

The Modification Request contains the following topics:

- Reason for the Change
Description
Assumptions
Project Impacts
- Estimated Schedule Impacts
- Breakdown of Estimated Hours and/or Costs
- Capital / Expense Worksheet
Approvals

Disaster Recovery Plan Information

Documents a disaster recovery plan as part of an overall contingency plan to complete the restoration task and keep the company running. A disaster recovery plan is required for any publicly traded company and companies that need to minimize loss under which the company site is unable to function under standard daily business procedures.

The Disaster Recovery Plan contains the following topics:

- What is disaster recovery?
- Goals, objectives, and scope
- Disaster recovery team
- Disaster recovery time
- Disaster recovery site
- Critical services or information
- Technology priority for services and applications
- Response process (notice of problem, assessment, and resolution)
- Disaster recovery declaration
- Notification and recovery procedures
- Network, Internet and Windows Server recovery plan
- Electronic mail and telecommunications recovery plan.

Certificate of Compliance and Acceptance of Deliverable

This Certificate of Compliance is generally used to accept and validate project deliverables provided by outside contractors and developers in accordance with a task order or purchase order, but can be used in any situation where you wish to review the status of deliverables by internal organizations on a given project.

The Certificate requires the following entries:

- Contractor / Independent section to be completed
  - Task order number
  - Deliverable number
  - Deliverable name
- Project manager section to be completed
  - Task order number
  - Deliverable number
  - Deliverable name
- Contracting office section to be completed
Request for New Application / Enhancement

This document permits a business unit, other departments or auditors to initiate the process of requesting a new application or an enhancement to an existing application.

The Request requires the following entries to be completed by the requestor:

- Requestor / Business sponsor
- Applicable department
- Contact person
- Request Type
  - New application
  - Enhancement to existing application
  - Minor correction
- Description of request
- Priority (Critical, high priority, low priority, delete)
- Potential risks
- Funding sources qualified
- Related projects
- Attachments

The Request requires the following entries to be completed by the project manager / development manager:

- Estimated development hours
- Anticipated delivery date
- Conclusions
- Approvals.
Product Retirement Plan

The Product Retirement Plan provides a detailed roadmap to retire a product, system or application. It includes how the hardware, software, data and documentation associated with the system or application will be detached from production and archived or migrated to backup status.

It also identifies how users and support personnel will be notified to retire the system and associated activities.

The retirement strategy is identified for both hardware and software, as well as how the information will be archived or retired, and data migrated.

The Product Retirement Plan contains the following topics:

- Product or system information
- Reason for retirement
- Costs and benefits
- Any assumptions
- Dependencies or constraints
- List of stakeholders
- Risks
- Implementation dates.

Global Application Support Summary

The Global Application Support Summary provides a vehicle to record critical design, development, production support, Infrastructure, and security data on all applications.

The information recorded herein is used to update any IT applications defining your application environment.

The Global Application Support Summary contains the following topics:

Section 1 – Applications Data
Section 2 – Design and Development/Integration
Section 3 – Production Support
Section 4 – Infrastructure
Section 5 – Security
Section 6 – Instructions for Completing Index.
The Developer Knowledge Transfer Report provides a vehicle for conveying details about a system or application for production support developers. This document will provide the support for developers by transferring knowledge for the application from the initial development people to new developers with precise knowledge about the project development.

The Developer Knowledge Transfer Report requires the following entries:

- References
- Key Personnel
  - Business users
  - Subject matter experts (SMEs)
  - Developers
- Technical knowledge
  - Core languages
  - Dependent languages
  - Reporting tools
  - Databases
  - Operating systems
- Business Knowledge
- Application knowledge
  - Application level function
- Application environment
  - Flows / diagrams
  - Server-side application components
  - Client-side application components
  - User – network environment.