Systems Development Life Cycle Policy and Procedures

Title	[company name] Systems Development Life Cycle Policy and Procedures
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Language	English
Individual and/or Department Responsible for Distribution of Document	[company name] Information Technology Department
Individual and/ or Department Responsible for Timely Update of Document	[name and title]
Developed by:	[company name]
Subject	Systems Development Life Cycle (SDLC)
Approval Date	TBD
Purpose of Document	To implement comprehensive Systems Development Life Cycle (SDLC) policies, procedures, and practices whereby all employees and other intended parties are readily aware of the organization's SDLC initiative.
Distribution of Document	Disbursed to all employees of [company name] and available by request to all other intended parties.

# 1.0 Overview

In accordance with mandated organizational security requirements set forth and approved by management, [company name] has established a formal Systems Development Life Cycle Policy and supporting procedures. This policy is to be implemented immediately along with all relevant and applicable procedures. Additionally, this policy is to be evaluated on a(n) [annual, semi-annual, quarterly] basis for ensuring its adequacy and relevancy regarding [company name]'s needs and goals.

# 1.0 Purpose

This policy and supporting procedures are designed to provide [company name] with a documented and formalized Systems Development Life Cycle Policy that is to be adhered to and utilized throughout the organization at all times. Compliance with the stated policy and supporting procedures helps ensure the safety and security of [company name] system resources.

# 1.0 Scope

This policy and supporting procedures encompasses all system resources that are owned, operated, maintained, and controlled by [company name] and all other system resources, both internally and externally, that interact with these systems.

- Internal system resources are those owned, operated, maintained, and controlled by [company name] and include all network devices (firewalls, routers, switches, load balancers, other network devices), servers (both physical and virtual servers, along with the operating systems and applications that reside on them) and any other system resources deemed in scope.
- External system resources are those owned, operated, maintained, and controlled by any entity other than [company name], but for which these very resources may impact the confidentiality, integrity, and availability (CIA) and overall security of Solaris servers.

### 1.0 Policy

[Company name] is to ensure that the Systems Development Life Cycle Policy adheres to the following conditions for purposes of complying with the mandated organizational security requirements set forth and approved by management:

### Structured and Formalized Systems Development Life Cycle (SDLC) Framework

A critical component of [company name]'s Systems Development Life Cycle (SDLC) initiatives is utilizing a framework consisting of well-established phases and other supporting best practices for ensuring a highly structured, formalized, and well documented process is in place at all times. The SDLC phases are to include, at a minimum, the following:

- Strategic Planning
- Initiation
- System Concept Development
- Planning
- Requirements Analysis

- Design
- Development
- Integration and Testing
- Implementation
- Maintenance
- Disposition

### STRATEGIC PLANNING

A critical component of any Systems Development Life Cycle (SDLC) initiative entails undertake necessary strategic planning for the entire project. This includes identifying long-term operational and business goals of the envisioned project, challenges that lay ahead, along with opportunities for supporting the mission and vision of the organization as a whole. While systems development is often extremely technical, the business vision and strategic goals are what ultimately drive a project, thus requiring clear and concise directives at all times. In essence, the goals and related deliverables of strategic planning are to identify, discuss, collaborate, and engage in constructive dialogue pertaining to the actual aforementioned SDLC phases.

# INITIATION

The Initiation phase consists of undertaking necessary measures for determining the actual business case for a given project. Constant improvement, refinement, and adding of products and services is necessary for ensuring sustained business viability. Because of this, a business case scenario and other supporting documentation are to be compiled that effectively address the following subject matter:

- Executive summary
- Business challenge, issue, or opportunity
- Options for Implementation
- Relevant risks associated with each options
- Relevant risks of not undertaking any of the options
- Timing and Duration
- Approximated Milestones and Deliverables
- Funding
- Project Leaders

<u>**Tasks:**</u> Identify a project sponsor, project manager, key personnel, along with addressing the aforementioned subject matter, etc.

**Deliverables:** Business Case Document, Concept Proposal and/or similar related document that effectively address the aforementioned subject matter.

