CHAPTER 1
Introduction

This guide provides a concise reference to the most important aspects of the SAP R/3 PS module. *Project System* (PS) equates to anything that is project-oriented and has a life cycle. Apart from providing detailed background information about the features of PS, this guide includes useful reference information such as Transaction Codes, Report lists, Tables, and Fields—vital when you're offline and need to refresh your memory.

One of the hardest things to communicate to those trying to implement business requirements in PS is the various methods by which things can be done. Questions range from "How does PS work?" to "How can I distribute my planned costs over five years all in one go?" to "Why can't I see my Planned Costs?" Reading this book should lead you in the right direction. It has been developed with a top-down approach, starting with the big picture and "drilling down" to detail as you progress.

Project System: An Overview of PS

In business, just about everything can be viewed as a Project. The decision to use PS depends on the degree of complexity and functionality desired. SAP R/3 has other modules that offer objects capable of emulating a project—Production Planning, Sales & Distribution, Controlling with Internal Orders, and Customer Services, to name a few. But none has the depth of structure, integration, and complexity available in PS.

What exactly is PS? It is a repository for planning, collecting, and generating costs and revenue via a structure that truly represents what you are doing over a period of time. How simple is that? As simple or complex as you want it to be.

If it has a start, a middle, and an end—it's probably a project.

Everything associated with a project revolves around what SAP terms *Work Breakdown Structures* (WBSs) and *Networks.* These are the objects that do all the work and carry information about what the project will do. They can trigger events, schedule work, and generate demands for materials and services required to carry out the project.

The SAP R/3 manual defines *Projects* variously:

> "[G]enerally complex, unique, having a high degree of risk, having precise goals, are limited in duration, are cost and capacity intensive, are subject to quality control and have strategic importance to the company carrying out the project."

"Projects can be structured according to how the project is organized and the process involved in carrying out the project."
"Projects are generally used as cost and revenue collectors."

From Start to Finish

There are myriad examples where the preceding may not apply because of the nature of how a project can be structured.

For example, a project could be created as a single element without any associated structure whatsoever; in this case, it's simple because none of the "progressive" elements of project management apply. You might just want to record all the costs associated with the recruitment of a person into the company or with buying a mobile phone (there are, of course, other ways of doing this in R/3).

On the other hand, you might build a highly complex structure that reflects every single task associated with the building of an offshore platform, including the various services, creation of assets, billing of customers, and so on. Needless to say, all possible functionality would have to be utilized, including cost/revenue planning, budgeting, resource/capacity planning, activity control, milestones, Gantt charting, manufacturing, capitalisation, earned value, and so forth.

As seen in Figure 1-1, an SAP R/3 Project might "progress" from Definition through to Settlement.

You **Define** what you want to do from a business perspective, **Develop** a strategy that's represented by a structure, **Plan** your costs and revenues, and schedule when events must occur, approve the **Budget** and distribute it throughout your structure, release the project and **Execute** day-to-day confirmations, frequently **Evaluate** progress by reporting, **Settle** it to its intended receiver, and **Close** it off.

Organization

From an Organizational standpoint, PS has many tentacles, which demonstrates how integrated it is. The fundamental elements of any business are driven by its organizational chart—information such as Company, Profit Center, Plant, Business Area. This "Master Data" provides the basis upon which reporting is performed. The organizational chart also keeps the elements of a project "honest," meaning that the relationship between these organizational values is respected.

Figure 1-2 contains a diagram of the various Organizational references each of the Project Objects may have associated with them.

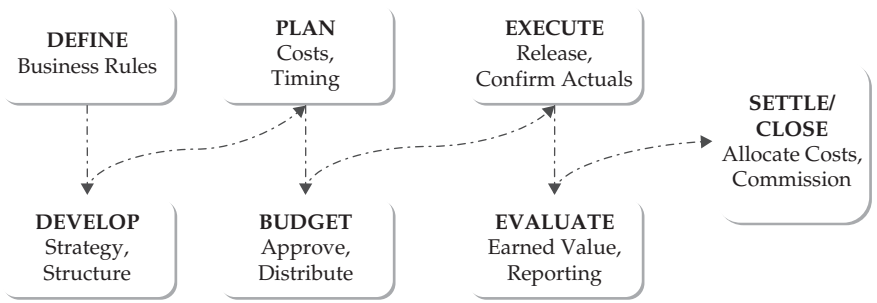


Figure 1-1 From start to finish.

