Chapter 2
Introduction

The Enterprise Resource Planning (ERP) application implementation methodology is composed of well-defined processes that can be managed in several ways to guide you through an application project. This methodology provides the tools needed to effectively and efficiently plan, conduct, and control project steps to successfully implement new business systems.

The implementation methodology defines an organization's business needs at the beginning of the project and maintains their visibility throughout the execution. It defines time-sensitive business events, and maps each event to the corresponding business and system processes. Using this method, the business community gains an accurate understanding of the business requirements to be met by the final system.

This was designed with scalability in mind. From the largest, multinational, multisite, multientity projects to the smallest, limited-size, constrained-scope projects, the implementation methodology provides the scalability that your project demands. It also allows you to tailor your own approach to match your organization's specific needs. This methodology is also flexible and extensible.

The implementation methodology activities are conducted in phases. These phases provide quality and control checkpoints to coordinate project activities that have a common goal. During a project phase, your project team will simultaneously be executing tasks from several procedures.

The tasks against each phase are organized into *processes*. Each process represents a related set of objectives, resource skill requirements, inputs, and deliverable outputs. There are 13 processes in all, divided into seven phases.

Table 2.1 illustrates the phases and the corresponding processes under each phase.

The following are the typical critical success factors (generic in nature) for the success of an ERP application implementation project:

- Sufficient infrastructure
- Clear understanding of business needs
- Upper management support
- Strong program/project management
- Team strength
- Organizational readiness
- Sufficient technical architecture

Table 2.1 Phases and their corresponding processes

Phases / Processes	Definition	Requirement Requirement	Solution Design	Build	Testing	Production Go Live	Rollout
Project Initiation	■						
Core Process Analysis		■					
Conference Room Pilot			■	■			
Customization/Build			■	■			
Interface/Conversion Building			■	■			
System/Integration Testing				■	■		
Training					■		
User Acceptance testing				■	■		
Production Go-Live					■	■	
Roll out							■
System Administration	■	■	■	■	■	■	■
Project Management	■	■	■	■	■	■	■
Change Management	■	■	■	■	■	■	■

The preliminary application implementation project estimate is based on:

- What is the business objective?
- What is the scope of the project and how does it relate to the overall objective?
- Who will participate in the project (employees, consultants, or vendors)?
- What are the constraints affecting the project (timing, budget limitations, or organization changes)?
- Which applications will be implemented?
- Which sites will be involved?
- Will a phase deployment be employed? If so, in what sequence will the applications be implemented?
- When will work commence?
- What experience does the organization have regarding the technology that will be used?

Before creating a detailed work plan, develop the project scope, suggested approach, and preliminary budget.

The indicative phase schedules given in the respective phases in this document are based on the assumption of an average complexity of implementation, which includes the following assumptions:

1. Industry standard processes
2. Two to three sets of books, 5/6 segment chart of account (COA) structure, and a single calendar

3. No Multi Currency (MRC) or GCS requirements
4. Simple multiorganizational structure with one business group, 2/3 LE, 2/3 OU, and corresponding inventory organization
5. No localization requirements
6. Single geographical entity
7. Not a material-intensive business
8. Around 1,000 vendors and customers
9. Moderate volumes of transactions ($\sim$500 invoices per month)
10. Dedicated business process owners' time

The color codes depicted in the diagram above for phases and processes are maintained throughout the average case phase schedules to identify the processes and activities in their corresponding phases.

2.1   Target Audience

The ERP application implementation methodology is a high-level description of how the implementation methodology can be used to facilitate implementation projects. Project managers will use this handbook for project planning and scheduling. Team members can use this book to gain a broad understanding of end-to-end implementation of ERP application. It also provides detailed information on the process and tasks involved in each phase of an ERP application implementation life cycle.

2.1.1   Multiple Deployment Sites/Multiphase Considerations

One of the prerequisites before planning an ERP application implementation project activities in line with the application implementation methodology and tailored to the unique specifications of the project is that you need to determine if the transition into production needs to occur for all organizations at the same time. If a phased implementation is planned, decide what applications are to be implemented in each phase.

Consider the following factors when deciding on a single-phase or multiple-phase deployment:

• Is the organization facing changes from other sectors? Give time for an organization to absorb major changes before introducing new factors.
• Is the organizational culture amenable to integrate the new system into its operations? The risk is less if the organization is accustomed to using a common system with related policies and procedures. If business units have been operating independently, the organization must adapt to a cultural change, as well as to the new system.

