

Implementing SAP R/3 in 21st Century: Methodology and Case Studies

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FOREWORD

SAP is the most common ERP system all over the world as well as in Turkey. I worked for many companies, some of which were using and most of which were implementing SAP. I have experienced problems and successes with the projects I have been involved over the past years. However, based on my business experience on SAP projects I realized that useful documentation and reference books about SAP project management and approach were currently not available in Turkey or elsewhere, although project management is the most critical part of SAP implementations. Additionally, from both successful and unsuccessful implementations we keep on getting feedback about lack of reference books, written documentation and experience in these areas. SAP implementations require strong expertise and powerful project management.

Furthermore, as far as we experienced, there are no satisfactory reference books about SAP project management in the universities where we teach ERP systems and implementations, either. Books related to SAP modules, technologies and ABAP are available in most places, but the subject of project management is generally addressed inadequately, in reference to SAP implementations. It is also a subject that is transforming over the years as new methodologies are introduced and new SAP products are integrated to existing modules. Yet I think that there is enough material about SAP implementation and project management to fill a book.

All these issues point to the need for a methodological system approach. Particularly, implementations in Turkey require a methodology that supports the business processes that might be specific to Turkey and its legal requirements, and focuses on Turkish teamwork habits and work culture.

This book does not claim to introduce a new methodology. Rather than that it is intended to provide a redesign in the methodology integrated with proven experiences, various company approaches, SAP implementation methods, my own experiences and information, and also elaborate case studies. I think that company case studies are especially valuable, so readers might be more interested in Chapter 7 where these are presented.

The redesigned methodology, which is based on a new system approach, is supposed to improve the conventional methods integrating them with new technological tools. For instance, internet has been highlighted as a perfect tool for project management.

We also provide two appendices, which might be helpful in implementation: Some project control table examples, which you can customize and improve within the realm of your project, and a detailed key project team profiles, which are hoped to assist you regarding your project team specifications.

This book integrates various methods on basis of a common language, analyzing some experiences and methodologies in worldwide SAP implementations for the use of both academic and business communities, and is hoped to meet an essential need of current and potential SAP clients, available industrial users, SAP business partners, consultants, students and the academic community and new users in future.

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Enjoy the book and please send me your feedbacks. For any inaccuracies, please accept my sincere apologies and forgive me until the next book.

Dear Friends,

Thank you all of you again.

Arzu Baloglu

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INTRODUCTION

What has changed in business life in the information age we are experiencing and what is the required transformation businesses and organizations need to pursue? This transformation needs to be well defined and adapted appropriately to the corporation. A flexible, strong and corporate business environment needs to be established in order to reach competitiveness and to build a dynamic business.

As the business life transforms continuously the amount of project-based work increases significantly in every industry. A new project often means a new target requiring a task list with new resources, a new organization, a new mission and and a vision. The enterprise needs to build models which meet today's requirements and support tomorrow's competitive environment.

However, these systems work within a relevant methodology. The task is to develop a prototype, project procedures and so methodologies in order to execute the projects. Project management covers these specific topics and investigates continuously what the innovations and improvements are.

Numerous traditional project management methods have been tried and succeeded in software implementation projects do far. Most software implementation projects until the introduction of large-scale ERP systems however have been limited to converting data from legacy systems to new systems to be implemented. This approach defined the project as an information technology project and it was mostly owned by IT departments. Projects failed, new systems were not up to their task, and this meant additional cost, and insufficient systems, often loss of business, not to mention employee satisfaction. As a result, these isolated legacy systems were not efficient enough to meet the requirements of today's business and technology environment. They have been replaced by flexible, integrated, open and user-friendly products.

The challenge of implementing company-wide ERP systems, covering all the functions of a company, and integrating processes in a customer oriented way has improved the project management approaches with the introduction of new tools, internet technologies, groupware, custom methodology databases and application. Resources and systems have been utilized in a more efficient way and has led to higher overall productivity. Motivation of employees as well as consultants have been improved, focus on budget made the executive level sponsor with more enthusiasm.

Over the past few years, in order to prepare for the arrival of the year 2000 (Y2K) many companies were engaged in implementations of standard business software applications, the enterprise systems particularly such as ERP, and supply chain management systems. While these software systems solved the immediate problem of Y2K compliance, they were typically implemented with an emphasis on speed and the need to fix the Y2K problems. The scope of data conversion from the legacy to the new systems was not sufficient. Focus on business processes was required in order to leverage the capabilities of the software to a maximum. There was also a very common requirement to re-engineer the business processes completely for technology-driven business dynamics, such as the implementation of e-business applications, ERP, B2B, SCM or Data Warehousing applications.

As a result, many companies have invested in expensive software applications, without receiving adequate returns on investments (ROI) so far. In fact, most of such implementations have either failed to return the expected ROI, or have cost much more money and time to implement than expected.

In addition to acquiring the ability to master the challenges of Y2K, e-business etc., the following objectives have generally been of primary importance to companies which are implementing integrated systems:

- Reducing maintenance costs for old systems
- Replacing "home made" applications that have proven too difficult and too expensive to maintain
- Reducing redundant data inventories
- Standardizing business requirements and related processes for multiple locations
- Integrating standard software to accelerate business processes

While the first two items have been accomplished by most companies, optimization of business processes cannot be automatically achieved by implementing a software system, even a system as comprehensive as ERP, e-business or supply chain management.

In today's business environment, change is constant and stakes are high. Key decisions have the power to create a tremendous ripple effect not only throughout the organization. And as soon as a process has been updated or a new system implemented, a rapid cycle of obsolescence begins. In an environment like this, there is need for flexibility to change as new opportunities arise.

More specifically, when making decisions companies need:

- To determine which enterprise products are more convenient to implement,
- To determine their actual requirements and expectations before the system selection,
- To verify that scheduled process throughput times are being met (and how consistently those times are met),
- To detect points where a potential for time and/or cost saving improvements exist,
- To verify that process capacities correspond accurately to the amount of work that needs to be accomplished to meet customer demands,
- To verify that proposed process costs are being adhered to,
- To ascertain whether planning premises were correct,
- To ensure that the business processes currently being implemented are resulting in desired levels of customer satisfaction.

In summary, this book is generally focused on the impacts of new technologies in today's ERP project management.

C1 Projects and Trends in the New Millennium

1.1 Introduction

The new millennium focuses on proven methods and lessons learned from dealing with projects in diverse industries and settings. It brings new technology opportunities to the industrial environment. Projects like implementing SAP should address issues of organization, process, and technology, and explore how modern technology tools such as the internet and world wide web can support effective project management and project success.

This chapter addresses current trends in collaborative project management, conflicts and resolutions concerning team work, and information sharing. Especially SAP Projects will have to benefit from the technological opportunities of the new millennium. It expands the guidelines and the use of modern technology, and spends more time on project analysis and costing and issue management. Monitoring the latest technological progress helps improve SAP project implementations and projects are implemented using internet tools and cutting the time of the implementation. This becomes a very important advantage for project managers, consultants, clients and business partners.

Today's trend in software management is performance and speed. That is why, implementation using internet technology will be the most efficient technique in future, we believe. In this book we will try to suggest ways to use the internet, intranet, database management systems and project management in order to complete a project in the most efficient way possible. We will focus on managerial, technical and human aspects of a project.

1.2 What is SAP

The company SAP was founded in Waldorf, Germany, in 1972 by five ex-IBM engineers. SAP stands for System, Anwendungen, Produkte in der Datenverarbeitung (Systems, Applications, Products in Data

Processing). Headquartered in Waldorf, Germany, SAP employs 29,000 people in more than 50 countries. The original founders have been so successful in growing SAP into a global player such that SAP AG is now the third-largest independent software supplier in the world, with over 19,300 customers, 10 million users and 60,100 installations, including more than half of the world's top 500 companies. SAP had revenues of €7.4 billion and net income of €509 million in the year 2002 [SAP Annual Report 2002] .

What made this company so successful? The first big scale product SAP launched in 1979 was SAP R/2. Running on mainframe computers, R/2 was the first integrated, enterprise wide packaged software and it was an immediate success in Germany. For years SAP stayed within the German borders until it had penetrated practically every large German company.

Looking for more growth, SAP expanded into the remainder of Europe during the 80's. Towards the end of the 80's, client-server architecture became popular and SAP responded with the release of SAP R/3 (in 1992). This turned out to be another success for SAP, especially in the North American region into which SAP had expanded in 1988.

The growth of SAP R/3 in North America has been nothing short of stunning. Within a 5 year period, the North American market went from virtually zero to 44% of total SAP worldwide sales. SAP America alone employs more than 3,000 people and has added the names of many of the Fortune 500 to its customer list (8 of the top 10 semiconductor companies, 7 of the top 10 pharmaceutical companies etc). SAP today is available in 46 country-specific versions, incorporating 28 languages. These solutions are tailored to meet the specific requirements of 23 different industry categories, from aerospace and defense to utilities, giving SAP a competitive advantage that no other company can match.

SAP R/3 is delivered to a customer with selected standard processes turned on, and many other optional processes and features turned off. At the heart of SAP R/3 are about 10,000 tables which control the way the processes are executed. Configuration is the process of adjusting the settings of these tables to get SAP to run the way you want it to. Functionality included ranges from financial accounting (e.g. general ledger, accounts receivable, accounts payable etc) and controlling (e.g. cost centers, profitability analysis etc) to sales and distribution, production planning and manufacturing, procurement and inventory management, and human resources.

The start of the internet age at the end of the 90's was a big challenge for the big players of the enterprise software industry. While trying to grow at a high speed, the companies, SAP included, were racing not to miss the internet train. Businesses had to be internet-enabled, e-business quickly became the buzzword of the decade, and the software companies introduced new concepts, new products.

Today, SAP offers solutions that improve virtually every aspect of business, government, and education. For example, mySAP Business Suite allows employees, customers, and business partners to work together from anywhere, at any time. SAP's customer relationship management, supply chain management, and product life-cycle management solutions help streamline critical business processes. Leading-edge technologies in such areas as technology platforms, enterprise portals, and mobility provide customers with the tools they need to work more efficiently and profitably. [SAP Annual Report 2002]

1.3 Future Requirements and New Products

Customers are increasingly looking for solutions that not only support their critical business processes and minimize risks but also deliver fast ROI and lead to a lasting reduction in IT total cost of ownership. SAP's focus has been on solutions designed for specific processes – predefined combinations of applications, services, and content for resolving urgent business problems.

Trends always change according to new requirements so that software developers and companies have to work on products continuously in order to meet these requirements. What is the progress with SAP technologies? What are the new requirements and the expectations of the business in the new millennium?

- The new business environment
- SAP'S product strategy for next millennium
- Sap's Business strategy: Assuring customer success
- A Family of empowered end users

Nowadays, trends are going that products should support multi currencies also for the legal framework of monetary union. Product should have euro and integrated solution. Otherwise, it can have a less of market share because of lack of euro-compliant.

Other application areas are related to new business environments.

1. Link the extended supply chain with the financial value line.
2. Integrate back office and front office.
3. Manage the extended enterprise-Real time.

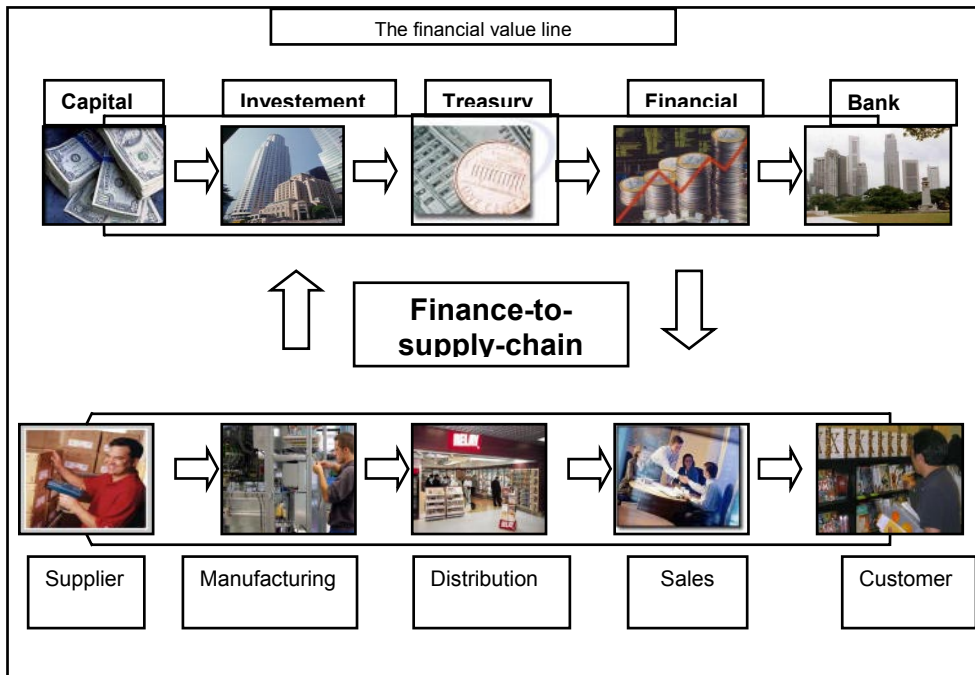


Figure 1.1. Linking the Extended Supply Chain

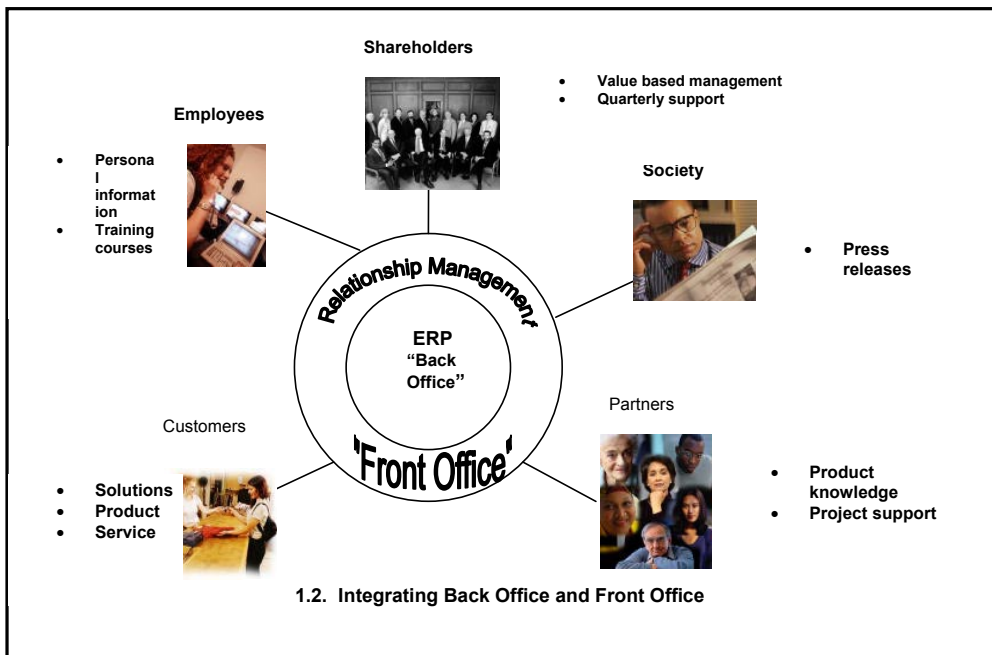


Figure 1.2 Integrating Back Office and Front Office

SAP has introduced new products parallel to new trends. Some of them such as SFA, HR, APO, and B2B can be seen in Figure 1.3

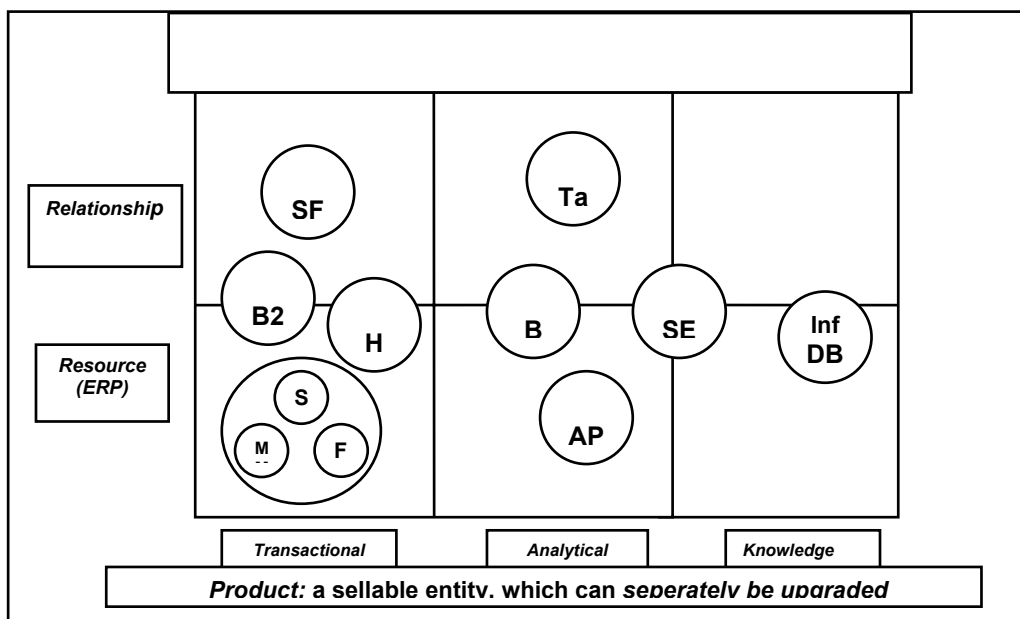


Figure 1.3. SAP Product Family

One of the important concepts of today's IT world is to provide low cost of ownership. There are several approaches to improve this metrics during evaluation, implementation and after go-live:

- Coordination of all solution components
- Feasibility study
- Accelerated implementation
- Ready-to-run R/3
- Separate upgrades for legal changes
- Upgrade roadmap

Empowerment is another aspect of improving the human resource factor of a project. These are the components of empowerment of people:

- Self service
 - Employee self service
 - Purchasing of services and direct supply
- Self-education
 - Easy to learn end user training
 - Commonality: corporate language
- Self-management
 - Development of employee's skills and potentials
 - Team-oriented performance indicators
- Self-motivation
 - A human interface for everyone to enjoy

1.4 What is Accelerated SAP (ASAP)

1.4.1. SAP R/3 System

SAP R/3 pursues a flexible and modular structure of individual components. In previous page you have reviewed the general module groups such financials. If we would like to see them altogether in terms of sub modules, these individual components are as follows:

- Basic System:
 - Basic components (BC)
 - Advanced business application programming (ABAP4)
- Accounting System
 - Financial accounting (FI)
 - Controlling (CO)
 - Asset Management (AM)
- Production and logistics
 - Sales and Distribution (SD)
 - Materials Management (MM)
 - Production Planning (PP)
 - Quality Management (QM)
 - Plant Management (PM)
- Others
 - Project System (PS)
 - Human Resources (HR)
 - Workflow (WF)
 - Industry Solutions (IS)