### SYSTEM CONCEPT DEVELOPMENT

The System Concept Development phase consists of undertaking necessary measures subsequent to management approval of the Business Case Document. As such, the actual Business Case Document is studied and analyzed in an in-depth manner regarding costs and benefits, feasibility, risk management, along with system boundaries. More specifically, the System Concept Development phase requires a detailed analysis and formal documentation of the expected costs and benefits, financially and operationally. Additionally, compensating or alternative systems and/or solutions are to be identified and

relevant costs and benefits of such options. Moreover, all operational, business specific, and information security requirements are to be identified and documented accordingly.

<u>**Tasks:**</u> Study and assess business needs, assess costs, benefits, risks, gather all required information, submit and gain approval, etc.

**Deliverables:** System Concept Development Document, Feasibility Study, and/or similar related documents that effectively address the aforementioned subject matter.

### PLANNING

The planning phase consists of undertaking necessary measures for ensuring all critical plans relating to the project are actually created, reviewed, and conditionally approved authorized parties. The planning phase is vitally important to the overall success of the projected as the following major initiatives are to be addressed:

- Project scheduling
- Identification and assignment of resources, both internally and externally
- Establishing various agreements with stakeholders
- Developing project plan
- Assess security issues
- Award project as applicable to third-parties

In essence, the Planning phase collectively brings together all operational, financial, technical, security, and business specific issues and initiatives together for helping the project move forward in a unified and cohesive manner, one with full management support at all stages, at least conditionally.

Tasks: Collectively asses, agree upon and put in place the aforementioned criteria.

**Deliverables:** Project management plan, risk management plan, system security plan, and/or similar related documents that effectively address the aforementioned subject matter.

### **REQUIREMENTS ANALYSIS**

The requirements analysis phase consists of undertaking necessary measures for ensuring al previous requirements are re-evaluated, assessed, and further discussed for helping further define BOTH the user and system/functional requirements for the envision system. More specifically, the following activities are deemed critical and in-scope for the Requirements Analysis phase:

User requirements – Interaction as necessary with all applicable users for developing comprehensive, indepth process flow diagrams and other supporting materials, helping identity key processes, automation, inputs, outputs, etc.

System/functional requirements – Based on interaction with applicable users, and other supporting information, detailed system/functional requirements are to be developed that encompass all operational, technical, administrative, and other applicable issues. This also entails developing comprehensive, end-in-depth system/functional topology documents, etc. Specifically, all stakeholders are to have a clear understanding of the major boundaries of the system, its intended use, application, and other critical issues.

Other – The requirements analysis phase is to also include the following:

- Provide all necessary examples to all users (i.e., visual, technical, etc.) for helping better assess the overall envisioned system
- Maintain detailed meeting minutes of meeting and circulated among the team.
- Discuss change controls issues whereby a clearly defined process for receiving, analyzing and incorporating changes are in place.
- Incorporate firm deadlines for all deliverables.
- Ensure that appropriate time is spent to understand the objectives, deliverables and scope of the envisioned system.
- Clearly state, define, and document all the user system/functional requirements.

<u>**Tasks</u>**: Conduct interviews, send out and answer questionnaires, review client documents, assess all scenarios along with performing procedures that effectively address the aforementioned subject matter.</u>

**Deliverables:** User flow diagrams, system/functional diagrams, client material (questionnaires, etc.)

# DESIGN

The design phase consists of undertaking necessary measures that collectively assesses all prior information gathered from user requirements, system/functional requirements, and any other requirements. Specifically, the design phase identifies design specifications used by software developers for developing the envisioned system, ultimately detailing how the system will meet all data requirements. Common standards and guidelines can include, but are not limited to, the following elements:

- Graphical User Interface (GUI)
- System Architecture
- Software components

Additionally, financial decisions are to be made regarding the purchase of hardware and software solutions for meeting all applicable user and system/functional requirements, including network security and perimeter defense initiatives for ultimately ensuring the confidentiality, integrity, and availability (CDA) of the envisioned system.



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