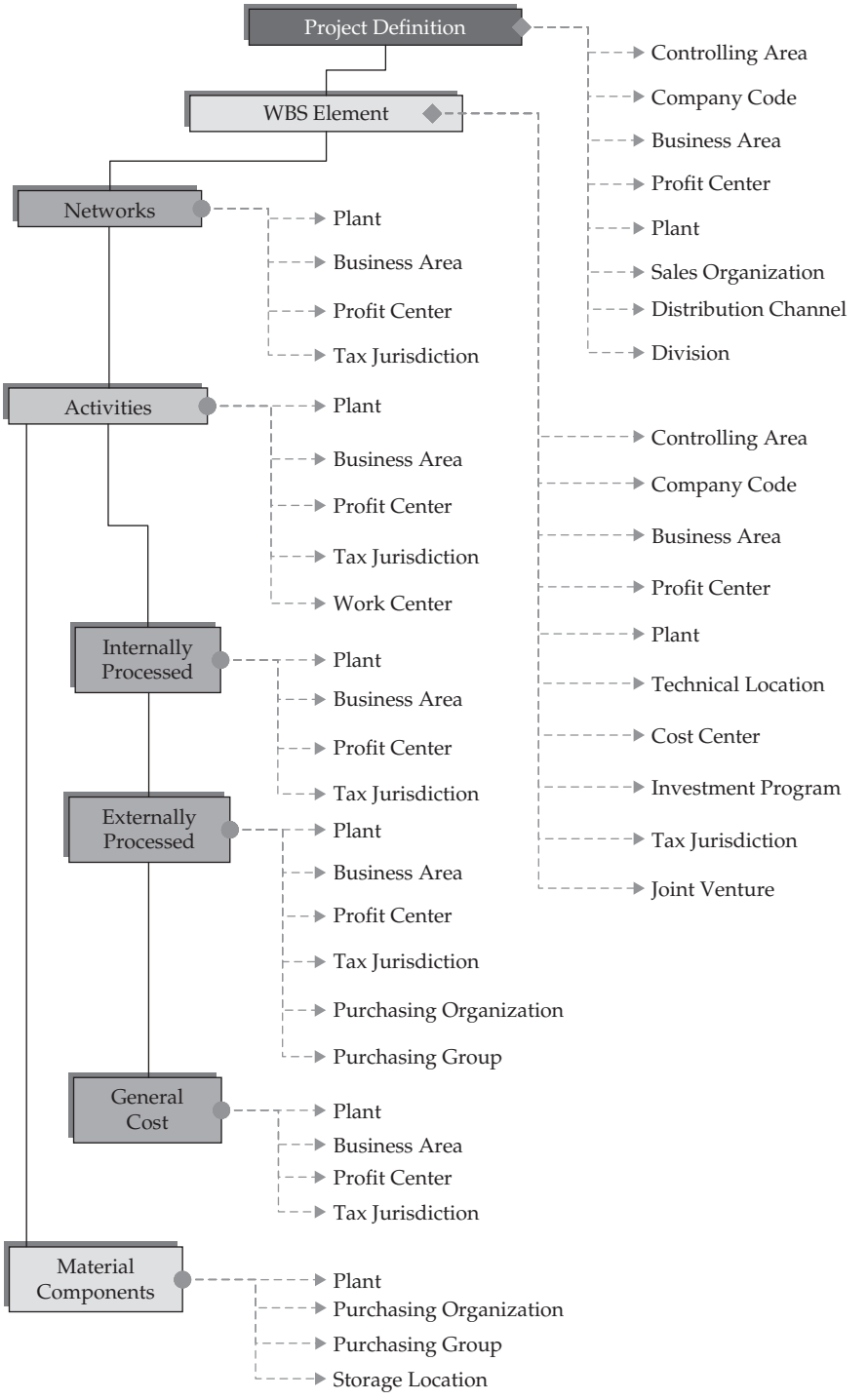
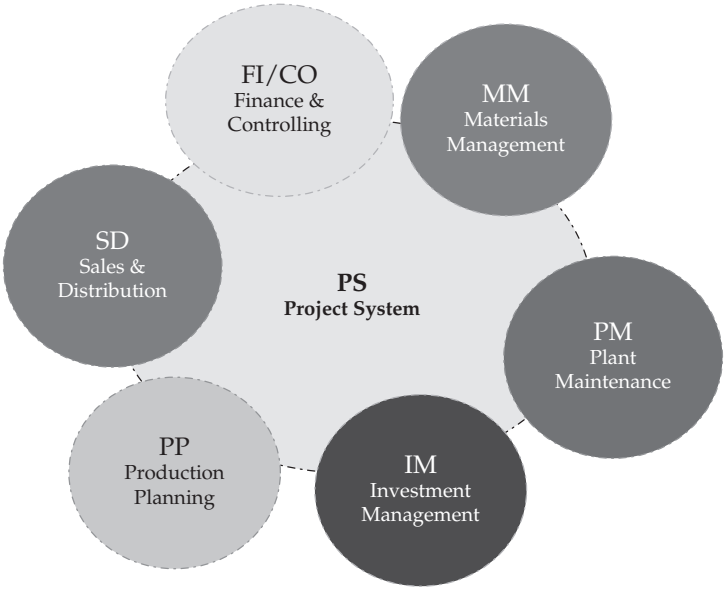