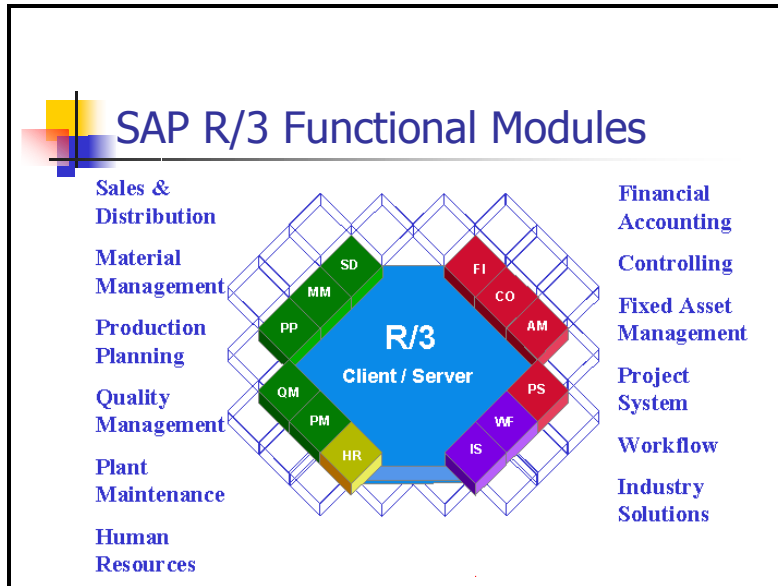


Figure 1.4. SAP R/3 Modules

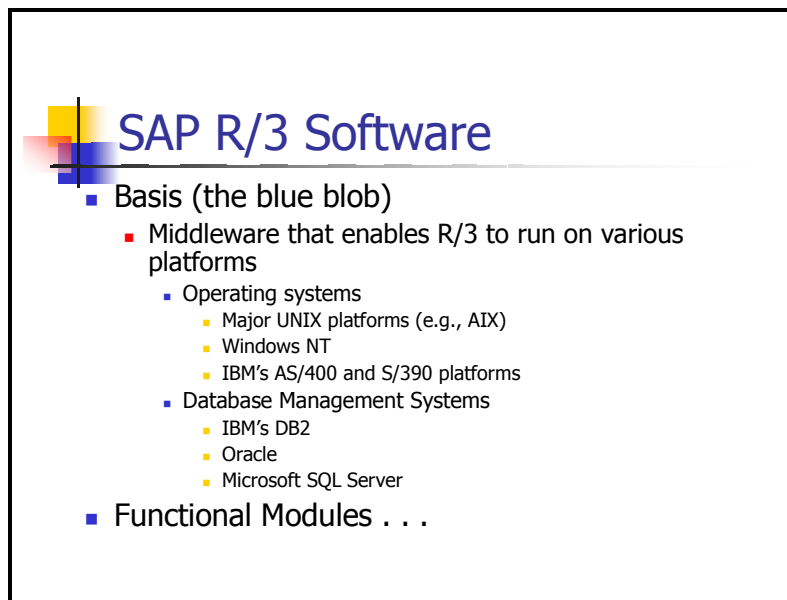


Figure 1.5. SAP Basis

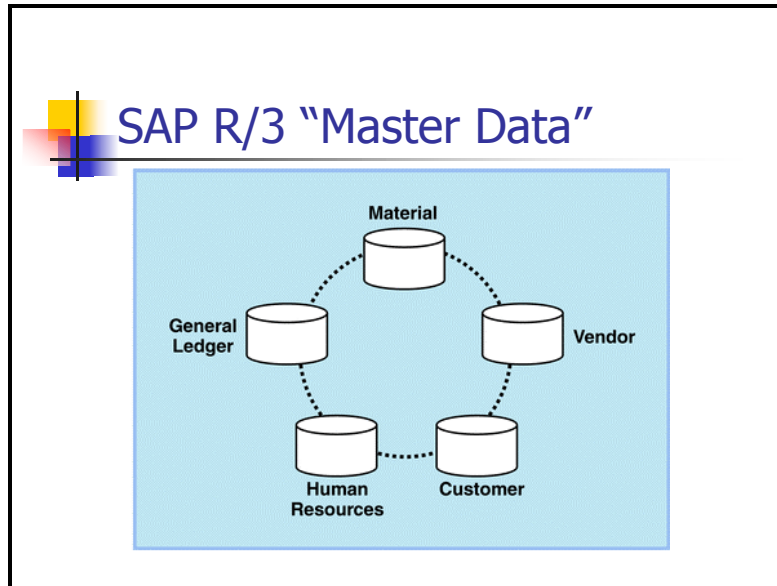


Figure 1.6. SAP Master Data

1.4.2. Global Implementations and Global ASAP

There are some challenges for companies planning to implement globally or at more than one site:

- Global business processes and data issues - Business standardization, Legal requirements
- Geography and cultural issues - Geographical spread and time-zone differences, cultural differences between international sites, communication challenges and local acceptance/buy-in, diversity within regional IT systems in use
- International team structure and program organization - Geographical spread and time-zone differences, internationally balanced teams, distributed support over regions/continents, change management, coordination of rollouts in multiple regions/countries
- Diversity within regional IT system in use - More complex configuration management; variations in regional IT infrastructures

Global ASAP is the SAP solution designed to facilitate meeting these challenges. It both builds upon and coordinates with the ASAP implementation methodology. It represents a new implementation layer above the standard acceleratedSAP and uses a centralized approach with the global template rollout as its main focus.

Global ASAP comprises a roadmap structured according to the ASAP principle including step-by-step instructions, accelerators and tools. The focus is to address global or multi-site as opposed to local level activity.

Global corporate level strategy is defined and used to prepare and set up a global template project. This project prepares, configures, confirms, and tests a global template, which it rolls out for use in each local implementation. The global template project supports the local implementations. There is also continuity between the Global ASAP methodology and the ASAP methodology and the ASAP methodology used for each local implementation.

1.4.3 Conclusion

This chapter has focused on new trends in ERP, SAP or project management and an introduction to SAP components. Which approaches have been involved in the new products of today's enterprise software technologies? Some of the important points made are as following:

- Today's trend in software management is performance and speed
- SAP Projects will have to benefit from new technology opportunities
- One of the new trends is to provide low cost of ownership.
- The next challenge – Optimizing the human factor
- Empowerment: Self-service, self-education, self-management, self-motivation
- Team SAP: Assuring customer success throughout the entire life cycle
- Global implementations bring additional challenges for project management. Global ASAP to support global implementations

C2 Introduction of SAP Project Management

Why do information technology projects fail? Depending on how you define project failure [Boltman, 2002], it tends to run at the level of 30 per cent outright failure and this has not changed much in decades, despite the advent of many new software technologies and techniques. It is argued that given this pattern, the expected benefits need to be between nine and ten times greater than the cost of the project for the return on investment (ROI) to be positive.

What are the characteristics of an SAP project that differentiate it from other software implementations? What methodologies are used?

To understand what makes an SAP implementation project a success, and to answer these questions we will focus on some key concepts of project management, such as planning, organizing, monitoring and controlling a project.

2.1 Basic definitions: Project, Project Management, Project Manager

As a general approach, a project is a group of related work activities, organized under the direction of a project manager, which when carried out, will achieve certain objectives. (Ernst&Young, 1999)

A **project** has a project charter, defining project scope, deliverables, tasks, duration and budget. Existing work is examined as a project and completed with a project deliverables. The basic driver for a project-based work has been our transformation to a knowledge society. As part of this knowledge society we have to understand the project concept and terminologies. Furthermore, we have to acknowledge a project methodology and standards.

Regarding project and project management approaches there are certainly various definitions within literature. But we would prefer to cover the above in terms of projects components:

There are obviously several definitions for a project. A project is defined as following by its components in general:

- It has a beginning and an end
- It is defined by specific goals and objectives
- It is usually conducted by a well-defined organization
- It has a single project manager who is responsible for its success, failures and risks
- It can be expressed by identifying the starting point and the goal and the route between them

Project Management covers the following functions:

- Planning-deciding what is to be done
- Organizing-making arrangements
- Staffing-selecting the right people
- Directing-giving instructions
- Monitoring-checking on progress
- Controlling-taking action
- Innovating-coming up with new solutions
- Representing-liaising with users

Program and Program Management

In certain literature (especially US), project is referred to as a program and project management as program management.

As defined in [Ernst&Young, 1999], "a business program or program is a group of related projects that address a common business objective or initiative. All the individual projects that are contained within a program must be successfully completed for the business program to meet its objectives. Business programs provide a means of organizing and managing large or long-term project efforts." It may consist of both IS projects and non-IS projects, such as a business process redesign project, sales, procurement, marketing or a manufacturing project. All the constituent projects must be successfully completed for the program to meet its objectives.

The methodology of the program management is an extension of the methodology of the project management. The program management is usually covered by the project management timetable. It is designed to support the management of efforts that exceed the standard project guidelines.

The program management method has usually been implemented as a single phase but in fact it includes three basic stages:

- 1- Program start up and preparation,
- 2- Program monitoring and control, and
- 3- Program review and assessment.

Generally, the program start-up and preparation stage involves all start up activities, which we will review in the next sections of the book. Secondly, program monitoring and control stage involves problem management and solution design. In the last stage the goal is to improve all the critical processes and tasks within the program.

The Role of the Project Manager

The role of the project manager is one of the most critical roles in the project.

As defined in [Ernst & Young Navigator Series, Release 3.1.1996] the project manager leads the project as both a friendly leader and also a process manager, who handles the all work flow diagrams. As a leader the project manager is responsible for managing and communicating a clear vision of the project and motivating the project team to achieve them.

A project manager shouldn't require a strong technical background but only needs the authority to assign and approve project activities that will be carried out by the technical staff. The project manager might facilitate inevitable changes and processes with well-defined scope management procedures, and also provide continuous leadership for the development team and motivate a productive project environment.

As a result, the project manager needs to be a very good communicator, an experienced negotiator and also a perfect leader.

Key Principles of Project Management

Many consulting companies work on methodologies on how to implement and how to support an SAP system. That is why there are numerous project management and SAP implementation methodologies. Usually, consulting companies such as Accenture, Ernst & Young, PWC design and improved them after years and years of using and validating the tools and techniques.

Project Sponsor

In fact first let us start defining what the executive sponsor's responsibilities and then let us be back to project sponsor;

Executive Sponsor's Responsibilities:

- Funds the project and selects project sponsor
- Resolves change requests and issues, as needed
- Validates and ensures project benefits are attained
- Approves all deliverables, starting with initial project charter
- High involvement during the structure and plan processes

Project Sponsor's Responsibilities:

- Representative of the executive sponsor
- Business decision-maker of the project
- Coordinates all requests for time with the business community
- Requires considerable/day-to-day involvement

Project Stakeholders

Stakeholders of a project are the people who have a stake or interest in the project. Stakeholders might be internal to the project team, external to the project team but in the same organization, or totally external to the organization. Stakeholders should be carefully selected.

Stakeholders can have the following roles:

- Internal to the project team. This means that will be under the direct managerial control of the project leader
- External to the project team but within the same organization. For example, the project leader might need the assistance of the information management group
- External both the project team and organization. External stakeholders may be customers who will benefit from the system that the project implements or contractors who will carry out work for the project.

A project needs to decide what kind of stakeholders it will need. Choosing them might cause a budgetary challenge as well. Also, different types of stakeholders may have different goals and objectives and one of the jobs of the successful project manager is to recognize these different approaches.

Project Management Life Cycle

The project management process is usually expressed based on a route map via three project management stages.

As mentioned before, the project management stages basically describe the detailed work flow by the project manager. They are designed for integration with the project-specific development work. In each phase of a methodology route map, the project management stages are integrated with phase-specific development stages so that each phase represents a complete project.

Therefore, the set of project management stages is called "The project management life cycle".

In the first stage, which is the start up and preparation, it is important to set up a steering committee, the project management team and the most appropriate stakeholders. These are the people who will provide sponsorship, partnership and so that key decisions can be made easier throughout the life of the project. It is important that this structure is set up in addition to the core team structure and that these people are well aware of their roles and objectives.

Additionally, it is also important that the project manager ensures that all of the core team is trained at the appropriate times during the project. This activity is coordinated through the project life cycle and the development process. These training activities and needs continue during the project.

Project Management Deliverables

The benefits of the defining and focusing on project deliverables include:

- Expectations can be managed based on a clear definition of what the project will produce
- Deliverables are usually tangibles that can be tracked, reviewed, improved, and accepted
- Team members have clear goals, stated in terms of the work outputs that must be produced
- Estimates, actual, reports, costs, performance, risks, and quality are anymore easier to define, measure, and manage

Basically, project management deliverables are the results of the project management processes. As an example, the structure of the project processes is created by the initial project charter.

Some of the deliverables are as follows:

Information System (IS) Master Project Plan

These new projects, tasks or activities are incorporated into the IS master project plan, which contains the entire current project template for an IS organization. From a business perspective, it is facilitating the controlled shifting of IS investment priorities based on the business climate at the time, when each project is completed. The project plan is very flexible and it needs to be updated whenever necessary.

Project Charter

The project charter is defined as a discrete unit of work that can be independently staffed and managed. The charter particularly specifies the scope of the project and its completion criteria. It provides a contract of what the project is committed to deliver, to control, to train, time constraint, resources, cost control and standards within it must be completed. The project charter is used as the proposal for preparing detailed plans to be used throughout the project life cycle. It also serves as a statement of the commitment of an organization to a particular project.

Project Plan

The purpose of project plan is basically to define the particular tasks for managing the project. It contains a detailed list of deliverables, a detailed work plan, task-level effort and duration estimates, and the project budget. In the project plan is estimated costs, activities, problems and time requirements for the project in order to determine its viability.

Project Status

When project work plan is active, actual work force must be recorded against the work plan in order to monitor and control progress. So it will be reported the comparative table. This allows adjustment of the work plan if the actual performance intend to decrease. If they have close scores, then it can be said that it is in the defined limit in the project charter.

This deliverable helps the project manager to adjust some variables.

Project Assessment

In the beginning, when the project deliverables have been produced and accepted, a project assessment is performed. This deliverable documents the evaluations, recommendations and opportunities for future process improvement.

Project Management Infrastructure

In order to manage a project successfully, standards and procedures need to be defined. The technological environment must also establish for effective and efficient running of the project. The purpose of the project management infrastructure is divided into two category . Firstly, the standards and procedures for issues management, scope management, quality management, risk management, knowledge coordination, status reporting should be defined. Secondly, a technology plan should be developed, and the necessary hardware, software, and office equipment should be obtained.

2.2 SAP Implementation Methodologies and Strategies

Project management seeks to reach a previously defined result within the context of a given schedule, specific costs, and in the required quality.

Within this definition, SAP Project Management provides an implementation methodology that adapts SAP functionality into the organization and its businesses. Various implementation methodologies and models have been developed over the years by SAP, the "Big 4" and other SAP business partners, customers and consultants. Many projects take an existing methodology one step further and adopt it to their organization, introduce improvements and new tools to make the implementation task more efficient. The benefit of using a methodology is the risk reduction that comes from using a proven approach. Another benefit is the creation of a common framework for all teams to work with. This includes standard terms and the coordination of time lines.

It also provides a rough guide as the overall work effort that will be needed. This breakdown of tasks is very important for a smooth implementation. Most methodologies includes templates that show examples of normal project deliverables., which provide project teams with guidance for their detailed work.

Finally a methodology contains the collective wisdom of those who produced it, and may even contain this wisdom in the form if helpful tips.

According to [Norris, 1998] the top 10 risks to an SAP R/3 project are:

1. Inadequate sponsorship
2. Poor/slow decision making
3. Poor/no scope definition
4. Inadequate attention to change management
5. Lack of cooperation between business areas/departments
6. Poor use of consultants
7. Inappropriate resources
8. Unrealistic expectations
9. Inadequate knowledge transfer to your people
10. Poor project management

There are certain important things to remember when using a methodology.

1. A methodology is a generic approach. It will not prescriptively solve all of a company's problems because, while it is generally true, it is never specifically accurate. Each company has some

unique aspects, and every R/3 implementation will be affected by the particulars of the organization.

2. Because every organization is different in both its makeup and its reasons for implementing R/3, a methodology cannot be relied on to such a degree that flexibility is lost.
3. On the other hand, a methodology will not describe every necessary task; on the other hand following every detail of the methodology may result in unnecessary work.

In short a methodology must be put into context of the business and its needs. It should be used with an understanding of the needs by adopting those aspects that support the goals and by discarding those that do not.

Similarities in All R/3 Methodologies

All methodologies for implementing SAP software have a few common elements. First and most important, they are all structured. They consist of phases, which are broken down into tasks, further broken down into activities and finally into work steps. Almost all methodologies have four phases that can generally be thought of as follows, although with different names:

- 1- Initiate: This phase includes planning and costing the effort, determining the internal staff and outside help necessary, defining the scope of the implementation, and doing the initial business case justification for the undertaking.
- 2- Think: This is the phase in which the current or "as-is" state of both systems and processes is analyzed and what is wanted from the "to-be" state determined.
- 3- Work: In this phase, the R/3 program is actually configured to the specifics of a company's business, then tested and deployed.
- 4- Watch: The watch phase entails measuring the results achieved against the expectations, and supporting, maintaining, and upgrading the system as necessary.

Accelerated SAP (ASAP) is SAP's current standard implementation methodology. It contains a roadmap, a step-by-step guide that incorporates experience from many years of implementing SAP. Quality checks are incorporated at end of each phase to ensure quality of deliverables and monitor critical success factors.

Another important aspect of an SAP implementation is the implementation strategy the business decides to pursue. A strategy defining the functional scope and regional coverage of the implementation is chosen by analyzing the cost, resource requirements, risks and expected returns of the implementation. At a high level, we can define three implementation strategies: Step-by-step functional implementation, Big Bang, and site rollout. Each one has its pros and cons, and selecting a strategy requires an in depth analysis of the above mentioned criteria. The strategy should also define the business' approach and preference for technical development, i.e. adding customized code to core SAP, in form of user exits, custom transactions, and modifications. The quite opposite implementation strategy of using SAP as delivered is often referred to as "Vanilla SAP". This is a big challenge for the business to adapt the processes to the software, but results generally in minimum cost and risk for the implementation, and minimum maintenance after go-live.

Let us compare the three major implementation strategies, by its advantages and disadvantages.

Step-by-step implementation

A step-by-step implementation is characterized by the implementation of the software in small steps, and generally concentrates on the implementation of a few related modules at one time. Before adopting this approach, an overall concept must be established for all relevant business processes in order to avoid conflicts and constraints in subsequent implementations. For example, due to the complexity of its financial legacy system over several regions, a company might choose to implement certain logistics modules first (e.g. Materials Management, Sales and Distribution, Logistics Execution) and build interfaces between R/3 and the legacy systems.

Advantages

- The complexity for coordinating, controlling, and organizing the project and resources is reduced
- A minimal amount of human resource is required for the project team and user community
- The quality of the projects improves because the project members increase their knowledge and skills
- A team of internal consultants can be established over time, reducing the cost of the project
- There is a smoother changeover throughout the company: people have time to adapt to changes
- Costs are spread over a longer period of time
- Modest organizational changes can be considered during the implementation

Disadvantages

- There is a longer project throughput time
- Interfaces must be developed to maintain existing systems
- Integration advantages of the project can only be used step by step
- Customizing may not be optimally set because integrating components have not yet been implemented
- Return on investment is generally delayed

Big Bang implementation

A big bang deployment of R/3 replaces all or most critical existing systems in a single operation with the new software. Fastest by definition, the big bang had emerged as the most cost-effective and also the riskiest solution. A majority of the SAP community would vote against simultaneous launch of all R/3 modules in conjunction with a new IT infrastructure. This approach is preferred by companies with a straightforward organizational structure or with too many systems to replace where the cost of developing interfaces would be too high.

Advantages

- Few or even no interfaces between legacy systems and the new application are needed because all modules go live at the same time
- There is a short throughput time
- The project members' motivation is high
- It is highly efficient, because redundant customizing is avoided
- There is optimal integration of all components under consideration of the integrated business processes

Disadvantages

- The implementation is complex due to the increased need for coordination and integration
- It is resource intensive over a short period of time
- All employees are subject to higher stress levels at the same time
- A high degree of consulting support is required
- Organizational changes must be limited in order to overcome resistance to change among employees

Roll-out

Roll-out refers to region or business specific extensions of an implementation after a model is created at one site or business unit, which is then used to implement to the other sites or business units. For example, a company operating in USA and Europe might choose to create a model for most of its functionality in USA and with a subsequent phase implement the tested approach in Europe. Similarly, a company operating multiple business units might choose to start the implementation with the one of the business units and leverage its experience. The roll-out approach can be combined with the other implementation strategies above limiting or enlarging its functional scope.

Advantages

- There is valuable experience gained by project members
- Expertise is available for a fast implementation
- Costs are kept low because only limited resources are needed
- Standard business processes can be achieved by using a model implementation and leveraging the same design

Disadvantages

- Customization must also consider company standards for subsequent implementations
- Site-specific requirements can be overlooked

Which implementation strategy to select will be affected by the time and resource (people and money) constraints. The size and scope of the effort will also affect the decision of which implementation strategy to take. Finally, there are a number of major events that may have an impact on the selection of the proper strategy. Among these are the following:

- Mergers and divestitures
- New legal requirements such as the recent Euro migration
- Increasing software failures in the current system
- A current re-engineering effort within the company
- Austerity and cost cutting programs within the company

Overlaying these issues that affect the decision are another set of issues that affect the implementation, whichever implementation strategy is selected. To some degree, these issues will steer the selection toward one approach over another, but they will have an impact no matter which implementation strategy is selected. Among them are the following:

- **Geography:** Is the company domestic, regional, or global, and should the implementation be domestic only, regional or country-by-country?