- Can the project team adequately execute the project so that there is minimal risk in implementing all applications for all organizations at one time?
- Can two or more organizations all fit (from a sizing point of view) on the same servers?
- What is the company's experience with previous system implementations?
- What is the project team's experience with previous system implementations?
- Is the application a production that is controlled, or is it a beta release of the software?

To minimize risk, use the pilot implementation technique. Go live with a carefully selected subset of users who are well trained and able to deal with initial problems. Initial success at a pilot site often sets an attitude of success that carries over to the remaining sites.

2.1.2   Structure of the Document

After this, each section of this document describes one significant phase of the life cycle of the project. The phase description contains:

- *Objectives of the relevant phase*
- Activity flow diagram
- Implementation schedule
- Prerequisites
- Detailed activities containing the tasks corresponding to that activity
- Phase deliverables
- Decision matrix/checklist to gauge the successful completion of the phase and a prerequisite to proceed to the next phase
- Critical success factor

This document describes the following 13 phases of implementation:

- Project initiation
- Core process analysis
- Conference room pilot
- Customization design/build
- Interface/conversion design/build
- System integration testing
- Training
- User acceptance support
- Production go live
- Rollout
- Project management
- System administration
- Change management

The formats of templates corresponding to the deliverables of each phase are provided as an attachment with this document.

2.2   Project Initiation

2.2.1   Objective

The objective of project initiation is to frame a standard approach to project management to accomplish and execute a successful ERP application implementation project.

The goal of the project management framework is to prepare a unified project plan to provide a framework, in which all types of ERP application projects can be planned, estimated, controlled, and completed in a consistent manner. This consistency is necessary in an environment where projects use a variety of methods, tools, and approaches to satisfy business needs.

The overall organization of a project management plan is expressed as a process-based methodology, which can be tailored to a project's specific needs. The five management processes are:

- *Control and reporting*—contains tasks that help to confirm the scope and approach of the project, manage change, and control risks. It guides toward management of project plans and reports project status.
- *Work management*—contains tasks that help to define, monitor, and direct all work performed on the project. This process also helps to maintain a financial view of the project.
- *Resource management*—provides guidance on achieving the right level of staffing and skills on the project, and on implementing an infrastructure to support the project.
- *Quality management*—provides guidance toward implementing quality measures to ensure that the project meets the client's purpose and expectations throughout the project life cycle.
- *Configuration management*—contains tasks that help to store, organize track, and control all items produced by and delivered to the project. The configuration management process also calls for providing a single location from which all project deliverables are released.

Each of the above processes needs to be framed with a common format of task categories, which include:

- Planning tasks with respect to project scope, quality, time, and cost
- Controlling tasks performed concurrently with execution tasks basically measuring performance and taking corrective action as needed
- Completing tasks to formalize acceptance of project deliverables and obtain a proper sign-off of all the deliverables

Figure 2.1 depicts the fundamental values of a project management approach.

The project initiation is the kickoff or the start of a new project with the project manager, and a few key resources that basically form the project management team are required to carry out this phase.

Fig. 2.1 Fundamental values
of a project management
approach

Manage Risks	Keep Sight of Objectives	**Attitude**
Build an Experienced Project team		**Enablers**
Clear and Practical Methods	Partnership Environment	**Foundations**

Before embarking on the creation of a project plan, there are certain golden rules
which each member of the project management team needs to keep in mind and
practice as necessary. The golden rules are as follows:

• *Start right*—if you start badly, it is always difficult and often impossible to re-
  cover.
• *Know your client*—get to know the project stakeholders and, in particular, who
  is funding the project. These two parties usually are not the same people. Under-
  stand their spheres of influence and agree on when and how their support will be
  called upon, and what the project will expect of them.
• *Define the project scope*—study the contract, reach an agreement with the client
  on a precise definition of the scope of work and terms of engagement, and under-
  stand how a consultant's scope of work relates to the client's business objectives
  and the key benefits the client expects to achieve from it.
• *Manage the risks*—determine the key risks, analyze their impact, define contain-
  ment strategies, and establish contingency plans.
• *Field a winning team*—select people based on three primary criteria: merit, abil-
  ity to adapt rapidly, and personality fit with the team. Set for everyone involved,
  the expectation of "no surprises." Adopt a conflict minimization strategy and try
  to reach a win–win solution.
• *Produce formal documentation*—document all deliveries, agreements, decisions,
  issues, resolutions, actions, and file them with all correspondence and minutes of
  the meetings.
• *Plan for completion—project completion* is the final phase of the change, process
  brought about by the project. Plan early for it. Final impressions are the ones that
  you leave with people.
• *Communicate with honesty and conviction*—set standards with the stakeholders
  and the team on communications and progress reporting, adhere to them, be hon-
  est, and do it frequently.

