

Subject System Operations Concept	Type Identifier Effective Date Revision No.	Standard S–3053 May 2002
	Q Q(1. Mm	

Approval

**CISSCO Program Director** 

# A. PURPOSE

This standard specifies content and format requirements for the System Operations Concept document.

# B. APPLICABILITY

This standard applies to all projects that fall under the SDLCM Methodology umbrella. It is used by those persons who perform decomposition of needs for a new development system, transforming the needs into a concept for the new system and into system requirements. Those persons operate in the Project Definition and Analysis activity within component 1 of the SDLCM Methodology and use the assessment of the current system as part of the basis for the new system.

# C. REFERENCE PUBLICATIONS

The following publications contain related information:

- SDLCM Methodology Handbook
- SDLCM Methodology Standard, S-3051, System Requirements Specification
- SDLCM Methodology Standard, S-3052, Current System Assessment Document

## D. STANDARD

Use the System Operations Concept to transform stated requirements and the results of the assessment of the current system, as documented in the Current System Assessment Document into a conceptual view of a new development system or updated system. The following paragraphs describe the content of each section.

Subject	Туре	Standard
System Operations Concept	Identifier	S-3053
	Effective Date	May 2002
	<b>Revision No.</b>	

## 1. INTRODUCTION

## 1.1 Background

Briefly describe the problem to be solved or the system/subsystem to be developed. Describe the effort used in analysis of future need against the present capabilities of the current system to formulate the concept presented in this document.

## 1.2 Objectives

Describe the quantifiable criteria the system must meet to be successful.

#### 1.3 Scope

Describe what this system covers and what it does not cover.

## 1.4 Assumptions

Discuss assumptions made because some information needed has not been explicitly stated as a requirement or as background. This may include comments regarding user knowledge of business area; user workstation literacy; training; who will be responsible for backup and recovery of the system; roles of users versus operators, DBAs, etc.; updates of policy and procedures, etc.

#### **1.5** Applicable Documents

List any other documents that apply.

#### 1.6 Overview

Provide a brief overview of the sections that follow.

## 2. APPROACH

Describe the approach that was used to produce the operational concept.

Describe the sources of information used in developing the concept, such as:

- User guides and documentation
- Focus sessions
- One-on-one interviews
- Surveys

Describe the tools and techniques used during the assessment, such as,

- Focus sessions
- Structured interviews

Subject	Туре	Standard
System Operations Concept	Identifier	S-3053
	Effective Date	May 2002
	Revision No.	

# 3. SYSTEM OPERATIONS CONCEPT (SOC)

Summarize the results of integrating new system needs/requirements and the definitions and analyses from the Current System Assessment Document in this section by presenting a conceptual description of the proposed system and its operation.

Provide initial cost and resource estimates based on the proposed system concept. Identify critical technological limitations and key cost drivers. Define the approach for tailoring the development effort to the specific work required. Define the procurement approach if major procurements are envisioned. Provide an operational description of the system. Specify significant operational requirements, operational interfaces, operational scenarios, and operations personnel requirements.

# 3.1 System Description

Describe the system, providing its capabilities and other characteristics.

# 3.1.1 TOP-LEVEL SYSTEM VIEW

Present a top-level description of the system, its operational environment, and interfaces to provide an understanding of what the system is to accomplish.

## 3.1.2 FUNCTIONAL AND OPERATIONAL CAPABILITIES

Describe the functional and operational capabilities required to meet the needs of users and operators. Identify which user and operator needs are supported by each capability. Use a table or matrix if appropriate for the sake of clarity. Discuss trade studies performed to establish how best to provide the system's required capabilities.

## 3.1.3 SYSTEM CHARACTERISTICS

Describe characteristics required of the system. Possible areas of discussion include processing capabilities; data structures; performance; error recovery; fault tolerance; reliability, maintainability, and availability; risk criticality; safety and security; flexibility and expandability; transportability; quality; and adaptability to various operational sites. Focus only on those characteristics that will have considerable impact on the system design. A cross examination of all of the characteristics will be made to the requirements defined in the Systems Requirement Specification (SRS) and any not specifically covered will be converted to requirements and the SRS will be updated.

## 3.1.4 REFERENCE ARCHITECTURE

Partition system functions and operational capabilities into logical groupings, and allocate system capabilities to those logical groupings. Highlight key system characteristics. Identify existing system components and any required modifications.

Subject	Туре	Standard
System Operations Concept	Identifier	S-3053
	Effective Date	May 2002
	<b>Revision No.</b>	

# 3.1.5 SYSTEM INTERFACES

Establish system boundaries, and define major external and internal interfaces. Discuss the general flow of both execution control and data across external interfaces, including networking considerations.

#### 3.2 System Environment

Define the environments of the system.

#### 3.2.1 ORGANIZATIONAL ENVIRONMENT

Define the organizational environment in which the system will exist during both development and operations.

#### 3.2.2 OPERATIONAL ENVIRONMENT

Describe the physical environment in which the system must perform, including environment characteristics and operator needs that directly affect system design. Discuss the maintenance environment as part of the operational environment.

#### 3.2.3 USER ENVIRONMENT

Identify and describe the expected users of the system, the way in which they will be using the system, and the functional capabilities they will require when performing their activities. Interpret the term "user" to include interfacing systems and subsystems. Define the users and their needs explicitly and in such terms and detail as to make it possible to correlate system capabilities and characteristics to specific needs. (Use a cross-reference matrix if necessary.)

## 3.2.4 DEVELOPMENT ENVIRONMENT

Discuss the degree and type of resources, support, tools, technology, and facilities required for the system development effort.

#### 3.3 System Operations

Describe system operations, including requirements and interfaces. Provide scenarios to explain specifics of system operations. Define personnel requirements.

#### 3.3.1 OPERATIONAL DESCRIPTION

Specify system operational modes, contingencies, mission phases, scenarios, processing schedules, response times, and other known operational needs.

#### 3.3.2 SIGNIFICANT OPERATIONAL REQUIREMENTS

Discuss operational requirements that will have a major impact on system design.

Subject	Туре	Standard
System Operations Concept	Identifier	S-3053
	Effective Date	May 2002
	<b>Revision No.</b>	

# 3.3.3 OPERATIONAL INTERFACES

Identify key operator and user positions, and highlight their capabilities. Include details of operator control and flexibility required, such as level of automation.

## 3.3.4 OPERATIONAL SCENARIOS

Describe scenarios of the interaction of hardware, software, operators, and users. Present assumptions about how operational tasks will be performed. Identify operational constraints.

#### 3.3.5 PERSONNEL REQUIREMENTS

Specify skill levels required of system operators and users at all identified business area process and operator positions. Discuss key tradeoffs between position capabilities and skill requirements imposed on operators. User knowledge and capabilities both in terms of business area focus and use of workstation software products (i.e., knowledge of Windows, etc.) should be captured.

## ACRONYMS

List and define all acronyms used in the preparation of this document.

#### REFERENCES

List all cited references.