- **Customer needs:** Are certain customers, or certain sets of customers, demanding information and information transfer that your current systems are not capable of performing?
- **User needs:** Which user in your company is driving the decision to obtain, install, and deploy R/3? Is it the financial community, or the IT community? Is it the sale and marketing community who are reflecting customer needs?
- **Time and urgency:** If your current software systems are experiencing increased and increasingly costly failures, you need to get R/3 up and running somewhat quickly. The year 2000 problem challenged many companies at the end of 1999 to expedite their implementation in order to avoid to upgrade any legacy systems that might not have supported year 2000.
- **Legacy system impact:** Different implementation strategy options have a different impact on the current system. A limited rollout for a division will probably mean that the legacy systems used by other divisions will not be decommissioned and that maintenance costs will be ongoing.

2.3 Accelerated SAP and The Solution Manager

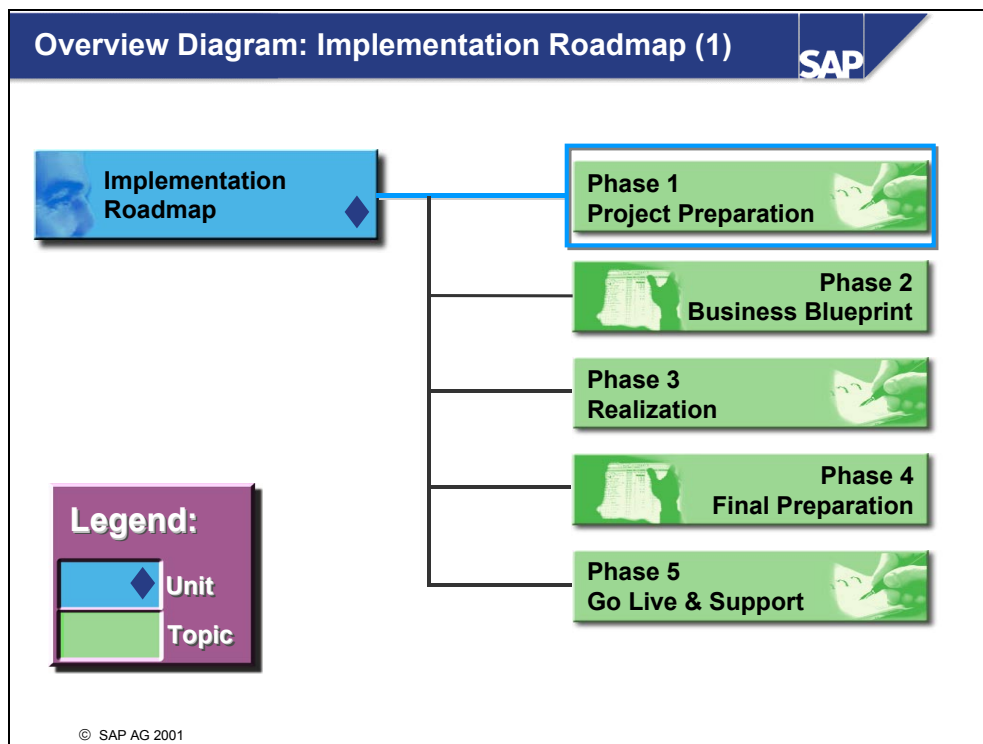


Figure 2.1 Accelerated SAP – Implementation Solution

SAP recognized that their customers would benefit from a standard roadmap to SAP deployment and developed their Accelerated SAP (ASAP) methodology in response. ASAP was originally intended for smaller implementations. But the approach proved successful in larger SAP rollouts as well, and continues to be used quite successfully even today.

ASAP consists of five high-level phases or milestones:

- Project Preparation
- Business Blueprint
- Realization
- Final Preparation

- Go-Live and Support

ASAP evolved into Global SAP and ultimately into Value SAP, adding methodologies, adding methodologies for evaluation and continuous business improvement to its core implementation methodology. The roadmap changed a bit as well, shrinking to four implementation phases instead of five. With the introduction of the mySAP solution growing throughout 2001 and 2002, however SAP sought to release both an improved delivery vehicle and a more comprehensive methodology that better reflected the challenges inherent to mySAP implementations.

As a result, SAP's Solution Manager was introduced with Web Application Server 6.10. The Solution Manager does not only offer multiple roadmaps to implementation but also improved content (sample documents, new templates, a repository for canned business processes, and more) and a better project management tools.

The Solution Manager may also be used to support ongoing operations as well as implementation and continuous improvement activities. Robust project monitoring and reporting capabilities exist as well. Plus, it provides for a variety of ways to help to manage the project team's educational goals, including *Learning Maps*, which are role-specific Internet-enabled training tools featuring online tutoring and virtual classrooms. And with training and related support of the ASAP and Value SAP methodologies Solution Manager will be the only standard SAP implementation methodology remaining.

2.3.1 ASAP (Accelerated SAP) Roadmap

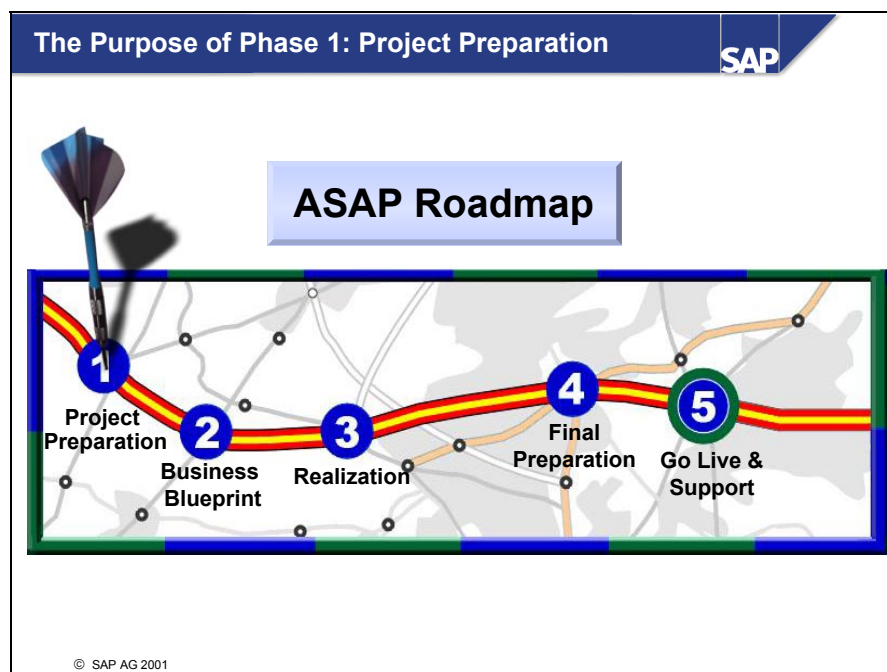


Figure 2.2. Defining the points on the ASAP Upgrade Roadmap

According to standard ASAP Methodology, the below is included the Roadmap and brief content like in literature;

Phase 1 – Project Preparation

- Change Charter – Goals and objectives of organizational change management
- Project Plan – This is a first cut focusing on milestones and work packages; details to come
- Scope – Sets the initial definition of the project; input from sales cycle
- Project team organization – Sets the who of the project: Standard Procedure – sets the why and how of the project

Phase 2 – Business Blueprint – Requirements reviewed for each SAP Reference structure item and defined using ASAP templates.

Phase 3 – Realization – Master Lists – Define business scenarios and R/3 transactions to be realized in the system. BPP – Business Process procedures representing R/3 transactions; used for unit testing & documentation. Planning – Defines how the configuration will be done and how it will be tested. Development Programs – Provides details of the external programming requirements. Training Material – End user training material and process documentation

Phase 4 – Final Preparation - Stress & Volume tests – Plans for confirming the production hardware's capabilities. Cutover Plan – The details of how to move to the production environment and go live. Conduct End User Training – Delivery of the necessary levels of R/3 End User training prior to going live

Phase 5 – Go live & Support – Ensuring system performance through SAP monitoring and feedback

The project manager of an ASAP implementation must facilitate communication between team members while directing and controlling the project. In addition, the project manager should foster an environment that promotes team functioning as a cohesive unit.

According to ASAP method, within project critical success factors are like these;

Critical Success Factors:

- Clearly defined and stable project scope
- Only reference-based reengineering
- Implementation using standard R/3 functions
- Adaptable organization
- Defined business direction
- Best People = Best Results
- Whole company committed to using the ASAP methodology and the R/3 Business Process
 - Committed management (steering committee) and fast decision-making
 - Committed, empowered project team, competent, well-trained users and decision-makers

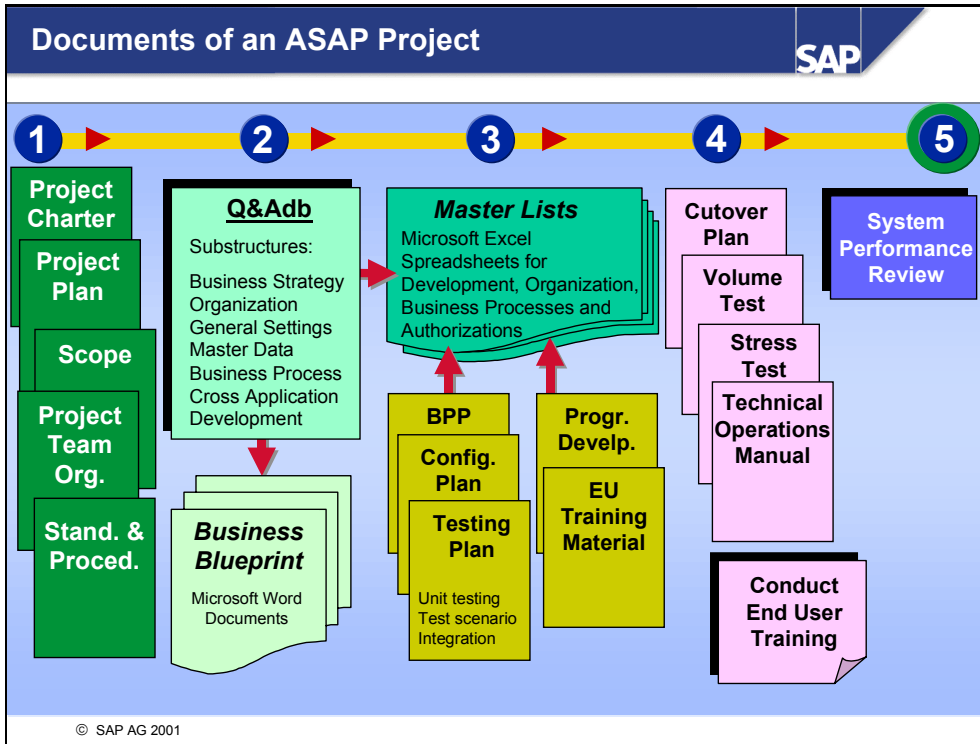


Figure 2.3 Documents of an ASAP Project

2.3.2 Current Changes

Recently, ASAP is replacing with Value SAP. Value SAP is the newest implementation tool of SAP. Any more technology companies are suggesting it to help into the implementation as it has a new content, method and more effective routing. What is the challenge by Value SAP? What does it add extra value into the project?

The following sub sections has been originally included from www.sap.com

New Content

Value SAP Edition 2 includes new Roadmaps plus all the existing Roadmaps, some of which have been enhanced. New Roadmaps for Value SAP Edition 2 are Business Information Warehouse (BW), Knowledge Warehouse, Strategic Enterprise Management (SEM), Small and Medium Businesses (SMB) & Hosting. The number of project roles for Value SAP Edition 2 has been significantly reduced to eliminate unnecessary repetition.

Changes in the Implementation Phase

R/3: The R/3 Implementation Roadmap has been updated in line with current Organizational Change Management (OCM) methodology. In addition, you can now transfer documents you have created or changes you have made to documents in the Customer Solution Strategy Roadmap directly to the Implementation Roadmap. This reduces workload and improves consistency between the two Roadmaps.

CRM: The CRM Roadmap for Value SAP Edition 2 is based on the latest CRM Software (Release 2.0C). All content has been updated for Edition 2 and the solution, 'Pervasive Service', has been added. Some roles have been replaced and the rest have been updated.

Business-to-Business Procurement: The Business-to-Business Procurement Roadmap has been enhanced to offer more BBP detail for your implementation project and contains new topic files and accelerators.

Workplace: The Workplace Roadmap has been updated in line with the functionality provided in Release 2.10 of the mySAP.com Workplace.

BW: The Business Information Warehouse Roadmap includes more detailed BW content, and additional accelerators to support implementation of BW in your enterprise.

Knowledge Warehouse: The KW Roadmap for Value SAP Edition 2 is based on KW Software Release 5.0 with three areas: Training Management, Performance Assessment Workbench and Web Content Management.

SEM: This Roadmap provides an activity-based approach to implementing Release 3.0 of the mySAP.com component, Strategic Enterprise Management. The SEM Roadmap contains accelerators and Internet links to current information on SEM in SAP Net.

Global Template: The Quality Management work package now includes newly developed program review topics and accelerators. Key accelerators include self-assessment checklists and templates that can be used to present findings for each phase.

The program review is used with Global ASAP, whereas the project review is used with ASAP. Deliverables taken from the strategy defined during CSS are addressed in Global Program Set-up, the first phase of the Global Template Roadmap. There is new Organizational Change Management topics and accelerators and also more focus on the Global Solution Package in this release.

SMB & Hosting: The SMB & Hosting Roadmap is used in smaller enterprises that require a rapid, turnkey implementation solution, and that want to adopt SAP Best Practices. A reconfigured, industry-specific system is tailored to an enterprise's specific business requirements.

The Project Preparation phase for the SMB & Hosting Roadmap differs from the Implementation Roadmap in that it includes presales activities that allow the customer to identify early on, which reconfigured solution is most suited to them.

Most of the project work in the Business Blueprint phase consists of defining the differences (the delta) between the customer's requirements and the processes delivered in their reconfigured solution. The Project Preparation phase includes additional steps for preparing and installing a hosted SAP Best Practices system.

This system can be used as early as the Business Blueprint phase as a demonstration and development system for determining the delta. In later Roadmap phases, data can be transferred from the demo system to the productive system.

Upgrade: The Upgrade Roadmap now includes information on the procedure for a Customer-Based Upgrade (CBU), and information on the Reverse Business Engineer (RBE), which is used to analyze productive SAP systems.

New work packages, activities, tasks and accelerators are provided to evaluate the need for an upgrade, to determine the release required and to upgrade and test the upgrade system. In addition, the Upgrade Roadmap now includes specific information to support IS-Oil upgrades.

C3 An Efficient Tool for SAP Project Management : Internet Services

3.1 Web and Internet based software for integral culture

How can the internet assist your endeavors, and how can it help your clients and employees in search of help? Here are some of the web opportunities:

- Enhance and expand the hands-on, interpersonal process of therapy and counseling
- Lead users to the questions, as well as the answers
- Reach more people
- Provide tools, examples, stories, encouragement for living in process
- Share the knowledge- and the wisdom-of your professional and academic community
- Participate in the dramatic new methods of online learning, community, and research

Nowadays, internet work is not available to major segments of the population. Cost complexity and relevance create a glass floor for pervasive computing. But, because of the following dynamics, this is about to change:

- Dramatic drop in cost
- Revolution in the man/machine interface
- Wireless, broadband, and bandwidth
- Bursting of the complexity bubble
- Dawn of micro-payments
- Information modeling, navigation, search, and context

What social trends accelerate this process?

- The disenfranchised wanting a piece of the action,
- Distance learning, online community, and dispersed organizations,
- Continued evolution and emergence of personal and global consciousness,
- Contelienge, the promise of the "Global Brain" and the role of internetworking
- Emergence of the second and third world (and dissolution of language barriers via intelligent technology)
- Aging boomers with time and money, and a strong desire to give something back

3.2. The Web as Project Infrastructure

Virtual project management (VPM) is the information age equivalent of management by walking around. Most recently, the rise to dominance within organizations of internet-based collaboration tools offers new possibilities for web based project management.

"A virtual project is a collaborative effort towards a specific goal or accomplishment which is based on "collective yet remote performance". Another source sets "working together, apart" as the goal of enterprise networking. These modes of work share a need for management tools that enable communication and coordination at a distance.

In addition, many projects require the concerted effort of several individuals sharing a common set of tools. For example, an engineering team might use a computer-aided design (CAD) program to develop and compare design alternatives without holding a physical meeting. Look at the kind of project management activities associated with this process:

- **A task** must be defined to develop alternative designs based on project requirements
- **Resources** people, time, expenses if any must be allocated to the task

- The team members involved must **communicate** before and during the task, both with each other and with the PM
- The PM needs to **track** the task, and based on performance relative to allocated resources, administer course corrections

Collaboration or groupware tools like Lotus Notes and design collaboration tools like Team Fusion do a good job within their respective domains. When a project manager needs to lay out tasks, assign resources and track performance, however, she must look elsewhere specifically to project management software. Project management software adds value by facilitating the administrative chores associated with teamwork, from schedule production and cost estimation to critical path analysis.

This kind of tools is, of course, indispensable within a narrow administrative domain. Some products, like Suretrak project manager from Primavera systems Inc. and Microsoft Project, can publish current project data to a web server, making status information and associated files available too all comers through a standard issue browser.

Web publishing is much more efficient from both a cost and client configuration standpoint than the per-seat licensing model of older project management products, which required every user who might conceivably need access to install a full copy of the client software.

Two products that support virtual project teams are Mesa/Vista Project Manager by Mesa Systems Guild, Inc.; a high-end offering that provides comprehensive process management through a rich mix of Java, JavaScript and XML technologies and Web Project by Web Project, Inc. which offers a more traditional PM feature set enhanced by an all-Java implementation

Web-based project infrastructures

Virtual projects – “working together, apart” require communication, collaboration and project management. The present generation of software aims to support work within each of these domains by leveraging client/server technologies such as shared data access, standards-based messaging and browser economies. But not until now, with the impending rise of web application technologies such as Java, ActiveX, and XML, have project teams had access to integrated environments that bridge project domains. (<http://www.intranetjournal.com/features/idm0398-pm1.shtml>)

3.3 Using Internet in project management

Nowadays Internet is one of best tools in running international collaborative projects. The requirements of the projects mean that workers collaborate between remote locations. Communication between them is essential and the internet is the primary communication tool.

The time to start considering the role of the internet is long before the project is started, when the proposal and the technical annex are being written. If it is to be exploited then resources must be allocated to managing the network use.

E-mail has well known advantages as a means of communication and some disadvantages. In conventional use, most e-mail messages are person to person, but in a small collaborative projects, broadcasting e-mail can enhance communication by keeping all participants in touch with developments. There is of course a danger that traffic can become overwhelming, that detailed messages that are of interest to only two or three people waste the time of the others. An alternative or supplementary means of communication is the newsgroup. Groups might be set up for discussion of different topics.

Ideally one individual at the central site should be in charge of managing the data held there. Each project will evolve its own directory structures. There are likely to be separate directories for software (completed and under development), draft documents, finalized internal reports, deliverables, other publications. The data manager and other project members should have different levels of access to the files. Only the manager should have write access to all the files, other members should have only read access to most files.

The data manager need not necessarily be the lead partner. This was not the case in the project and it did not seem to cause any problems. The amount of work required of the data manager should not be under-estimated.

Most of the data will be confidential to the project. Access must be password-controlled. Of course the password should be changed frequently and shared by non-electronic means; a review meeting is the ideal opportunity.

Related to security is the question of data protection. The requirements vary between countries and there are complex questions as to whether the legal requirements of one country can be applied to data held in another.

A universal problem of sharing electronic documents is the lack of standardization of formats. Documents require formatting information and will often contain 'non-standard' material such as mathematics and graphics. The main message is to choose one format that is adequate to your project's needs and to stick to it. Partners should be prevented from trying to 'slip in' a document in another format, however good their reasons.

Many telematics projects involve the development of software. With different partners contributing different modules there is a need for code sharing. This might be achieved through the use of portable storage media, but they must be physically transported and will perpetrate multiplication; they will be occasions when it is effective impossible to know that the version of the software that one partner has is truly identical to that held by another.

One of the obligations of project is dissemination. The world wide web is one valuable way of contributing to this. A home page should be set up-and maintained. This can give general information about the project that would be of interest to a general readership. The homepage should include a list of publications, with those which are publicly available downloadable.

Setting up a home page is only part of the job; maintenance is also vital. The data manager must ensure that the information is kept up to date as the project progress. New publications must be added to the list as they are completed. (<http://www.stakes.fi/tidecong/833EDWAR.HTM>, 22.05.2002)

Value SAP Edition 2 is the latest technology tool for SAP implementation.

The document in **Appendix 1** contains information on new functions, features and content delivered with Value SAP Edition 2.

Appendix 2 is involved the checklist before implementation.

C4 How to implement SAP

4.1. Project Preparation



Signing the contract is the next step after the difficult decision of implementing a specific ERP software. Contracting includes product definition, project definition, deliverables and materials, purchased services, responsibilities, payment type, payment plan, laws, validity, and several other similar items depending on the project and scope.