The major activities during a project initiation phase are as follows (Fig. 2.2;
Table 2.2):

• Contract review and firm up project scope, assumptions, exclusions, and deliver-
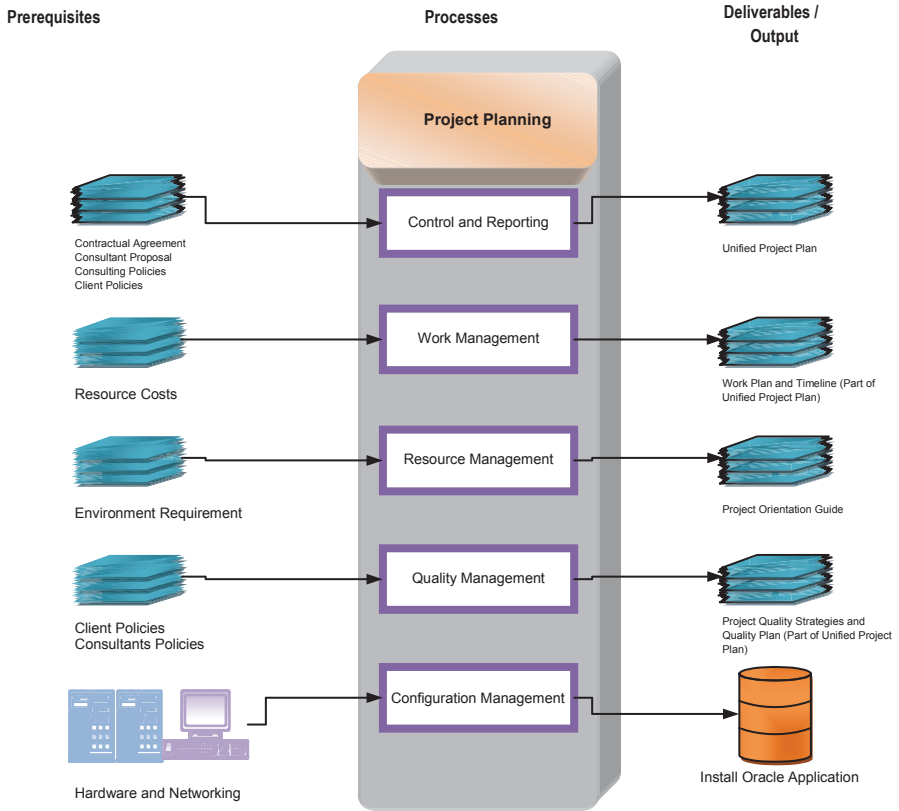 ables
• Prepare a unified project plan

Prerequisites   **Processes**   **Deliverables /
                                                                        Output**

Project Planning

Contractual Agreement
Consultant Proposal   Control and Reporting   Unified Project Plan
Consulting Policies
Client Policies

Resource Costs   Work Management   Work Plan and Timeline (Part of
                                                            Unified Project Plan)

Environment Requirement   Resource Management   Project Orientation Guide

Client Policies   Quality Management   Project Quality Strategies and
Consultants Policies   Quality Plan (Part of Unified Project
                                                           Plan)

Hardware and Networking   Configuration Management   Install Oracle Application

Fig. 2.2 Business flow diagram: project initiation

- Field a project team
- Install the software

2.2.2   Prerequisites

- Contractual agreement documents
- Consultant proposal
- Client policies
- Consulting policies
- Resource costs
- Environment requirement

Table 2.2 Implementation schedule: project initiation

	TimeLine							
	Month 1				Month 2			
Activities	1	2	3	4	5	6	7	8
Contract review and firm up Project Scope	▪							
Prepare Unified Project Plan	▪	▪	▪	▪				
Field a project team		▪	▪	▪				
Install the software		▪	▪	▪				

2.2.3 Detail Activities

Prepare a Unified Project Plan

The goal of project planning is to define the project objectives and approach with respect to scope, quality, time, and cost.

