

**Adaequare** Business Solutions

# Capturing Requirements

*A Comprehensive Framework for  
Capturing Requirements*

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## Executive Summary

Expectations cause misery is an old adage. However, in software product engineering, misstated or unstated requirements are the root cause of many failures and support issues.

The purpose of this document is to provide a framework and to discuss the details that need to be addressed for deriving requirements for a software product. This helps in ensuring that the product meets and exceeds the expectations of the users, the partners' community and the internal IT organizations.

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# Introduction

## High-Level Requirements

The prime objective of this section is to express concisely the high-level requirements and also understanding of the proposed system.

Given below are the types of information which need to be captured for better understanding the context and nature of the product:

- Business goals and Objectives
- Current Problems and Opportunities
- Business Requirements
- Business processes
  - Profile of Business Objects/Entities
  - Profile of Business Entities
  - Profile of data sources
- Critical Success Factors
- System Context Diagram
- Data context diagram
- Document Classification
- Constraints, Risks and Assumptions

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# Requirements

## **Requirements relating to the Business Process Model**

Information should be gathered on the existing and proposed business process model with the following details. It is suggested that as many inputs as possible, relating to the following items, should be captured and documented. The items are:

- Business process model hierarchy
- Super process
- Major process
- Sub-processes
- Elementary processes
- High level/ Detailed process flow
- Description of business objects and attributes
- Description of each business process
- Description of business events

## **Requirements relating to Business Data Model**

Information should be gathered on the existing and proposed business data model with the following details. It is suggested that as many inputs as possible, relating to the following items, should be captured and documented. The items are:

- High-level entity descriptions
  - Outline for describing the entities
    - Entity name
    - Alias(es)
    - Definition
    - Existence constraints
    - Business rules
    - Volumetrics
    - Attributes
- Entity Relationships
  - Outline for describing the relationships
    - Relationship name
    - Description
    - Cardinality classification
    - Existence constraints
    - Business Rules

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### **Solution/Technical Requirements**

Information should be gathered with respect to the following items to understand the solution/technical requirements:

- Candidate technologies (HW/SW/Networking)
- Computing platform requirements
- Technical component diagram
- Interoperability requirements
- Database selection/requirements
- Interface requirements
- Reliability requirements
- Performance requirements

### **System Distribution Strategy Requirements**

This section describes issues related to setting up and maintaining the proposed solution:

- Data and process association matrices
  - System transaction matrix
  - Data entity/location matrix
  - Data entity/volume matrix
- Data and process distribution technology

### **Security/Control/Administration Requirements**

This section discusses a variety of security and control requirements that need to be addressed for the proposed solution.

- Categories of users
- Administration Requirements
- Security Requirements
  - Application
  - Database
  - Network
  - Operating system
- Integrity requirements
- Audit requirements
- Disaster Recovery

### **System Operational Requirements**

This section addresses a variety of performance-related requirements.

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- System response time requirements
  - Operational service level requirements
  - System accessibility requirements
  - System availability and reliability requirements
  - System throughput requirements
  - Batch report/user queries requirements
  - Miscellaneous batch job requirements (data archiving etc.)
  - System printing requirements

### **Capacity Planning**

The prime objective of this section is to analyze and estimate the capacity requirements of the proposed solution.

- Online Usage
  - Geographical distribution of users
  - System transactions overview
  - Transaction usage frequency
- Batch Usage
- Initial disk space sizing
- Extra capacity load
- Network requirements (speed, bandwidth etc.)
- Computers/LAN requirements

Capturing the above requirements and addressing them in product design will go a long way towards creating a robust and stable product that becomes a stakeholder's delight.

# Requirements Traceability Matrix

<Project Name>

<b>Current Version:</b>	<current version number>
<b>Date Last Updated:</b>	<last update date>
<b>Last Updated By:</b>	<update author name>
<b>Author:</b>	<author name>
<b>Date Created:</b>	<creation date>
<b>Approved By:</b>	<approving body>
<b>Approval Date:</b>	<date of approval>

Seq. #	Document	Requirement	Type	Category	Priority	Use Case	Test Script	Analysis Model(s)/Business Objects	Development Cycle
[Assign a unique sequence number.]	[Reference the source document, where the requirement is defined.]	[Restate the requirement definition.]	[Constraint, Hardware, Software, Performance, Other]	[Link to System Scope Statement Category. Select from: Functionality, Data, Interface, Architecture]	[Assign a priority – classification may be dependent on project.]	[Provide the use case name]	[Reference the Test Script to test this requirement]	[Reference the containing analysis model(s) and associated business objects]	[Provide the iteration of the development cycle this requirement will be implemented in when that becomes available]

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## About Adaequare

Established in 2001, Adaequare is a CMMI Level 3 Certified software services company specializing in product development, data and test engineering. We assist IT teams in delivering high performing solutions to the business with faster time to market and high returns on investment.

With a global presence across 3 different locations, we focus on medium to large businesses and encapsulate consulting, results-driven engagement and delivery models which are important to our target customers.

We work with several companies in the USA such as CoreLogic, Tria Beauty and have been either a dedicated IT partner or a preferred IT partner. We have offshore delivery centers in India that support our customers in product development, Tier 1 and 2 support and testing with over 300+ resources.

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