After signing the license and service agreement, the implementation starts with the project preparations. The project and business goals are determined, expectations from the project are defined.

4.1.1. Project Goals and Objectives

Program Goal – A statement of the program’s target or direction of development

Program Objective – A statement of a particular desired outcome of the program. The program objectives are achieved through the various project initiatives in the program.

Critical Success Factor – An internal, business related item that is measurable and will have, on an ongoing basis, a major influence on whether or not an enterprise or process meets its objectives

Goal – An aspiration or aim of enterprise that states a direction in which it will focus its efforts in support of the enterprise mission

Objective – A measurable end or target state that the enterprise desires to achieve. Objectives are short-term targets with defined, measurable achievements and interim milestones

Opportunity/Problem – A set of factors that assists or hinders the ability of an organization to achieve its objectives and critical success factors

Lack of clear goals and objectives is a primary cause of program and project failure. The definition of clear goals and objectives is a critical step for initial planning and startup of programs or projects. Defining goals and objectives is much more than simple documenting these items; it is really a consensus-building process in which the program manager and sponsor, the project managers and executive sponsors develop a common understanding of why the program or project is taking place. Therefore, it is vital that all the sponsors be intimately involved in every step of the process.

Goals and objectives for the program or project are not the same as business goals and objectives, identified during strategy modeling. Although program and project goals they represent more specific targets for the program or project under consideration. Therefore they must be stated so that it is easy to verify their achievement at the end of the program or project. (E&Y Navigator series, 1996)

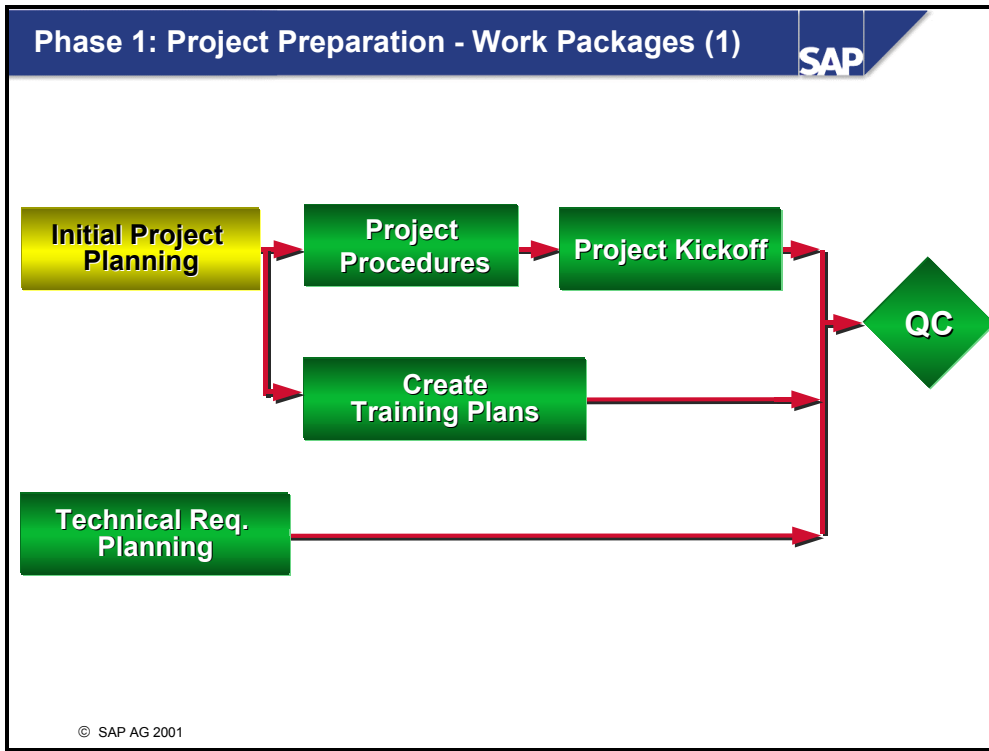
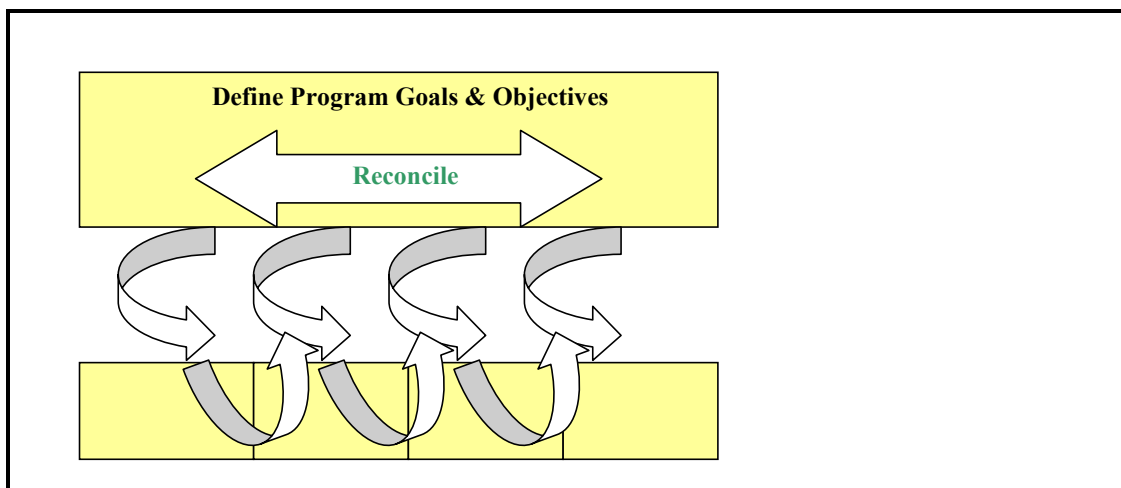


Figure 4.1. Project Preparation – work packages



4.2. Define Project Goals and Objectives

The steering committee must define the objectives for the program, and the line managers are responsible for the objectives of those projects that concern their departments. The involvement of the management in the definition of the project objectives is already a first step toward management ownership of project.

It pays to spend time in defining project objectives carefully, since the more clearly they are formulated the more precisely you can estimate savings and analyze results.

People tend to promise too much in a project. They forget that a project will be judged on whether the deadlines were met and the goals achieved. In short, success depends on the management of expectations.

When it comes to identifying objectives, the project manager can contribute in the following ways:

- By relating objectives to the company business plan
- By clarifying and communicating them to all the managers
- By highlighting the potential benefits and savings
- By spreading the objectives evenly across the four elements of business management: information technology, organization, processes, methods and procedures (Welti, 1999)

While determining project and business goals and objectives, a matrix showing SAP costs and benefits can be helpful. Many companies determine success criteria that they cannot measure and monitor. The below table can give an idea on how to determine some company and business objectives.

Furthermore project and business objectives have to be determined separately as these two concepts have different meanings.

You can benefit from such tables to set your own success criteria and expectations. Such analysis tables are very useful but you should set your expectations to have an idea.

Table 4.1 A SAP Cost/Benefit Analysis

FI/CO Modules

Reduce Receivables (0-75%, 20%):

Calculation

- Identify current working capital investment in receivables
- Determine average days outstanding
- Estimate reduction in days outstanding
- Determine associated reduction in working capital
- Benefit (annual) is the cost of capital for the reduction in working capital

SAP Enablers

- On-line and integrated system provides faster invoicing cycle time
- Better analysis tools for receivables analysis

Reduce Lost Discounts (0-90%, 40%):

Calculation

- Identify dollar volume of purchases with discounts
- Identify % discounts taken
- Estimate % increase in discounts taken
- Estimate average discount (usually 1 to 2 %) and associated payable age reduction
- Multiply % increase in discounts taken times dollar volume of purchases with discounts
- Multiply increased purchase volume subject to discount just calculated by the average discount
- Subtract off cost of capital for required increase in working capital (estimating increase in working capital in this case is somewhat complex. Find someone who knows how to estimate the increase in working capital)

SAP Enablers

- Integration with purchasing provides on-line verification and reduced entry
- Improved availability of information to pay invoice resulting in quicker payment

Reduce Credit Losses (0-50%, 5%)

Calculation

- Identify annual credit write-off
- Estimate percent reduction

SAP Enablers

- Credit Management integrated with sales and distribution functionality

Improve Cost Control - Reduce Costs (0-4%, 2%)

Calculation

- Identify budget accounts and amounts for the organization
- Review budget accounts and determine which accounts are controllable
- Calculate total dollars in controllable accounts
- Estimate percent reduction in controllable costs

SAP Enablers

- On-line, Real-time cost management information
- On-line analysis tools
- Earlier visibility of costs and commitments

SD Module

Improve Pricing (0-10%, 1%)

Calculation

- Identify total sales by product line in dollars
- Estimate % improvement in pricing
- Since improved pricing does not materially impact fixed or variable costs, benefit is sales multiplied by improvement percentage

SAP Enablers

- On-line real-time capabilities increase responsiveness and customer service
- Pricing procedures capability helps reduce "bad" deals
- On-line visibility of product cost and profitability analysis enables better decisions

Increase Sales (0-10%, 2%)

Calculation

- Identify sales volume by product line
- Estimate total sales capacity/production capacity (this should include allowances for preventative and unplanned downtime for maintenance reasons)
- Estimate sales value of lost available production
- Estimate margin of lost production
- Estimate portion of capacity that can be converted to sales

SAP Enablers

- On-line real-time capabilities increase responsiveness and customer service
- Improved customer forecasting

MM Module

Reduce Inventory (0-50%, 10%)

Calculation

- Identify inventory value by category (if LIFO valuation, value is actually higher than reported)
- Estimate inventory reduction goals by category
- One approach would be to treat reduction as a one-time benefit, but
- Another approach would be to recognize the annual benefit of reduction in carrying costs (I believe this better reflects reality)
- Multiply inventory reductions by incremental carrying costs (Carrying cost includes cost of capital, taxes, insurance, and damage allowances - should not include cost of assets, labor, or building unless major reductions in inventory are anticipated)

SAP Enablers

- Improved visibility of inventory
- Improved forecasting
- Improved data accuracy
- Reduced process cycle times

Reduce Landed Costs (0-10%, 4%)

Landed costs includes all costs associated with getting a product or service available for use. Landed cost will therefore include purchase, freight, receiving, quality, return, and vendor management costs.

Calculation

- Since purchasing cost is far and away the largest component of landed costs, identifying current annual purchasing dollars is a good conservative estimate of landed costs.
- Estimate percent reduction in landed costs with SAP. Factors to consider include
 - How much EDI is currently used
 - Is purchasing transaction oriented or vendor management oriented ?
 - How good of history does current systems provide?
 - How much vendor, requisition consolidation opportunity exists ?
 - Do current systems provide vendor evaluation tools?
- Determine savings by multiplying purchase volume by estimated % reduction

SAP Enablers

- On-line, integrated systems reduce transaction effort to enable more focus on vendor relationship management
- On-line history provides information to negotiate better agreements
- On-line availability of information helps drive consolidation of purchases with partnership vendors
- Vendor evaluation tools help manage vendor quality and shipment problems

Reduce Obsolescence and Damage (0-10%, 2%)

Calculation

- Identify current inventory obsolescence and damage costs
- Estimate improvement

SAP Enablers

- SAP provides on-line visibility of stock usage

PP Module

Increase Production/Sales (0-5%, 1%)

Calculation

- Determine total sales
- Determine margin on sales

- Determine capacity utilization
- Estimate increase in capacity utilization
- Benefit is the margin on additional production

SAP Enablers

- Integration with MM provides earlier visibility of material/asset availability issues
- Production planning helps identify unused capacity
- Better forecasting and planning tools helps identify correct product mix to produce
- Better planning tools help manage product conversion (tear down, setup, off-spec) costs

Reduce WIP Inventory (0-50%, 10%)

Calculation

- Identify value of WIP inventory
- Estimate percent reduction in WIP
- Multiply inventory reductions by incremental carrying costs (Carrying cost should include cost of capital, taxes, insurance, and damage allowances - should not include costs for assets, labor, or building unless major reductions in inventory are anticipated)

SAP Enablers

- Better forecasting and planning tools minimize need to maintain WIP as a buffer against unknown demand
- Improved visibility of inventory with on-line system
- Improved accuracy of inventory information

Improve Margins (0-5%, 2%)

Calculation

- Identify sales by product line
- Determine margin by product line
- Estimate improvement percentage
- Apply improvement to total sales volume

SAP Enablers

- Profitability analysis helps target product mixes for greater profitability
- Product costing helps target changes in production and pricing strategy

PM Module

Increase Asset Utilization - Reduce Production Asset Downtime (0-10%, 5%)

Calculation

- Identify daily sales volume
- Determine margin on daily sales
- Determine fixed cost per day
- Determine production downtime for planned and unplanned maintenance
- Estimate portion of downtime to be eliminated
- Benefit is margin and fixed costs previously lost during downtime

SAP Enablers

- Integration with other modules reduces cycle time for maintenance orders
- On-line system with analysis tools helps drive down unplanned maintenance
- Better problem tracking and preventative maintenance forecasting

Reduce Maintenance Requirements (0-10%, 4%)

Calculation

- Estimate total cost of plant maintenance - usually captured in a cost center
- Estimate reduction in maintenance due to improved preventative maintenance

SAP Enablers

- Preventative maintenance capability
- Maintenance history reporting and analysis

Other Benefit Areas

Existing Systems Infrastructure

Eliminate Mainframe and Other Equipment (100%)

- Identify hardware to be eliminated
- Estimate salvage value (or lease cost) of hardware

Eliminate Maintenance Contracts For Current Hardware and Software to be Eliminated (100%)

- Identify hardware and software to be eliminated
- Identify maintenance contracts on hardware/software to be eliminated

Reduce IT staff required to support current hardware and software (0-100%, 75%)

- Identify total FTE's supporting existing hardware and software
- Allocate FTE's to current hardware maintenance, software systems and overhead processes
- Determine FTE's allocated to maintenance of hardware and software to be eliminated

Year 2000 Cost Avoidance

- By now, this is probably no longer a viable savings area. However, the IT department has probably estimated the cost of year 2000 problem.

Other

Project Avoidance (100%)

- Identify planned projects to develop point solutions (i.e. Plant Maintenance package) that will no longer be required when SAP is installed
- Determine planned budget for all planned projects

Manpower Reductions (0-20%, 10%)

- Identify processes performed in all departments impacted by SAP implementation
- Identify characteristics of each process identified above (i.e. frequent rework, excessive downtime, missing information)
- Identify key ways that SAP will change each of the processes identified
- Estimate the percent change in manpower effort required for each process
- Determine net change in manpower by department and by position
- Determine where opportunities exist to reduce manpower
- Multiply reductions by manpower cost loaded with benefits only.

Establishing the Program Mission Statement

A program mission statement is a critical prerequisite to defining goals and objectives. The mission statement describes the purpose of the program. With the large number of people and activities involved in a major program, it is often too easy to lose sight of forest for the trees. A good mission statement is an effective way of communicating to all concerned the fundamental business purpose of the program.

A clear mission statement can help avoid this type of directional drift. It provides all program participants with a common reference point against which to evaluate their individual direction, actions and decisions.

Effective mission statements are notoriously difficult to develop. A good mission statement should possess the following qualities:

- It is clear, concise and unambiguous
- It identifies a single, definite, overall purpose
- It is easy to remember
- It may be used to discriminate between one priority and another
- Each term used in the mission statement has a supporting operational definition (E&Y Navigator Series, 1996)

4.1.2. Roles & Key Focus

There are ten primary roles in an SAP implementation; details of each are given in the implementation assistant.

Steering Committee - members include project sponsors, the SAP consulting manager (and/or the Team SAP Coach), and project managers. The committee is also the primary source for the company's long term goals and vision, sets priorities, approves scope, and resolves company-wide issues.

Project Sponsors – Directly communicates the company's long term goals and visions and are members of the steering committee

Project Management – Team SAP Project Manager and customer project manager

Consultant – Team SAP members, application, cross application, business process

Technical – Customer or consultants for system administration and technical, help desk provider

Training – Training & Documentation, Project manager/Leader, Training and documentation developer/instructor, training coordinator, training technology administrator

Change – These are dedicated individuals assigned to manage the organizational change management processes: Risk Assessment, communication, sponsorship and leadership, skills and development, knowledge transfer or business optimization

Security – Authorization, administration or internal auditor responsible for managing the system security and authorization environment and may be combined with other administrative roles.

Project Preparation - Roles & Key Focus						
Phase Content Role Groupings		Initial Proj Planning	Project Procedures	Training Plans	Project Kickoff	Tech. Req. Planning
Steering		***** <i>Proj. Charter and Implementation Strategy</i> *****	Change Mgmt Plan		Kickoff Meeting	
Sponsors						Sign-Off
Proj. Mgmt.		*****	Proj. Mgmt. Standards & Procedures		Kickoff Meeting	Quality Check/ Sign-Off
Consultant		Plan / Budget/ Resources	Comm./ Doc., Issue Mgmt		***** <i>Kickoff Meeting Proj. Team Standards</i> *****	
Customer						
Technical		Implementation Strategy	Deployment Strategy		Project Team Standards	ID Tech Requirements/ Procure HrdWr
Training				Project Team Training Plan		
Change		Organization / Plan	Change Mgmt. Plan	Project Team Org. Change Management Training	Kickoff Meeting	
Security			System Authoriz. Standards			

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Figure 4.3. Roles and Key Focus**4.1.3. Determine the Implementation Strategy**

The purpose of this activity is to review in detail the implementation strategy for the project. One must determine if any changes are needed in terms of project objectives or methodology. The overall implementation approach and methodology should now be finalized and confirmed. For some projects, it is necessary to also review the overall corporate SAP implementation strategy, especially if there are multiple, simultaneous SAP implementation projects in process throughout the company.

For local rollout projects as part of a global program, the objective of this activity is to understand and review the global SAP product implementation strategy.

The project strategy sets the guidelines for the project. It needs to be defined by the steering committee and followed by all project members. The project strategy should contain the following elements:

- Project locations
- Departments involved
- Implementation strategy
- Hardware and software to be used

Above all, the company must understand that it has to adopt the philosophy of the standard software. This means adapting the company organization, its processes, and procedures to the software standard.


In this point, you can follow two stages:


- 1- Review and Refine implementation strategy
- 2- Review and confirm implementation plan

Implementation proposals are different with specific focus on company business objectives, overall scope, and key implementation assumptions.

The sample scope document is used as a basis for outlining the scope of the project. This document may have already been created as a result of pre sales activities.

Review and Confirm Implementation Plan





- **With specific focus on:**
 - **Company Business Objectives**
 - **Key Implementation Assumptions**
 - **Overall Scope - Use accelerator “Sample Scope Document”**

**Project
Preparation**

Sample Scope Document

KEY			
Level 1			
	Level 2		
		Level 3	
			Level 4

Structure	In Scope	BP Owner / Consult
KPI		
mySAP.com		
Master Data		
Business Process		
Procurement		
Production		
Sales and Distribution		

Define Business Process Scope at:

- **Level 1 - SAP Reference Structure**
- **Level 2 - Enterprise Area**
- **Level 3 - Scenario**
- **Level 4 - Process Group**

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Figure 4.4. Review and confirm implementation plan

For the implementation of the SAP system, the steering committee can accept a project strategy as follows; (Welti,2002)

- 1- We intend to implement the SAP R/3 system for all our affability in Europe and USA.
- 2- We shall adopt a step by step and roll-out approach, introducing the different approaches
- 3- Deadlines established in the implementation schedules are to be met at all available and future costs
- 4- The project is to be implemented by our own staff.
- 5- Consultancy should be kept to a minimum, and project members should be trained up as appropriate. May be outsourcing can be used accordingly.

4.1.4. Develop a Project Budget

The project budget is the total sum of money allocated for the project, typically allocated into categories of expense and phased over time.

The budget serves as the cost baseline for the monitoring and controlling of the project activity. The budget can be distributed across milestones or across calendar periods. Additionally, budgets may be associated with deliverables to assess and validate each deliverable's value.

Developing a budget

If a high level budget has been developed, you often review it and update it as necessary. If considerable time has passed between development of the initial charter and project start-up, look for changes in sponsorship, business direction or organization.

Below we have added some financial words used commonly.

Cost – The amount of resources required to accomplish a task. Costs can be identified as anything that can be related to a monetary value. Examples include the cost of human resources required to complete a task, the cost of maintaining equipment required to generate a product, and the cost of transporting products to the customer.

Budget Cost Category – A category, which represents a collection of associated cost estimates for a project

Cost Estimate – A forecast of the approximate costs, that are associated with a project plan under a given set of assumptions.