The objectives of the project planning are to:

- Establish the project scope, technical and business objectives, and resources and schedule required to accomplish the project objectives.
- Develop a baseline work plan and determine project resource requirements.
- Prepare a resource profile for the project, which will be used to monitor and control performance in terms of effort and schedule.
- Obtain client and consulting management approval to proceed with the execution of the project.
- Determine the measures, which will be used on the project to measure and maintain the quality of the project processes and deliverables.

The key contents of the unified project plan should contain the approach and details of the project execution and management corresponding to the following:

1. Establish scope, objectives, and approach
2. Define control and reporting strategies, standards, and procedures
3. Establish work plan and detailed activity schedule
4. Define resource management strategies, standards, and procedures
5. Establish staffing and organization plan
6. Create project orientation guide
7. Establish infrastructure plan
8. Define quality management strategies, standards, and procedures
9. Define configuration management strategies, standards, and procedures
10. Define risk management strategy, identify probable risks, and define mitigation plan.

The key techniques to be employed in this process during project planning are *work planning, estimating, risk mitigation planning, and resource/effort loading profile*. These techniques support the development of the initial project work plan and effort profile.

Table 2.3 Deliverables: project initiation

Sl No.	Name of deliverable	Template ID	Responsibility	
			Major	Assisted
1	Unified project plan		Consulting organization	Client
2	Project orientation guide		Consulting organization	Client
3	Client policies and procedures document		Client	
4	Client requirement documents or statement of work as prepared by the client before signing of contract		Client	

Reuse of deliverables is an important asset to the project since it will reduce the overall preparation duration of the documents. *Project planning must also incorporate the planning for reuse of deliverables by incorporating the time required to prepare the deliverables and inclusion in the knowledge repository* (Table 2.3)

Implement a Project Team

Resource management during project initiation is somewhat unique in a sense that you not only plan but also oversee implementation of human and physical resources at the start of the project. In addition, you not only do long-term planning but also plan a core set of resources needed to support the execution of the first project phase. The primary techniques you use in this process during project planning are organizational design, recruiting, and negotiating.

The basic tasks for the above activity are as follows:

1. *Plan a strong project team*—working with the client project manager to plan out a single project team including consulting and client staff. You will need to negotiate with both, the client to agree on an acceptable level of client resource commitment and with your own management to secure commitments for consulting staff to form your core project team.
2. *Create a project orientation guide*—establish the expectations of the team members early in the engagement, facilitating the creation of a strong team. Also, the very important process of time collection will be restated in the project orientation guide, so that all team members clearly understand the importance and ramifications of time collection and reporting.
3. *Prepare a working environment*—the project staff should have a designated work area at the client site. Make sure that suitable workstations, phones, and office supplies will be available to each full-time project member. Agree with the client on arrangements to accommodate new full- and part-time project staff in the work area. Having to find work areas, each time a new staff member comes on to the site, is a distraction that reduces work productivity.

Table 2.4 Major activities, checkpoints, and weightage

Major activities	Checkpoints	Weightage
Prepare unified project plan	Is the preparation of a unified project plan complete?	
	Is the above plan signed off and accepted by the client?	
	Is a minimum project team to start the core process analysis in place?	
	Is the project plan and activity-wise schedule communicated and accepted by the project team?	
Install ERP application	Is the required hardware and software available?	
	Are proper working environment and facilities available to the project team?	
	Is networking infrastructure available at the client site as a prerequisite for accessing the software application?	

Install ERP Application

The prerequisites for installing the software are:

1. ERP application servers are available.
2. Server specifications are according to the requirement of the project system architecture.
3. Software is available.
4. The software version is according to the requirement.
5. Proper networking arrangements are done.
6. System administrator is available to the project team to carry out the installation.

The key activities include:

1. Preparing for installation—check the above prerequisites and plan for installation like creating privileges, access, storage space, partitioning, etc.
2. Installing ERP application software

Carry out the postinstallation activities like setting up roles, responsibilities, backup tasks, etc.

2.2.4   Decision Matrix/Checklist

Note that this checklist is indicative of assessing whether the activity is completed or not and giving feedback/escalation as deemed necessary. This does not stop in proceeding to the next phase of business requirement definition in any way (Table 2.4).