FIGURE 1-2 Organization

Integration

Here we have an overview of the primary integration points for PS—there are others, such as Fixed Assets and Human Resources, but they do not play as substantial a part as the ones shown in Figure 1-3.

Controlling (CO) Substantial integration exists between PS and CO. This is because PS relies on so many objects that belong to CO for Integrated Cost Planning, Settlement, Results



Finance & Controlling	Project/WBS Number, Network, Controlling Area, Company Code, Business Area, Cost Center, Cost Element, Work Center, Activity Type, Profit Center, Results Analysis Key, Object Class, Internal Order, Account Number, Jurisdiction Code
Materials Management	Project/WBS Number, Network, Plant, Material Number, Material Group, MRP Controller, Vendor, BOM
Sales & Distribution	Project/WBS Number, Network, Partner, Sales Organization, Distribution Channel, Division, Sales Order BOM
Plant Maintenance	Project/WBS Number, Network, PM Orders
Production Planning	Project/WBS Number, Network, BOM
Investment Management	Project/WBS Number, Network, Investment Programs, Measure

Figure 1-3 Integration

Analysis, Resource Planning, and any reporting that involves Cost Elements. Controlling Area is the most obvious connection, without which PS could not function. In Workforce Planning via Work Centers/Activity Types, there is integration with Human Resources (HR) to register personnel who are assigned to projects.

Materials Management (MM) Based on Materials and BOMs, PS has the ability to create Reservations, Purchase Requisitions, and Purchase Orders via Easy Cost Planning Execution Services and Networks in general. This powerful integration makes PS a key player in the logistics cycle, including the ability to handle Services via Service Masters and Contracts. Further, the ability of Networks to work with Catalogues takes PS into SRM (Supply Relationship Management), where the Internet plays a large part in sourcing materials and services. Additionally, PS can help manage the MRP (Material Requirements Planning) cycle with its MRP Grouping functionality. PS is the "owner" of the ProMan facility, which tracks and helps manage all the Procurement document flows.

Sales and Distribution (SD) PS has a fairly straightforward integration with SD via Order Numbers. All SD Orders (Quotations, Sales Orders, Consignment Orders, etc.) can be assigned to a project for the purpose of planning revenue, creating Billing Plans, and posting costs. DIP (Dynamic Item Processor) Profiles assist in the process of simulating and automatically creating Sales Documents, plus providing a means to bill customers based on activity within a project (Resource-Related Billing). Additionally, Assembly Processing provides the means for a Sales Order or Quotation to automatically generate a Project using Configurable Materials.

Finance (FI) As PS is primarily a Cost Planner and Cost Collector and therefore a slave to FI/CO, its primary objects (WBS and Network) rely on actual expenditure to manage Account Determination, which is really the Chart of Accounts. Ultimately, all costs end up somewhere in Finance. Cash-flow management is also a feature that PS can be used for, via Funding Areas in Treasury.

Production Planning (PP) Though not a major player in the PS side of integration, it is via MM that PP is informed of Production Orders using special settings in the Material Master.

Plant Maintenance (PM) At the heart of this integration is Maintenance Orders, which, like most external orders, can connect to PS for Planning and Settlement purposes. Generally, Maintenance and Service Orders apply to Capital (Asset) or Customer-based projects, where equipment serviced onsite can be managed in a Project.

Investment Management (IM) Quite a substantial amount of integration is involved here. IM seamlessly integrates with PS to manage Assets Under Construction (AUCs). Cost Planning can be managed in PS, sent to Investment Programs, and returned to the project as a managed Budget. AUCs are automatically generated when a project is released, so there is a relatively important connection to Fixed Assets.

Summary

SAP PS has many strings to its bow and it depends on you to decide which elements to include in your design. In the next chapter, we take a look at a typical scenario and include the elements you might use.