Document the estimating the budget,

- Document any estimating assumptions

A good example estimate provides an unbiased approximation of project scope. The fact is, an estimate can be no better than the information on which it is based.

Determine project applicable budget cost categories

Six generic budget cost categories can be defined as follows:

- Labor
- Training
- Facilities-related
- Travel and living
- Solutions
- Project support costs

Determine which categories are applicable to your project scope.

Determine additional costs

- Determine any additional budget cost categories that are applicable for your project scope in addition to the six generic categories that are provided.

Determine the labor cost target

- Calculate a cost target for the labor estimate by multiplying the total hours required by an average labor rate. The total hours can be determined by producing either a product-based or task-based estimate of the project.

Determine the labor cost estimate

- Calculate the labor cost estimate from the total of direct and indirect costs, and fixed and variable costs that are associated with the selected staffing aggregate

Estimate the travel and living costs

- Estimate travel and living costs, and include the following:
 - Transportation

- Accommodations
- Meals

Determine training requirements

- Determine the training required by entire project team and by individual members within the team
- Training requirement may vary by existing skills and by the roles and responsibilities that a particular individual will have during the project

Estimate the training cost

Estimate the training costs for the project team, including the following;

- Cost of instructors and associated expenses
- Cost of both paper-based and computer-based training material, including computer hardware and software
- Cost of training facilities, meals and snacks
- Cost of participant's time
- Costs associated with locating the team at the training facility

Summarize the costs for the budget

- Summarize the total costs either by milestones or calendar periods
- Generate a project expense summary report that details each cost category defined in the project with its respective budgeted amount (E&Y Series,1996)

You can use different planning forms in the work breakdown structure:

- Cost planning by work breakdown structure
- Cost planning by cost element (detailed planning)
- Unit costing

You can also use the three planning forms alternatively or together depending on the amount of information available. For example, you might enter a unit costing or cost element plan for particular cost elements, while using structure-oriented cost planning to estimate the costs for the other elements


The planned costing is the planning form used in networks. The planned costs are arrived at by valuing the quantity structure.

4.1.5. Define the Program Organization

The purpose of this activity is to create the project organization structure and finalize roles and responsibilities. Both company employees and consultants will need assignment. An important aspect of this activity is the set up of a common working area for the project team. It is critical for team members to work in an open environment where they are in direct contact, so that they can discuss the various integration issues and resolve them quickly. This common work area is generally referred to as a project team. (ASAP91,2001)

Determine Project Organization





Project
Preparation

Tasks

-  Plan and Set up Environment
-  Define Project Organization and Create Teams
-  Assign People to Core Change Team Roles
-  Conduct Project Team Transition Meeting
-  Create the Extended Change Team



Accelerators:

- Project Room Requirements White Paper
- IT Infrastructure Document

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Figure 4.5. Determine Project Organization

Determine the project roles

- Review the project's route map profile phase and its list of roles to determine the key roles required for the project
- Modify each standard role description to include specific project skills and responsibilities.

Determine the staffing requirements

- Estimate and document the number of resources required
 - Staffing requirements are constrained by:
 - Budget
 - Resource availability
 - Scheduled completion of the project or program
 - Methodology principles on size of individual projects

The ideal size for a team is two to six people in addition to the manager. This keeps the span of control small and minimizes communication difficulties.

Develop the team organization chart

Create a graphic that illustrates the team organization. Use individual names wherever possible.

In some cases, it may be more effective to represent roles on the organization chart and cross-reference these to a table of roles and the resources assigned to them. Keep the chart simple and uncluttered. It is meant to serve as an unambiguous communication vehicle.

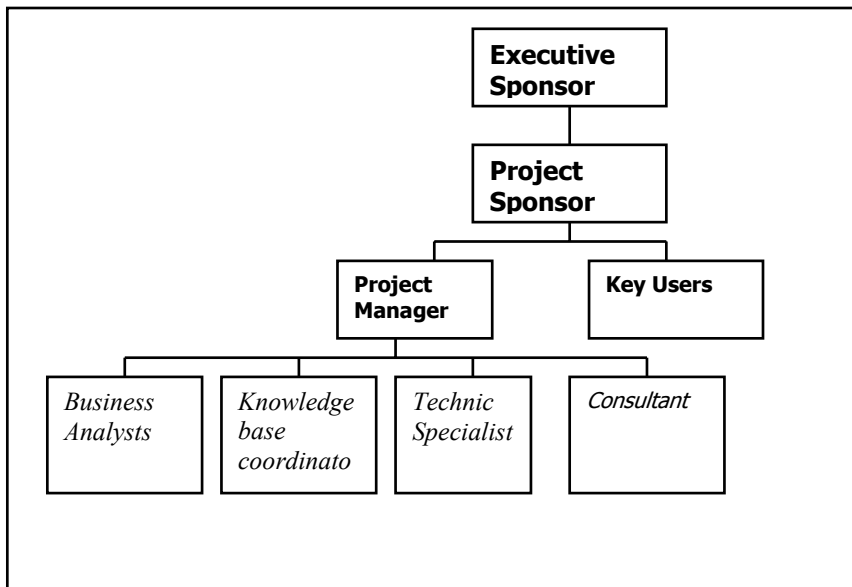


Figure 4.6. Project Team Organization Chart

Effective project organization

A flat hierarchical project organization is preferred, with short decision and communication lines, which proved highly efficient and effective. Tasks and responsibilities are allocated among the project members and a sense of ownership is encouraged.

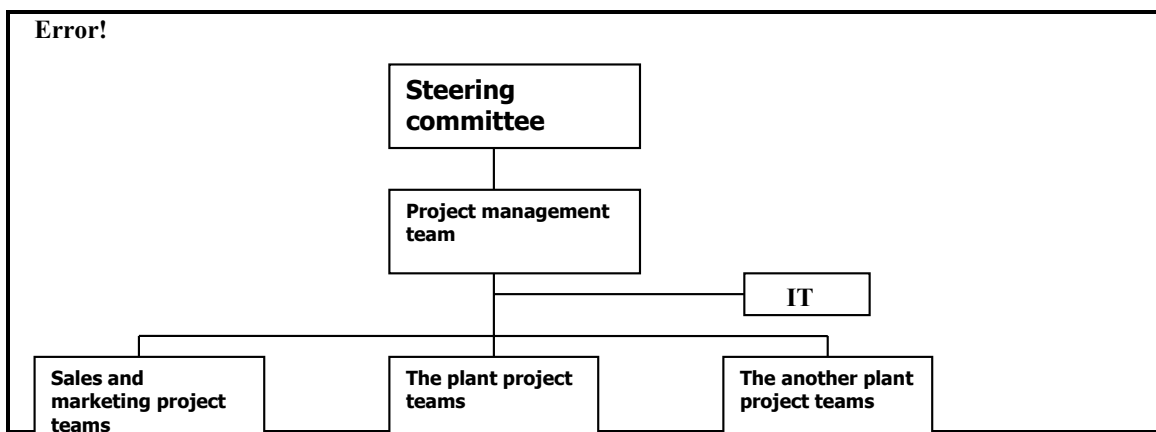


Figure 4.7. Efficient Project Organization

- **Hierarchical levels** - The project levels are reduced from five to three. Level 1 is the steering committee, level 2 the project management team, and level 3 the various project teams.
- **Simplification of the structures** – After reducing the levels, the next stage is to integrate the consultants and secretaries into the project teams, and to organize the projects at each site
- **Steering committee** – The top management became the steering committee. The project manager acts as project secretary on the steering committee, thus ensuring the link to the project

team. The steering committee members are also line managers of the project team members, thus strengthening the authority of the project organization.

- **Project management team** – In the new project structure it merges the project team and the project management into the project management team. The project management team consists of the project manager, the project secretary, and several project coordinators. The project manager have all responsibility for the project, sometimes he is also IT manager. The project coordinators are responsible to the project management team for their activities.
- **Project teams** – The project teams are led by the project leader, who in most cases are the line manager
- **Information technology team** – IT becomes a separate support unit, and as a task force it administered equally to the needs of all project levels.

Human Resources in a project

- **Project leader** – In most cases the project leader is a member of the line organization, preferably the line manager. In this way, line ownership of the project is guaranteed, and essential line expertise is made available to the project.
- **Project members** – Project members are selected according to the skills requirements of the project. The number of project numbers depends on the complexity of the projects and the availability of human resources.
- **Consultant** – The consultant supports the project with his experience in project planning, customizing, and training.

Project Management team

The project management team must manage all the projects, and represent them on the steering committee. It must coordinate the various interests from all module areas, and solve those problems that cannot be solved by project teams themselves. The members of the project management team have to be 100% available for project work.

Tasks and responsibilities

- Implementing the project
- Communicating, coordinating, and controlling the projects
- Evaluating and deciding about functional issues
- Configuring and customizing the system
- Training and supporting project members and users
- Documenting the project
- Reporting to the project manager

Project team

Project leaders must have strong leadership qualities, and be familiar with the software module they are going to implement. Knowledge of the organization is an asset but not essential. The ideal arrangement is one where the line manager is also put in charge of the project. Line managers must participate in the project because they should be the most familiar with departmental processes and procedures, and need to understand the prospective changes within their own departments.

Project members

Project members must be fast learners, as they must absorb and apply knowledge within a short time. During the life cycle of the project the project members must be able to concentrate on project matters rather than conflicts the line organization: yet another reason to keep the throughput time as short as possible

Characteristics of Effective Project Managers

Project managers need enthusiasm, stamina and an appetite for hard work to withstand the special pressures of project management. Where possible, project managers should have seniority and position in the organization commensurate with that of the functional managers with whom they must negotiate. Whether they are project coordinators within a functional structure or project managers in a matrix structure, they will often find their formal authority incomplete, and they need a blend of technical, administrative and interpersonal skills to provide effective leadership.

Technical skills. Many projects depend for their success on effective application of certain key technologies. The effective manager of such projects must understand the essentials of those technologies enough to evaluate whether the work done is of sufficient quality, even an unfamiliar technology is involved in a problem on the project.

Administrative skills. Project managers must be experienced in planning, organizing and control techniques as they apply to projects. In particular, they should understand the project planning techniques, such as the work breakdown structure, network systems, and other methods.

Interpersonal skills. Except in fully projected organizations, project managers depend heavily on the work of others not under their line control.

The Managers Charter

Of vital importance to the project is his or her charter, or scope of authority. It is highly desired that the responsibilities and authority of the project manager be defined in writing in advance to clarify the interfaces between the project manager, functional managers, and others, and to reduce the potential for conflict and confusion. Following are some of areas a project manager might like to see covered in such a charter. (Babcock-Morse,2002)

1. Specification of project priority relative to other activities
2. Designation as the primary contact with the customer
3. Authority to define the work to be performed by supporting departments in terms of cost, schedule, and performance
4. Control over the project budget, with signature authority on all work authorizations
5. Responsibility to schedule and hold design reviews, determine the agenda and representation, and establish responsibility for follow-up action
6. Responsibility for configuration and change control and for approving changes
7. Authority to constitute and chair the make-or-buy and source selection board
8. Responsibility for regular reporting to general management of project status and identification of any factors inhibiting project success
9. Participation in the merit review process for all personal on loan to the project.

Few project managers will be granted all the authorities suggested above, but the authority relationships with functional managers and among projects should be clarified where possible for more effective project performance.

Developing Project Management Skills

Managers of large projects typically began in some specialty of engineering or business, learned project planning and control while applying their specialty in a project environment, and was assigned responsibility for a major project only after a series of project and functional assignments of increasing responsibility. However, engineers may find themselves assigned to small projects with little or societies,

and consultants and many books available on the subject of project management, but none fully substitute for experience. Meetings and publications of the project management institute and of the American Society for Engineering Management also help in acquiring project management skills.

As a result, you can look at **Appendix 2**, that describes SAP Project team skill profile and key tasks for each role within the project organization.

4.1.6 Developing a Charter

Program Charter - The description and definition of a closely related set of projects that address a common business goal that can be independently staffed and managed. The charter defines an agreement of what the program and its projects are committed to deliver and specifies the overall budget, time constraints, resources and standards within which the program must be completed.

Project Charter – The definition of a discrete unit of work that can be independently staffed and managed. The charter defines an agreement of what the project is committed to deliver and specifies the overall budget, time constraints, resources and standards within which is must be completed.

A project charter is the cornerstone of a project using the methodology. If it used properly, it can be an important tool for managing the expectations of the project sponsor and other stakeholders. If the project charter is poorly constructed, the project is much more likely to run into trouble.

A project charter is essentially a contract. It may not be legally binding for the parties involved, but nevertheless it does represent a formal agreement and commitment between the project manager and the project sponsor. As such, it is the project manager's professional responsibility to treat this agreement seriously and make every effort to meet the commitment it represents.

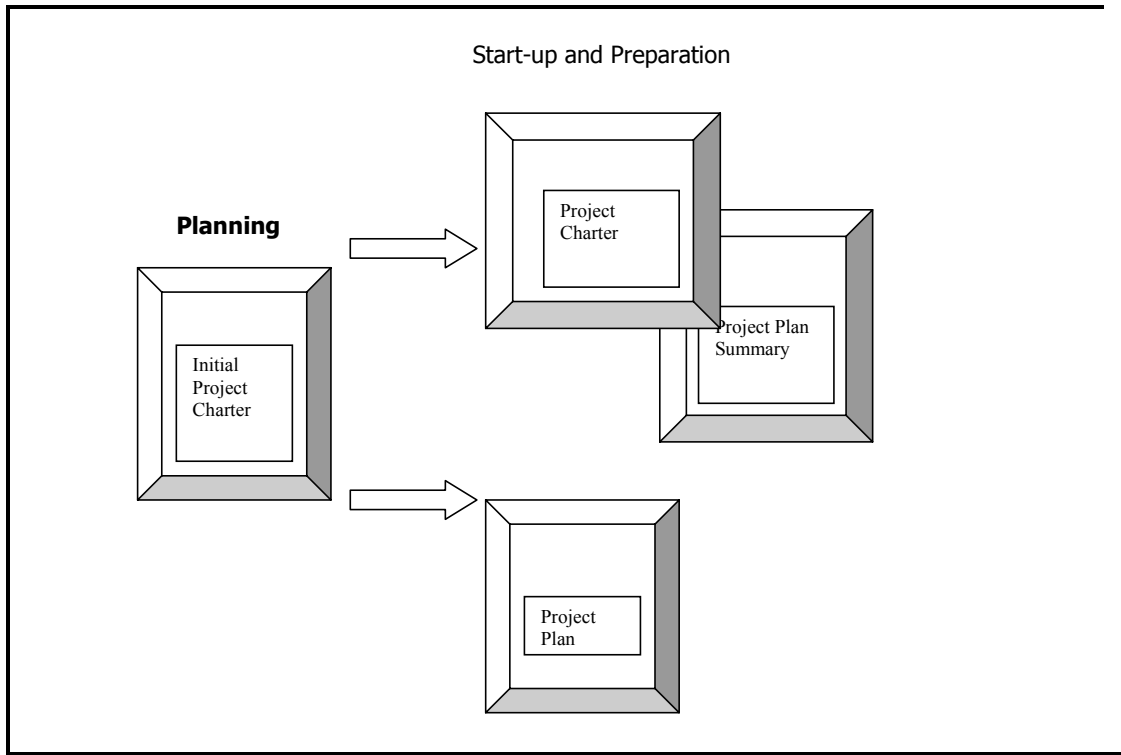
The project charter is designed to help the project manager:

- Document the agreement between the project sponsor and project manager
- Provide a clear statement of the project's purpose and of what the team is committed to deliver
- Define the project roles and responsibilities
- Make visible the development process and the approach that will be used to manage the project
- Establish the ground rules for the project
- Provide a baseline for scope and expectation management

This technique summarizes the work required to develop the project charter. For many of the steps, other areas of the methodology provide detailed support

The initial project charter and the project charter

Creating a project charter is normally a two-step process. An initial project charter is developed in the planning stage of a project for each subsequent project. For example, during the development planning stage of an analysis project, an initial project charter is created for every subsequent development project. In start up and preparation, the initial project charter is refined to produce a final project charter and a detailed project plan. A high level summary of the detailed project plan is included in the project charter for approval purposes.



4.8. The Initial Project Charter and the Project Charter

Create and Issue Project Charter

Tasks

- Load Documents into Roadmap
- Check Documents from Discovery and Evaluation
- Organize Workshop for Detailing Program Charter
- Define Project Mission Statement
- Create Initial Project Plans
- Identify Project Objectives and Measurements
- Develop the Change Strategy and Charter
- Assemble and Approve Project Charter

Accelerators:

- Project Charter White Paper
- Project Plan
- Budget / Resource Plan (Sample)

Project Preparation

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Figure 4.9. Create and Issue Project Charter

What is project plan?

The project plan contains the details of how and when the project will be executed. It includes the detailed work plan and budget for the project.

The sections of a project plan are;

Project Work plan: Describes the detailed estimate, schedule and resources for the project, including the task list and dependency network, task-based effort estimate, scheduled plan, resource assignment and project milestones.

Project Budget: Documents the costs of the project for labor, travel and living, training, facilities, solutions, and support.

Developing a Charter

Initiate the chartering process.

- Initiate the process of developing a charter.

The chartering process may begin by:

- Developing initial charters for future projects at the end of current project or program
- Developing a charter for the current initiative as the program or project starts
- Confirm with the sponsor and establish the required baseline deliverables
- If the baseline deliverables do not exist, develop them prior to, or in parallel with, the chartering process.

For example, certain enterprise models are needed to establish the logical and organizational boundaries for a project. Or, the business goals and objectives are needed to drive the definition of the program or project goals and objectives. If these baselines models do not exist or the business goals and objectives are not identified, this information must be developed to establish a sound foundation for defining the program or project.

Develop the charter components.

- Develop goals and objectives.

The goals and objectives should align with the goals and objectives of the enterprise. Ensure that the objectives are clearly defined and measurable.

- Develop the scope for the program or project.

The scope is the most important part of the charter. It describes exactly what will be produced, how long it will take to produce it, and how much the enterprise will pay to produce it.

- Develop the estimate and work plan.

The estimate and work plan provide the itemized details of how much time and effort is needed to produce the deliverables. Develop and confirm the product and task based estimates with the sponsor.

- Develop the plan summary.

A more detailed work plan will be developed, but normally only a high level summary should appear in the charter unless the sponsor wants to see more detail.

Obtaining Management Approval of the Charter and Plan (E&Y, 2000)

- Confirm the review participants
 - Confirm the participants of the review
- Schedule the review
 - Schedule a time and place to conduct the review
- Conduct the review
 - Facilitate discussions with the reviewers and document all issues
- Obtain management approval
 - Obtain the necessary approvals from the sponsor.
 - This approval means that management agrees with the review results

4.1.7. Create Project Team Training Plan

The purpose of this activity is to create a training plan for the project team involved in the SAP implementation. While training costs can be viewed as relatively expensive, it is critically important that the project team be given this training. Once initial training is completed, the project team has a much better understanding of basic SAP functions, how configuration works, and how to maximize SAP's impact to meet your business requirements. This initial training does not cover user training it will be addressed later in the implementation.

Key factors during this activity include:

- Background of each member
- Specific area of business involvement of team member (application or technical)
- Timing of team member participation during the implementation

This key factor information can be used to determine the appropriate classes for each team member, thereby avoiding redundancy, or time spent in classes that are not applicable, and make sure the course material is timed accordingly. When developing this plan, decide which courses are to be conducted at an SAP training center, or at the company site. The project team training plan is regularly updated throughout the life of the implementation.

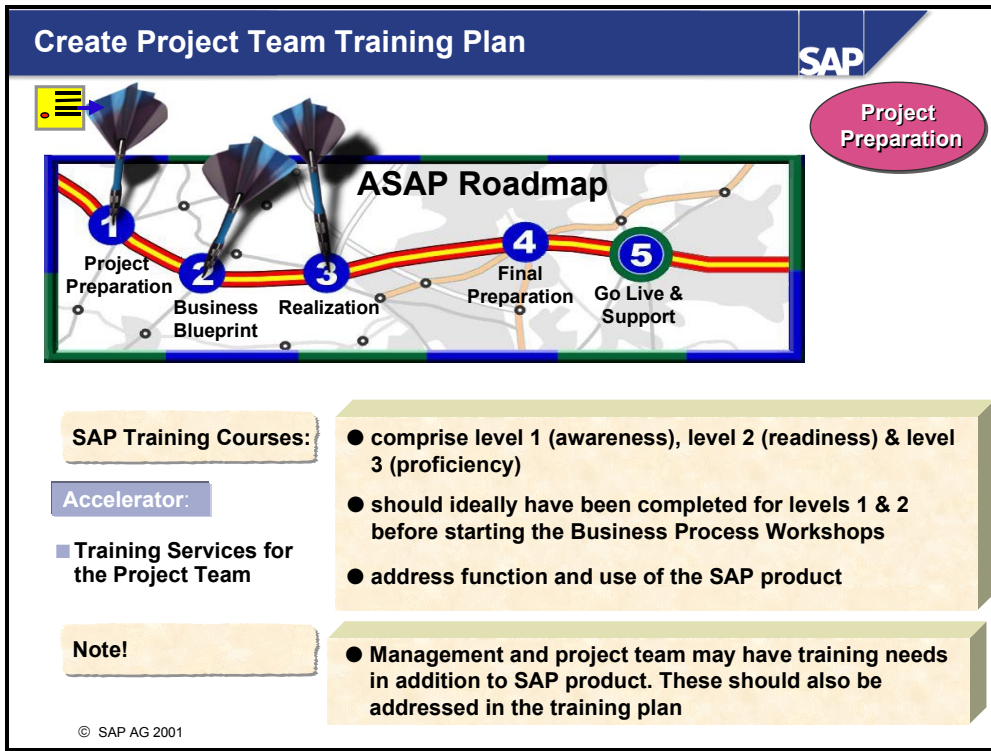


Figure 4.10. Create Project Team Training Plan

End User Training and Documentation Strategy

The purpose of this activity is to develop an end user training and documentation strategy and to develop a work plan. You will begin with an assessment of the needs of the end users, develop a project work plan, and then create a project plan that will be the basis of your end user training and documentation implementation.

Tasks;

- Develop end user needs assessment
- Develop end user training and documentation project plan
- Develop end user proposal and conduct project proposal meeting

Accelerators;

- End user training and documentation needs assessment
- End user training and documentation methodology

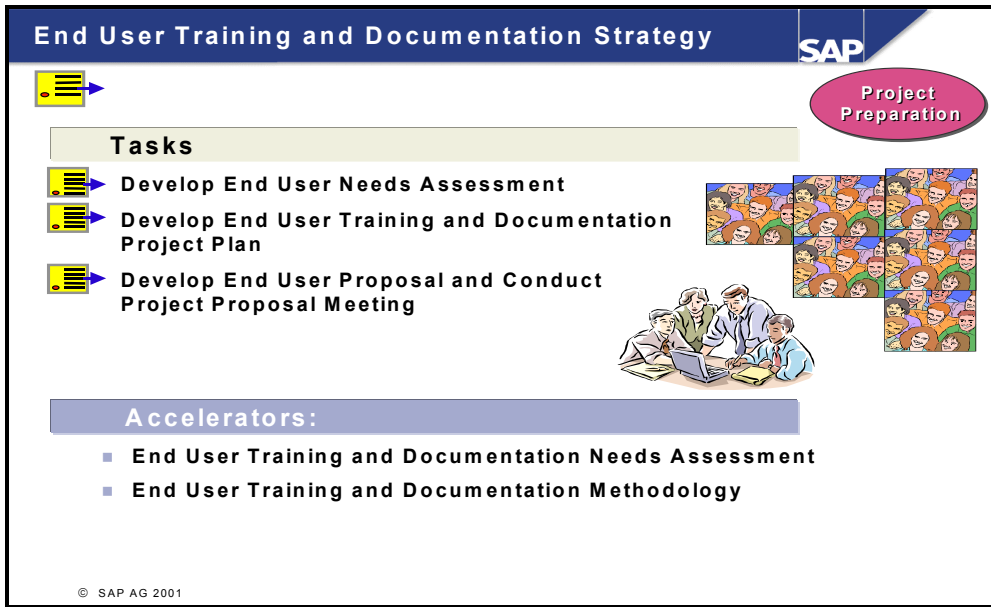


Figure 4.11. End User Training and Documentation Strategy

4.1. 8. Determine the Technical Requirements

The objective of this step is to identify the technical requirements needed to implement the SAP technical environment, clarify the customer's expectations, review hardware sizing and procure the required hardware.

During planning, keep in mind that all required SAP systems are unlikely to be procured and installed at the same time.

The development system is the initial system and is needed at the start of an SAP implementation project. Early on, this may be the only SAP system in the system landscape. Other required SAP system, such as the quality assurance and production systems, are not needed until a later phase; therefore, part of the planning includes taking expected delivery lead-times into consideration so that subsequent systems and hardware can be ordered in time.

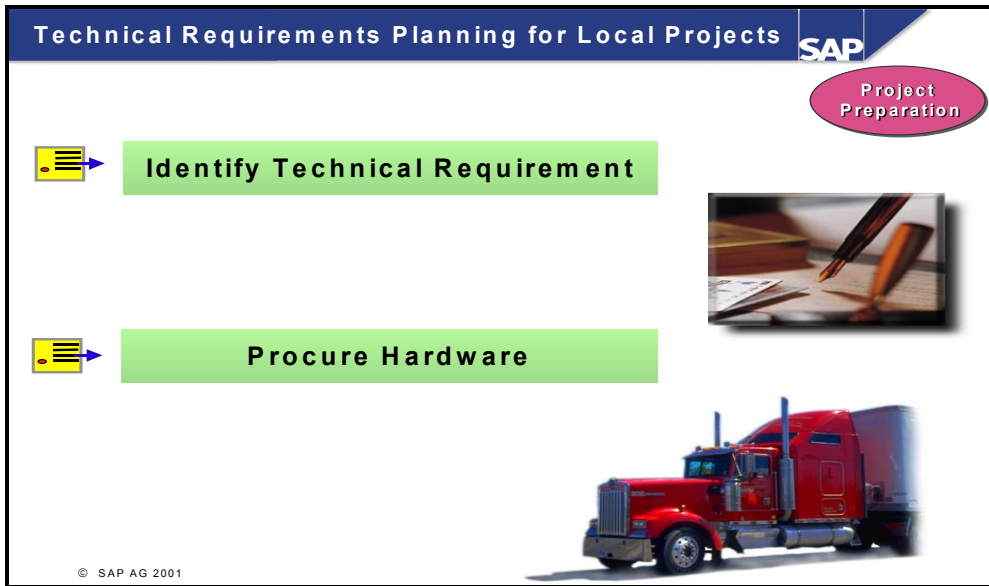


Figure 4.12. Technical Requirements Planning for Local Projects

Identify technical requirements: The purpose of this activity is to identify the technical infrastructure needed to implement R/3, and to clarify the customer's expectations.

Procure Hardware: The purpose of this activity is to procure the hardware needed for the SAP environment and places the hardware order with the appropriate vendor. Carefully plan the procurement of the subsequent systems to avoid unexpected lead times that could impact the SAP implementation schedule. Hardware procurement lead times vary from days, weeks, to even months.

4.1.9. Fix the Project Authority

Authority is essential to any group or project team effort. The legal authority that is exercised by an individual comes from organizational position occupied by the individual. Such authority is granted or delegated from a higher authority level in the organization. In a business organization, the shareholders elect the board of directors of a company. The board of director's authority role in project management is to study and approve key strategy proposals, particularly those risky projects which involve a substantial portion of corporate resources, and to maintain surveillance of the project during its life cycle.

Project managers face a unique authority challenge in the management of their projects. Usually project managers have only a few people working directly for them their small administrative staff.

Sometimes the authority of the project manager is very explicit. For example, at Honda the project team that develop new vehicles had engineers, designers, financial analysis, marketing experts and manufacturing people all report to a single project leader who had "line" authority over them and their work. Chrysler, in constraint, was divided by functional disciplines, as departments with their own functional agendas competed. The result? The Chrysler system took longer, cost more, and sometimes led to compromises such as in quality. (Cleland, 1999)

Documenting project authority

Project managers should have broad authority over all elements of their projects. Although a considerable amount of their authority depends on their personal abilities, they can strengthen their position by publishing documentation to establish their modus operandi and their legal authority.

At a minimum, the documentation should delineate the project manager's role and prerogatives in regard to;

- 1- The project manager's focal position in the project activities
 - 2- The need for a defined authority responsibility relationship among the project manager, functional managers, work package managers, and general managers
 - 3- The need for influence to cut across functional and organizational lines to achieve unanimity of the project objectives
 - 4- Active participation in major management and technical decisions to complete the project.
 - 5- Collaborating (with the personnel office and the functional supervisors) in staffing the project.
 - 6- Control over the allocation and expenditure of funds, and active participation in major budgeting and scheduling deliberations
 - 7- Selection of subcontractors to support the project and the negotiation of contracts
 - 8- Rights in resolving conflicts that jeopardize the project goals
 - 9- Having a voice in maintaining the integrity of the project team during the complete life of the project
 - 10- Establishing project plans through the coordinated efforts of the organizations involved in the project
 - 11- Providing an information system for the project with sufficient data for the control of the project within allowable cost, schedule, and technical parameters
 - 12- Providing leadership in the preparation the operational requirements, specifications, justifications and bid package
 - 13- Maintaining prime customer liaison and contact on project matters
 - 14- Promoting technological and managerial improvements through-out the life of project
 - 15- Establishing a project organization for the duration of the project
 - 16- Participation in the merit evaluation of key project personnel assigned to the project
 - 17- Allocating and controlling the use of the funds on the project
 - 18- Managing the cost, schedule, and technical performance parameters of the project
- (Cleland, 1999)

4.1.10. Activity Planning

In earlier sections we looked at the preparation of SAP Projects and requirements list and here we will review how to plan all the activities and follow them. However, must also include a schedule indicating the start and completion times for each activity. This will enable us to: (Hughes - Cotterel, 2001)

- Ensure that the appropriate resources will be available when required
- Avoid different activities competing for the same resources at the same time
- Produce a detailed schedule showing which staff carry out each activity
- Produce a detailed plan against which actual achievement may be measured
- Produce a timed cash flow forecast

In addition to providing project and resource schedules, activity planning aims to achieve a number of other objectives which may be summarized as follows:

- Feasibility Assessment
- Resource Allocation
- Detailed costing
- Motivation
- Co-ordination

Activity planning and scheduling techniques place an emphasis on completing the project in at an acceptable cost or, alternatively meeting an set target date at minimum cost. These are not , in themselves, concerned with meeting quality targets, which generally impose constraints on the scheduling process.

Projects and activities

Defining Activities

Essentially there are three approaches to identifying the activities or tasks that make up a project – we shall call them the activity-based approach, the product-based approach, and the hybrid approach.

The activity-based approach consists of creating a list of all the activities that the project is thought to involve. When listing activities, particularly for a large project, it might be helpful to subdivide the project into main life-style stages and consider each of these separately.

Work Breakdown Structure (WBS) is a task list which involves identifying the main (or high level) tasks required to complete a project and then breaking each of these down into a set of lower level tasks. Figure 4.10 shows a fragment of a WBS where the design task has been broken down into three tasks and one of these has been further decomposed into two tasks.

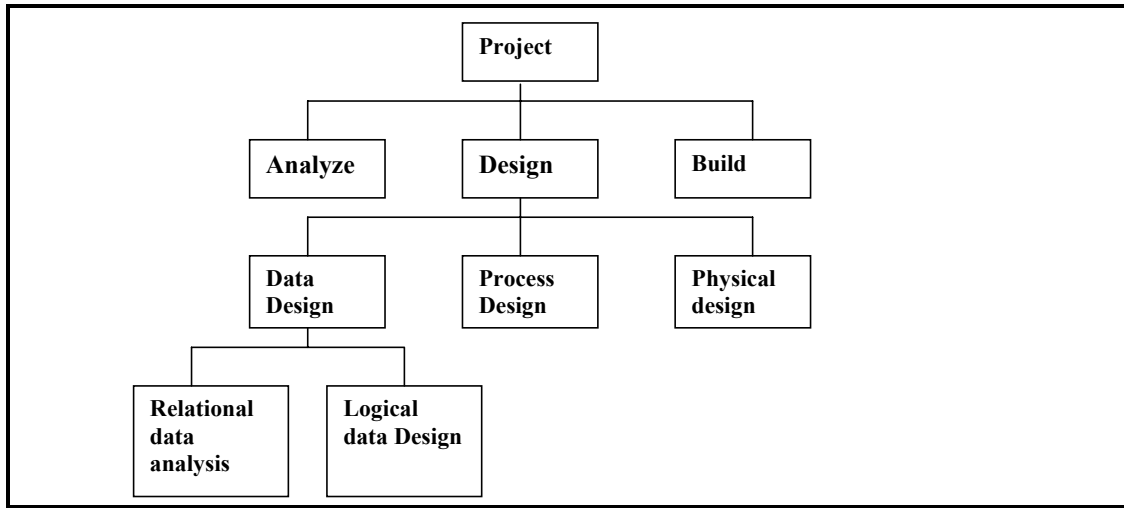


Figure 4.13. A fragment of an Activity-based Work Breakdown Structure

Activities are added to a branch in the structure if they directly contribute to the task immediately above if they don't contribute to the parent task, then they should not be added to that branch.

The tasks at each level in any branch should include everything that is required to complete the task at the higher level. When preparing a WBS, consideration must be given to the final level of detail or depth of the structure. Too great a depth will result in a large number of small tasks that will be difficult to manage, whereas a too shallow structure will provide insufficient detail for project control.

Advantages claimed for the WBS approach include the belief that it is much more likely to result in a task catalogue that is complete and is composed of non-overlapping activities.

Note that it is only the leaves of the structure that comprise the list of activities comprising the project the higher level nodes merely represent collections of activities.

Sequencing and scheduling activities

Throughout a project, we will require a schedule that clearly indicates when each of the project's activities is planned to occur and what resources it will need. We shall be considering scheduling in more detail here and let us consider in outline how we might present a schedule for a small project.

The chart shown has been drawn up taking account of the nature of the development process (that is, certain tasks must be completed before others may start) and the resources that are available (for example, activity C follows activity B because A cannot work on both tasks at the same time) In drawing up the chart, we have therefore done two things. We have sequenced the tasks (that is identified the dependencies among activities dictated by the development process) and scheduled them.

In the case of small projects, this combined sequencing-scheduling approach might be quite suitable, particularly where we wish to allocate individuals to particular tasks at an early planning stage. However, on larger projects it is better to separate out these two activities: to sequence the task according to their logical relationships and then to schedule them taking account resources and other factors. (Hughes,2001)

At the end of this section we attached a generic SAP project plan example to review.

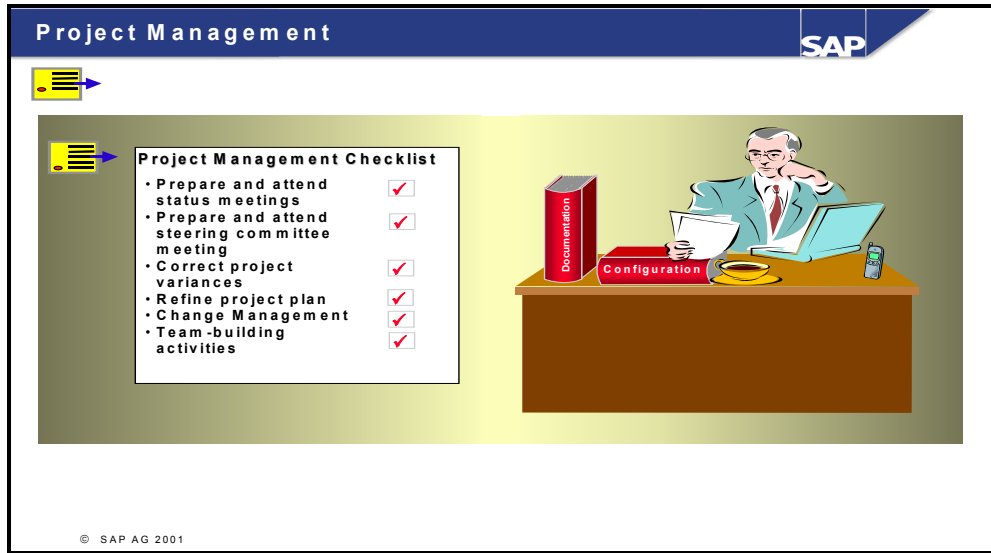


Figure 4.14. SAP Project Plan

4.1.11. Investigate innovations in project management practices

A number of technology innovations are presented in this section, which hold promise for improving human services delivery and project management. It also describes a set of best practices for technology project management as one solution to help.

Some innovations in Technology

Before starting an ERP project management, you should investigate some technological opportunities. A number of technology innovations offer significant opportunities for progress in people and project management. (www.iteaa.org, 15.08.02)

1. Database Technology

Some projects are seeking to expand their ability to obtain and analyze data from multiple sources. Therefore, database technology provides around-the clock performance with increased speed and scalability. Gateway technologies can make access to data on individual recipients, stored in multiple systems, more readily available. With the advent of graphical user interfaces, the internet, and the web,

information now includes rich, unstructured data types everything from graphic images, such as photographs, to audio and video, including sound clips and movies.

Database technology benefits human service delivery by providing a more complete picture of the clients, their needs. So, it facilitates project team's skills to make more informed decisions about recipients and supports us to run programs that benefit the most recipients in the most efficient behavior.

2. Security and Privacy Technologies

Security and Privacy technologies are one of the innovations in project management. Now it is quite common to use data encryption for all traffic to and from a database. Today firewalls protect perimeter access. Authentication validates authorized participants.

The benefit of improved security and privacy technology is an improved control of electronic access and dissemination of data. The tools exist to support the mandate to secure the confidential information about our clients while we share authorized access.

3 . Portal and server technology

There are several tools to build web sites and applications. Non-technical staff can create personalized portals. These tools provide greater flexibility of mixing and matching technologies. So, this kind of improvements enhance the integration of the services.

4. Internet technology

Web based technology supports smaller, component based projects and give possibility to handle it worldwide. Smaller components allow lower risk and lower cost investments. The publicity of the potential of the web may be a driving factor in current technology decisions.

Innovations on Internet is one of the important challenges. It involves less sensitive personal information or have more straightforward services to deliver, such service transformations are more easily achieved. These technologies are a sampling of the many that exist to support and improve the delivery of human services.

If we describe well and clear what the impact of technology is on project management, we can think of these impacts before and apply for the projects.

Internet is the excellent tool to use at the every area and also at SAP project management. Recently it has released various supportive tools such as e-project management, e-project, e-control etc. We should use them if they can bring the productivity. Especially some technologies like e-project management brings quite flexibility into the projects. Web sites like www.mysap.com provide a service to operate SAP.

Today there are a lot of opportunities to use web tools in project management. Particularly web sites are quite practical to operate SAP with more success.

1.2 Solution Definition



(2) Solution Definition

4.2.1. Design Training Plans

The purpose of this task is to finalize the project team training. During the training business task, the end user training and documentation strategy is carefully analyzed. The training team develops the training curriculum and selects the delivery tools. End user training and documentation prototypes are demonstrated during this activity.

Another purpose of this task is to conduct project team training so that team members can obtain an overview of the business processes or technical features in their area. This training is prerequisite to the detailed business process courses and detailed technical courses and enables the project team to start to match their company requirements with SAP functions during "Solution Definition" phase.

The purpose of the Analyze End User Training and Documentation Strategy activity is to analyze the end user training and documentation strategy, and finalize the plan for developing the training content, training documentation, and training delivery.

The purpose of the Prototype End User Training and Documentation Deliverables activity is to design and develop a training and documentation prototype, and analyze and determine the system requirements necessary for conducting training. The tasks involved with this activity will occur at times simultaneously with the tasks in Analyze End User Training and Documentation Strategy.



Figure 4.15. Design Training Plans

4.2.2. Technical Design Planning

The purpose of this activity is to define and document your technical design. It is recommended that you seek support from your hardware partner for this work. In the "Set Up Development Environment", main purpose is to install and configure the technical environment for the development system. This activity includes installing the hardware, verifying the technical environment, installing the SAP software and front end components, and configuring and securing the technical environment of the SAP system.

The latest there is concept of "system administration procedures" in this point. The purpose of this activity is to define and verify the system administration procedures for the development system. It is an ongoing process throughout the solution definition phase.

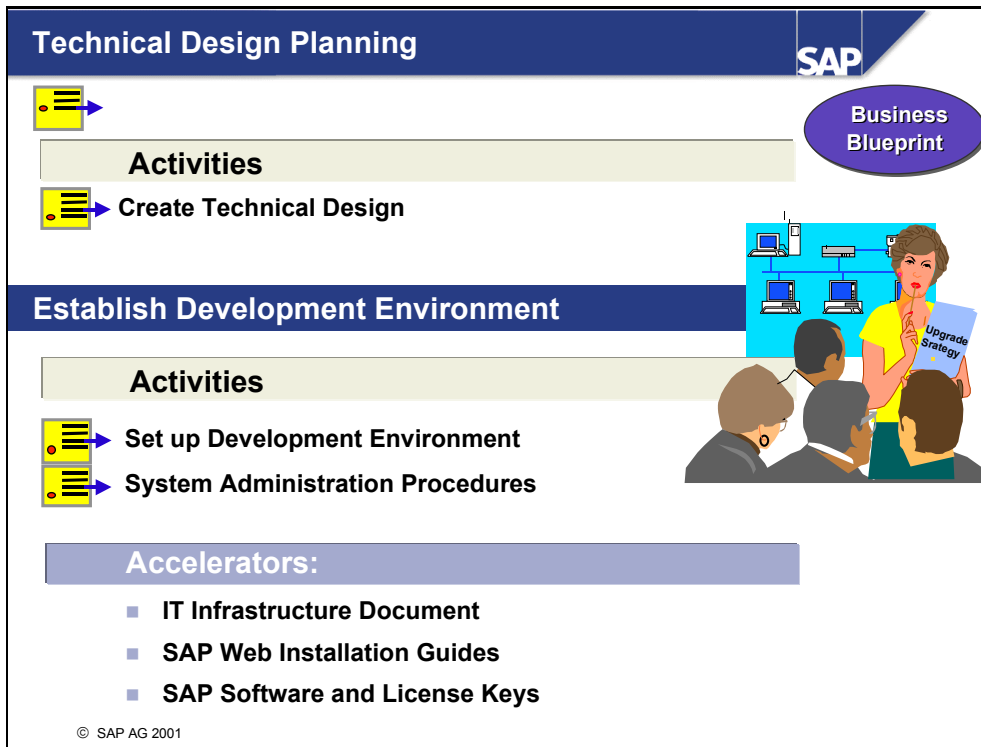


Figure 4.16. Technical Design Planning

4.2.3 Realize Some Assessment

4.2.3.1. Focused Current State Assessment

It is important to note that there are 3 concurrent activities going on here. While they are taking place at the same time, there is precedence. Focused Current State Assessment needs to be finalized before you can finalize the package fit assessment needs to be finalized before you can finalize the Future State Solution Description. (SER, 1996)

Current state high-level process model development summaries customer requirements, process inputs, and process performance. Process threads are identified context diagrams are developed, and performance management baseline models are identified. Key process requirements are developed. The major process is decomposed into one or two levels of sub-process flowcharts, which are mapped to organizational units and information systems.

The 3 key activities happening in this stage are:

- Analyzing their current business practices and processes to identify areas where they most need to improve
- Identifying core competencies which will help to focus all of the work that is done throughout the rest of the route
- Identifying short term improvement opportunities so that we can get some return back to the client while they are waiting for the first implementation

Once these short term improvement opportunities are identified, they will be managed through the project management.

This can be a difficult stage. Very often the client will say that since they are providing people from their organization to the team, they will already understand the current state and therefore there will be no reason to conduct a current state assessment. What we need to make sure the client understands is that we are not doing a full fledged current state.

4.2.3.2. Customer Requirements Assessment

Customer Requirements Assessment provides an understanding of the customer's process requirements. It provides a focus for the improvement activities. Furthermore, it translates the customer's needs and expectations into performance targets for the process.

Inputs for this work product:

- Current state high-level process model (Focused Current State Assessment)

Where this work product is used later:

- Assess Selected Sub-Processes (Focused Current State Assessment)
- Conduct Benchmarking and Leading research (Future State Solution Description)

Value:

- Knowing the customers requirements is the foundation for designing processes that meet those requirements
- Provides good initial indication of what characteristics or attributes of the product or service are important to the customer.
- Understanding customer needs and expectations can identify areas where existing and desired process performance are not aligned
- Provides focus for improvement opportunities which will enhance customer satisfaction and retention
- If this not done, you run the risk of implementing a solution that the client's customers will not buy into and then they will lose business.

4.2.3.3. Process Performance Assessment

Process performance assessment evaluates the health of the process by collecting high level process performance measurements. It also supports the selection of sub-processes for further investigation and more detailed assessment.

Input for this work:

- Current state high-level process model (Focused Current State Assessment)

Where this work product is used later:

- Assess selected sub-processes
- Assess People and organizational environment
- Assess Technology Environment
- Conduct Benchmarking and leading practice research

Value:

- Identifies and documents the process strengths and improvement opportunities
- Identifies a sub-process for further analysis
- Identifies those processes and sub-processes which contain core capabilities or significant advantage

4.2.3.4. Sub-process assessment

It includes an activity-level model with activity workflow diagrams for each selected sub-process. This kind of assessment summarizes the assessment of the selected sub-processes.

Input for this work:

- Customer requirements assessment
- Process performance assessment

Where this work product is used later:

- Conduct future state solution description sessions

Value:

- Provides the basis for assessing organizational performance levers and technology enablers that support these processes
- Understand the existing processes to facilitate communication
- Identifies problems so that they are not repeated in the new processes
- Identifies core competencies or significant competitive advantages
- Provides a cost/benefit and risk baseline
- Identifies short term improvement opportunities

There are some sub-processes assessment techniques. Below we will identify what they are and sub-steps of them.

Develop Activity Workflows

- Describe the business events
- Refining sub-processes flowchart
- Refine the sub-process descriptions
- Identifying business transactions
- Describe the business transactions
- Identify the activities that respond to each event
- Create a separate activity workflow for each business transaction
- Add the external agents to the workflows

Document Activity Data

- Refine the activity description
- Document activity quality issues
- Document cost at the activity level
- Document activity bottlenecks
- Document how existing performance measures are used

Conduct Root Cause Analysis

- Prioritize the activities in the activity workflow
- Identify root causes
- Organize root causes into categories
- Indicate the root causes on process flowcharts

Develop sub-process requirements

- Define the process requirements

- Prioritize the requirements

Assemble the sub-process assessment

- Confirm the work product contents
- Edit the work product
- Assemble the work product

4.2.3.5. People Organization Assessment

People Organization Assessment includes the following task

- Determines how the current people and organizational environment impacts process performance
- Assesses the organization's current competency levels
- Identifies which operational level will represent challenges and why

Here, purpose of these tasks and value added;

1. Understanding the size of gap between people's current competency levels and competency levels they must have in the future state
2. Identifies the impact of the package on the user organization
3. Determines the risks and costs of implementing the change

It is quite important to determine the people's current competency levels because this will be used in planning the end user training program further down the line.

4.2.3.6. Current State Technology Performance Assessment

This sort of assessment identifies and documents the state of the current IS environment and includes the following elements:

- Application portfolio
- Information Technology components
- IS management infrastructure

Inputs for this work:

- Process Performance Assessment

Where this work product is used later:

- Conduct future state solution description sessions
- Technology Environment Support Phase

Value:

- Provides a detailed investigation and understanding of the current systems in order to effectively scope the system implementation
- Determines if the client's existing system interacts or does not legacy with systems external to the client
- This activity will provide you with a map of the company's legacy systems as well as an understanding of there is organization

4.2.4 Business Process Definition

The purpose of this work is to determine the company requirements based on SAP business processes, to provide the required functions. The business process definitions create your business routing.

After the definition of the organizational structure, you define the business processes of the company in terms of the R/3 System. The Q&Adb in ASAP is the tool supporting the definition of the business processes. You can use the CI (Customer Input) template and business process questions within the Q&Adb to support the preparation and completion of business process definition. For detailed analysis, you can access external tools for modeling the business processes via the Q&Adb. If you generate the Business Blueprint gives you the company's business process requirements in one document. When you generate the Business Process Master List gives you the business processes, which are in scope for customizing in the realization phase. Look Figure 4.17

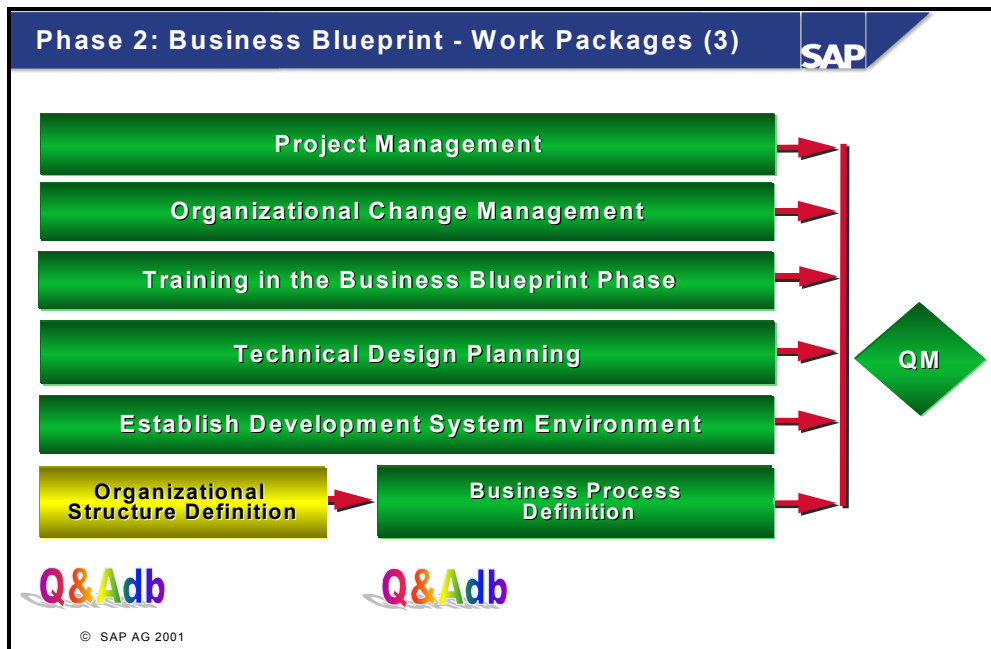


Figure 4.17. Business Blueprint

In the case of a local rollout (an implementation project itself part of an overall, global implementation comprising a number of implementation projects), most of the company requirements should already have been determined at the global, program level and mapped to the corresponding settings.

First of all, they have to define their organizational structure before proceeding to business processes. After the definition of the organizational structure, you must define the business processes of the company in terms of the R/3 System.

They will have to define some current state opportunities for every part of processes. What is requirements in this point?

- Summaries and priorities the current state of people, process, and technology strengths and weaknesses
- Identifies short term improvement opportunities
- Obtains stakeholder review team feedback
- Identify and prioritize requirements
- Use a combination of interviews and facilitated sessions to gather information about strategy, operations, processes, data and behavior
- Identify short term improvement to address immediate problems

What are inputs for this work?

- Current State Technology Performance Assessment (Focused Current State Assessment)
- People and Organization Environment Assessment (Focused Current State Assessment)
- Sub-Process Assessment (Focused Current State Assessment)

Values of this work:

- Evaluating strengths and weaknesses can help the package fit and provide potential benefit in critical processes
- Priorities improvement opportunities by the degree of benefit they bring to the organization's core or strategic processes
- These short term improvement opportunities are how we will be able to provide the client with some return on their investment while they are waiting for the first implementation.

Deliverables:

- Business Area Strategy Model
- Business Area Operations Model
- Business Area Information Model
- Business Area Requirements Report
- Business Area Requirements Data Gathering Materials

Conceptual System Design (CSD) is the transition from Analysis to Design. It bridges the gap between the business-focused business area requirements analysis (BARA) and the information system-focused business system design (BSD). In BARA, problems and opportunities are identified then modeled. BSD is when solutions for problems and opportunities are defined.

In CSD, alternative approaches to automating the business area are defined. An automation recommendation is developed including definitions of candidate applications and their supporting data and technology architectures.

Business transactions are transformed from elementary processes and decisions are made about which parts of business transactions to automate and how to automate them. Activities are written to support major business transactions, and external components (i.e. screens, reports, forms) are identified and described. Business transactions are then combined into applications and described in terms of their processing, data storage, and implementation components.

The data storage structure describes subject databases and target data storage architecture. The technology structure includes the processor configuration, hardware, system software, and the communication network.

All application designs are evaluated in terms of their impacts to the user and IS organizations, technology, and the enterprise's customers.

In Business Blueprint, you will see activities as below;

- 1. Prepare for Business Process Workshops:** The purpose of this activity is to ensure efficient business process workshops. This means determining who attend, which business processes are discussed, and other applicable topics.
- 2. Conduct general requirements workshops:** The purpose of this activity is to analyze your standardization aims (general setting) and the constraints to which they are subject. This activity deals with determining whether standardization is, or ought to be, one of your objectives. Some of the items which should be standardized include:
 - Numbering systems for data records
 - Charts of accounts
 - Statistics

- Units and measurement
- Balance sheets and profitability analysis
- Handling of procedures, rules and standards for data transfer between application systems

In the general settings substructure, you can determine general settings in line with the Implementation Guide (IMG), such as currencies, that apply across your entire SAP system. These settings are required to set default parameters in the SAP System.

In the Master Data substructure, you can see the structure of master data in the SAP system. It is organized according to enterprise area. General master records, for example, Material Master, Work Center, Customer/Vendor Record are located below the enterprise-specific master data items in the tree structure.

In Business Process Workshops, the purpose of this activity is to conduct the business workshops to determine and complete all requirements including:

- Business processes
- Reporting
- Interfaces
- Conversions
- Enhancements
- Authorizations

In business process workshops, main tasks are like these:

- Determine the need for extended functions
- Determine forms requirements
- Determine reporting requirements
- Determine Required Interface
- Determine conversion requirements
- Determine required enhancements
- Clarify deficient areas
- Analyze CRM requirements for BW integration

The business process workshops are a critical part, as all the results gathered during the workshops subsequently create the business the Business Blueprint.

In below figure it describes the structure between Q&Adb and Business Blueprint.

The Q&Adb questions and the corresponding process models are used to facilitate and frame the gathering of company input. The questions concerning the business process are dependent for their content on the respective business process. The answers can either be freely formulated or are given:

- Yes, No, Unanswered
- Answer List

You can also use external modeling tools to compare enterprise process areas, scenarios with the SAP Reference Structure.

The comparison with SAP Reference Structure clarifies to what extent your own business processes can be covered by the R/3 business processes.

The business fit can be high, medium, or low. The measures that need to be taken to achieve this depend on the analysis:

- High, though customizing
- Medium, though enhancement

- Low, own transactions

Once each process team has collected information about the different roles during business process workshops. Organizational Change Management team is responsible for bringing together the various design documents and creating a master set of roles. The objective of this step is to develop a set of roles small enough to allow flexibility in organizational design yet large enough to enable some degree of standardization throughout the company.

So, the roles are confirmed, business process teams assign the roles to the transactions (manual and SAP)

Finally, a report needs to be generated listing all business processes, transactions and roles. The report should be distributed to all teams for confirmation. Once the report has been confirmed, no changes should be undertaken without formal change control.

The user roles substructure is made up user roles that have been defined by SAP. The project team can use this substructure to determine the user profiles they require for their specific project. It is possible to define, copy and rename user roles.

You can also display the functions assigned by SAP to user roles for each structure item.

At the end of this stage it is created some reports like this. **Figure 4.18**

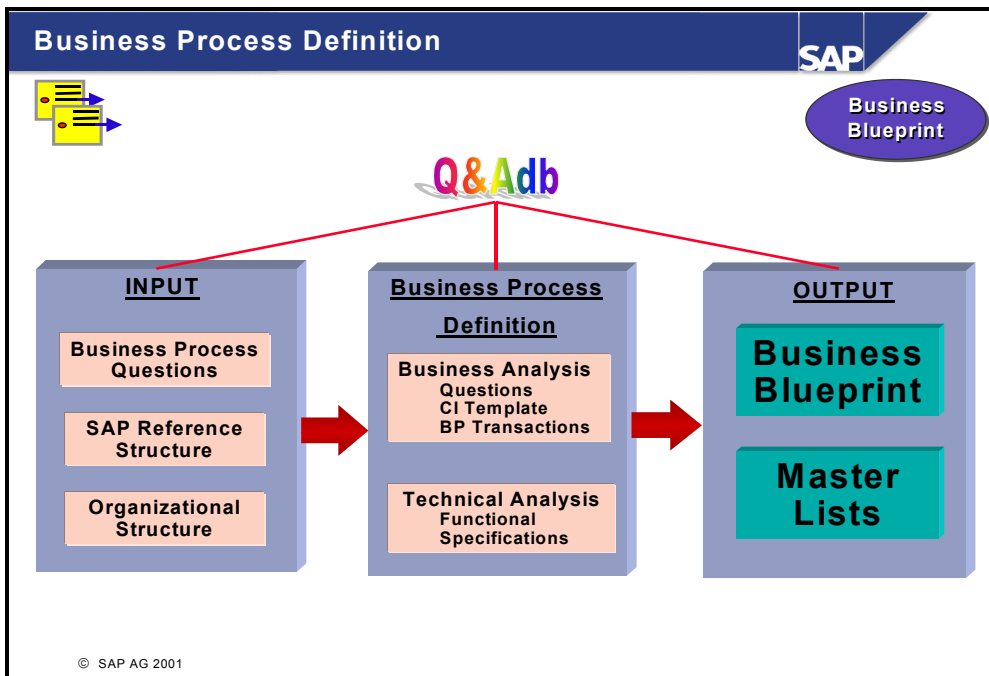


Figure 4.18. Business Process Definition Reports

This reports allows you to display project documentation in different forms, and creates a report structure for project team and users.

4.2.5. Business Case Development

This stage describes the business change approach that is driven by the need for radical redesign of existing business processes. This radical reengineering is generally referred to as business process innovation.

The scope of this phase is generally a major process requiring radical reengineering. The phase concludes by defining a strategy for piloting and implementing the future state across the enterprise.

Briefly, objectives:

- Design and develop an innovated process and pilot the process in a selected segment of the enterprise
- Develop a process vision specifying the process and technology components of the future state process
- Implement the piloted process broadly across the organization

This Figure shows Business Process Innovation Profile as follows;

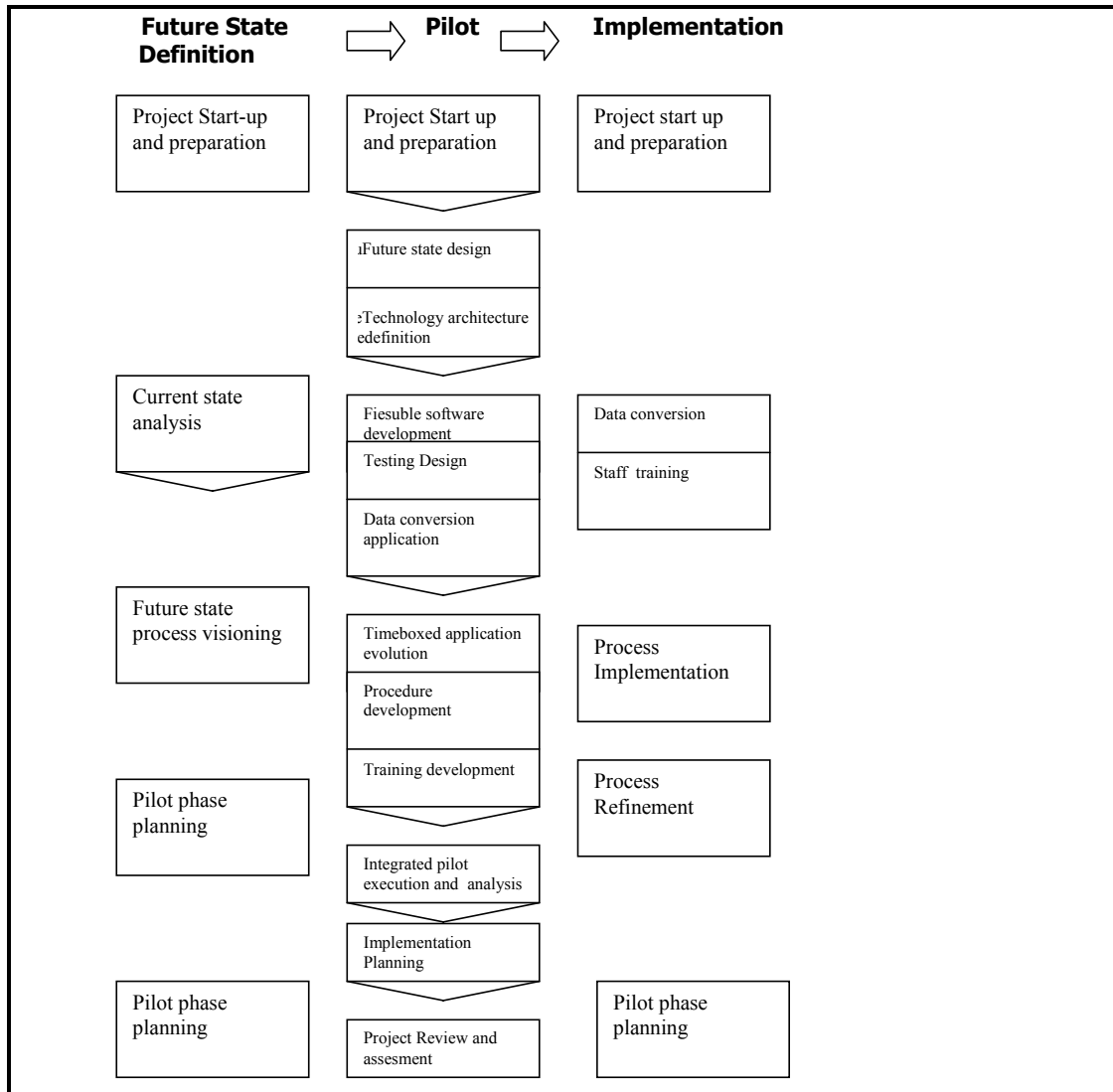


Figure 4.19. Business Process Innovation Profile Structure

This phase includes a current state analysis to determine the basis for short-term improvements and set the baseline against which the process innovation results will be measured. During this phase, a well-defined future state process vision is developed. Inputs into the process visioning sessions include process benchmarking and the current state analysis. The phase concludes with the refinement of the business case for the innovation of a major enterprise process.

This phase has the following characteristics:

- A future state process vision is created for a major enterprise process.
- An initial future state design is created
- The current state of the enterprise's major processes will be assessed
- The initial business case is revised based on the future state vision

This phase has the following stages:

- Project Start-up and preparation
- Process Definition Analysis
- Process Case Developing Visioning
- Business Case Development
- Pilot Planning
- Project Review and Assessment

During first step, establish the foundation for the project by developing the project charter and project plan and receiving management approval for them.

The project charter serves as a formal agreement between the project team. It establishes the project direction. It includes a summary of the various portions of the project plan. The project charter and project plan should be developed in parallel.

In Process Definition Analysis, conduct data gathering sessions with operational managers to analyze current business processes and organizational responsibilities. Analyze the efficiency and effectiveness of current business process, using internal and external measures. Develop overall assessments of the targets current business processes and associated technology components. Assess opportunities for structural changes of business processes. Structure this information into a model of business operations.

The objective of "Process Case Developing Visioning" stage is to create a well-defined vision of the developing process based on the following: corporate objectives and the environment, a framework of benchmark leading practices and lessons learned from other companies, and specific technology and people enablers that have the potential to yield process breakthroughs.

During this stage, create a vision based on these inputs, through an iteration series of process visioning sessions. Identify key assumptions underlying the process and potential barriers to success. And validate the vision with management throughout its development.

Another stage, Business Case Development ensures that short-term improvements are coordinated with the future state process vision.

Develop a cost/benefit analysis for the process vision. Analysis the risks and potential returns, assess change readiness, and develop the initial implementation plan for the future state process vision.

Business Case Development

The objective of this stage is to ensure that short term improvements are coordinated with the future state process vision.

For this, you develop a cost/benefit analysis for the process vision. Then you should analyze the risks and potential returns, and finally you should assess change readiness, and develop the initial implementation plan for the future state process vision.

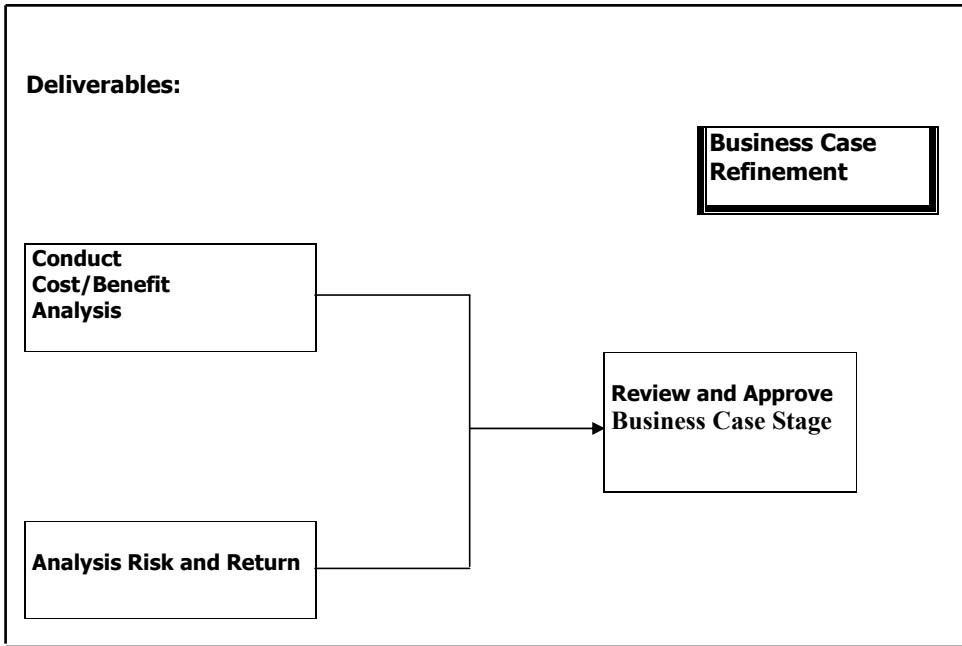


Figure 4.20. Dependency of Activities in Business Case Development

Pilot Planning

In this stage, develop a master plan for performing a series of pilot projects. These pilot projects are intended to provide fast and effective implementation of the future state. Develop high-level strategies to enhance the enablers and address the barriers in order to facilitate implementation efforts. Next, define the pilot approach. Describe future events including software and documentation development, testing, training, data conversion, and organizational or operational changes.

Third, develop a pilot phase transition management plan incorporating the data from the enablers and barriers management plan, the detailed transition management plan, and communication plan.

Next, create initial Project charters for each development Project, including infrastructure work. Use the process descriptions as a starting point. outline the scope and a high-level Project work plan for each development Project. Describe how each major aspect of the future state vision is to be designed, piloted, tested, and implemented.

Finally, create the master plan to show, at the high level, the dependencies and relationships among the individual projects.

Deliverables

- Initial Project Charter –Pilot
- Master Plan – Pilot Plan
- Project Assessments

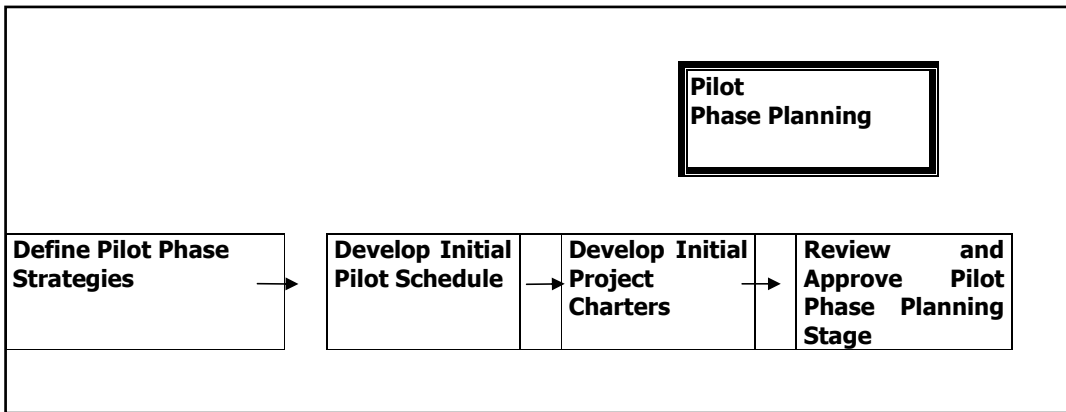


Figure 4.21. Dependency of Activities in Pilot Planning

Project Review and Assessment

At this stage, the project is reviewed from various perspectives to determine what has been effective and what could be improved in future project efforts. Project deliverables are reviewed and organized for hand-off to subsequent projects where they will be used to define project baseline. The performance of the project team is assessed. And finally approval is obtained from the project sponsor and the project is concluded.

Deliverables

- Project Assessments
- Control File

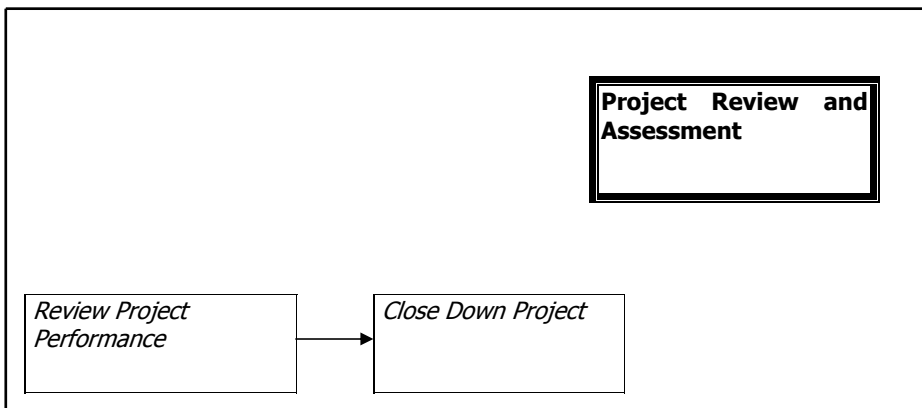


Figure 4.22. Dependency of activities in Review and Assessment

This stage will cover benchmarking and leading practice research. We will be developing a Future State Vision and creating an implementation strategy.

Benchmarking and leading practice research consists of gathering data from secondary benchmarking sources, and benchmarking partners. Researching the technology enablers and organizational performance levers allow the project team to become aware of what is going on in the world. Findings are analyzed, and integrated into innovative opportunities.

The implementation strategy determines how the package will be introduced and incorporated into the enterprise. Define the implementation scope. Gather the key players for an implementation strategy meeting to discuss initial strategy options, benefits, drivers, and an existing systems replacement strategy. Use the summarized strategy selection to define implementation waves and develop a high-level implementation schedule.

The future state solution description and key requirements will be validated with management throughout the rest of the project.

4.2.6. How to Set Up Value Driven Method

The key thing to remember is that this entire route is driven by value. Starting with the value propositions created as part of start up and prep and then moving to the identification of core competencies and key improvement areas in focused current state assessment. These things will help identify what areas should be focused on throughout the rest of the project.

In this stage, these value areas will become the focus of the benchmarking and visioning effort and will help determine which implementation strategy should be chosen. Once this is completed, these decisions will determine which deliverables and thus which tasks will be the focus of the effort throughout the rest of the engagement.

We can significantly increase the amount of value our clients receive from a package implementation project while at the same time minimizing the amount of time and effort it takes because focus on those areas that provide the most value and because we know at what point the incremental value begins to decrease.

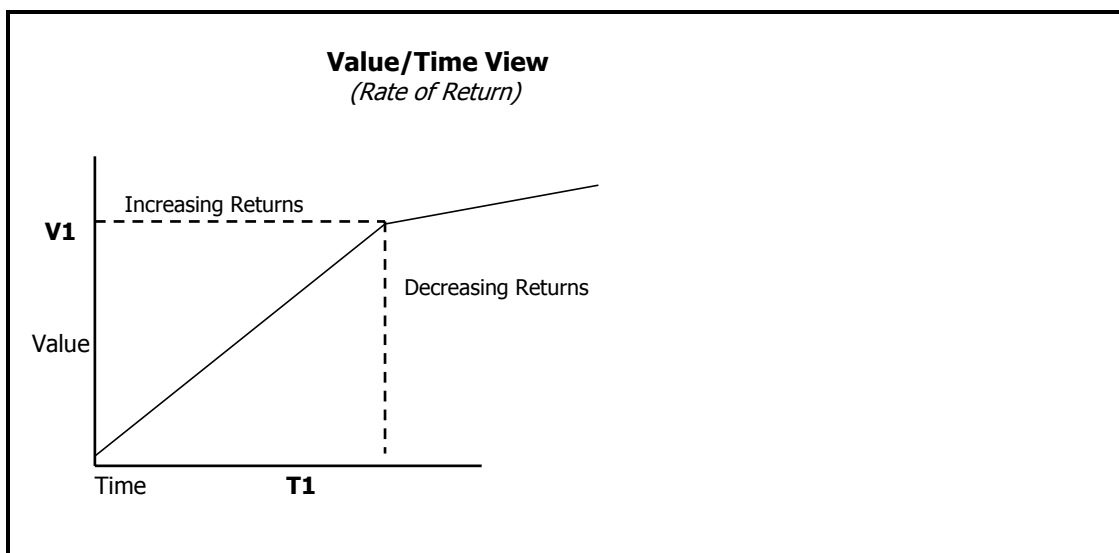


Figure 4.23. Value/Time View

4.2.7. Solution Model Definition

In order to create a solution model definition, we should describe some solution techniques. The following tasks give us an example routing to create a purpose and stakeholder value statement.

- Conduct a facilitated session

- Create the future state solution description purpose
- Create a stakeholder value description
- Set up the agenda and expectations for the session

Then, you can develop the major process requirements.

- Describe the performance measurement information needs
- Fix the key components and workflows within the future process
- Define the major process requirements
- Prioritize the requirements
- Consolidate all key characteristics
- Enhance the initial solution model using "solution-after-next" principle.

At the end, we identify solution model critical success factors and performance measures

- Conduct a facilitated session
- Identify the critical success factors
- Identify, describe and evaluate potential barriers to the solution model definition
- Identify and test solution model assumptions and identify the performance measures to use when gauging the success.

In the process of solution model definition, it needs to select a convenient implementation strategy as well. Implementation strategy has 3 main stages;

1. Define implementation scope
2. Summarize strategy selection
3. Define high-level implementation schedule

It can sometimes be very difficult to convince the client to think about implementation at this point in the project. It is extremely important because it will help to drive all of the work that is done from this point forward. So, that we will know what we should be focusing on first.

While determining an implementation strategy you should care one of or all of these techniques;

- Conducting implementation strategy meeting
- Present implementation objectives
- Present implementation strategy options
- Compare and contrast implementation strategy options
- Discuss implementation selection criteria
- Give implementation strategy recommendations
- Discuss implementation wave factors
- Then think about to develop implementation strategy
 - Determine an existing systems and procedures replacement strategy
 - Select an implementation strategy
 - Conclude with the selected strategy
- Confirm the implementation strategy
 - Drill down with the selected strategy
 - Document the results of the implementation strategy meeting
 - Obtain sponsor approval of selected strategy

4.3. Solution Development and Realization



3) Realization

The purpose of this phase is to implement into the SAP system the business and process requirements and validated business model. The objectives are final implementation in the system, an overall test, and the release of the system for production (live) operation. The project team will need to get the corresponding training in these areas.

In ASAP methodology realization phase covers:

- Project Management
- Organizational Change Management
- Training in the realization phase
- Establish production environment
- Develop system test plans
- Establish quality Assurance environment
- Baseline configuration
- Final configuration
- Integration
- Workflow, ABAP, Conversions and interfaces programs, user roles and archiving

In other words, the goal of the realization phase is to build up a system prototype reflecting all the company processes and procedures defined in the to-be-concept. The main activities during this phase relate to customization: configuring the system tables according to the business requirements.

Furthermore, reports and forms required by the company must be created, programmed conversion and interfaces, and authorization set up. The realization and preparation phases overlap: that is, certain activities from the preparation phases take place simultaneously with others from the realization phase.

Before starting customization, it must be clear how to embed the company's organizational structure, processes, and procedures into the SAP system: that means having the to-be concept already prepared.

First, structures and procedures must be analyzed and then matched to the SAP structures. Modeling organizational structures is a fundamental step in the project. A lot of setting are difficult to change, or cannot be changed at all later on.

This step took us quite a while because our organizational structures and processes were not very clearly defined but had simply evolved gradually as the company expanded. After a lot of discussions with the people best acquainted with the department, the processes or procedures, we finally agreed on the to-be concept and set up the structure in the system accordingly.

In this phase, roles and key focus should be like this;

Realization - Roles & Key Focus							SAP
Phase Content Role Groupings	Proj Mgt	Org Chng Mgt	Proj Team Training	Config Sys Admn	ARICE Arch/Form	Integration	QC
Steering	Steering Meetings						Signoff
Sponsors	Review / FU on Recommends			Check for Approvals	***** Check for Approvals		Signoff
Project Mgt	Review, Status/ Cutover & Prod. Support Plan	Analyse Org Implement. Risks	Refine Training Sched/ Review Proj Team Risk Assmt	Approve Config Plans/Validate Completion	*****	Define Scope & Test Cases/ Approve	Quality Check Signoff
Consultant	***** Realization Phase Review	***** Analyze Org Implement. Risks		***** Refine Scope Config/Define Test Cases	Define A-R-I-C-E	***** Conduct Test Cases	
Customer	*****	*****	Attend PTT	*****	Test, Review, & Approve		
Technical			Attend PTT	System Test Plans/QA & Prod Enviro/ Prep for ABAP	Create, Test, Migrate Programs & Procedures		
Training			E.U. Training: content & prep				
Change	Team Bldg Activities	Org Impact/ Risk / Sponsor		Org Structure	Authorize Design/ Job Functions		
Security			Attend PTT	Create & Register Dev	Review Strategy Create Models		

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Figure 4.24. Realization - Roles and Key Focus**4.3.1. Roles and Key Focus**

According to ASAP methodology, main roles and definitions as follows;

Steering Committee:

Members include project sponsors, SAP consulting manager and project managers.

Project sponsors:

Directly communicates the company's long term goals and visions and are members of the steering committee

Project Management:

Team SAP project manager and customer project manager

Consultant:

Team SAP members, application, cross application, business process

Customer:

Project team members (business process, power users)

Technical:

Customer or consultants for system administration and technical

Training:

Training & Documentation – project manager/lead/developer, training development instructor, training coordinator, administrator

Change:

These are dedicated individuals assigned to manage the organizational change management processes: Risk assessment, communications, sponsorship, skills development, knowledge transfer or organizational optimization

Security:

Authorization, administration or internal auditor responsible for managing the system security and authorization environment and may be combined with other administrative roles.

In this point, we can review project management checklist in general;

- Prepare and attend status meeting
- Prepare and attend steering committee
- Determine project variances and success criteria
- Refine the project team
- Determine production support plan
- Determine cutover plan

We should note that project review program is provided as an SAP service by SAP consultants. Reviews and controls can be scheduled throughout the duration of the project. A review and control process provides an independent and objectives management review of the customer implementation project, identifies any risks to the project goals and recommends appropriate actions.

The first purpose of this section is to ensure that the organizational change management (OCM) activities take place as planned and is successful in mitigating OCM risks. Second purpose is to ensure that there is an infrastructure, which supports the transition to the new organizational business solution.

Here, there are briefly the following activities;

- Monitor and update OCM plan and activities
- Continue business optimization process
- Measure OCM risk and benefit from activities guide

In Realization stage, the process of training materials is one of the main activities. Here aim is to define how to create the training materials and documentation. And also to finalize and conduct level three of the project team training. Additionally; during the realization phase, end user training and documentation is defined, developed, changed and finalized. In fact it is always improved accordingly during production system.

4.3.2. Realization Phase Main Activities

The main activities can be detailed as follows:

- The purpose of the **Conduct Project Team** training activity is to conduct level 3 project team training so that team members can get insight of the business processes or technical features in their area.

This training shows the many process and technical options available to your company and how to configure the system to meet your company needs.

- The purpose of **Define End User Training and Documentation Content** activity is to set the standards and review process, communicate this information to the course developers, and develop the course outlines are further tasks involved in this

activity

- The purpose of the **Develop End User Training and Documentation Content** activity is to develop all training content and documentation as defined in the end user training and documentation plan and designed in the prototype
- The purpose of the **Prepare for End User Training and Documentation Delivery** activity is to prepare for end user training delivery and distribution of documentation.

In this activity, you will finalize the training curriculum and job roles, develop a training logistics plan, test the training system, conduct a train-the-trainer, and finalize end user training content and documentation materials.

4.3.3. Project Team Training

First of all, an efficient training program should be developed. The trainers should be qualified enough and experienced about SAP projects and modules.

To prevent a delay in realization and have to better control, re-evaluate the package training schedule. You can ask yourself these questions:

1. Are your employees receiving the right training?
2. Have there been new people added to the project that need to be added to the training schedule?
3. Have people been reassigned to a different area requiring the schedule to be adjusted?
4. Have all decisions been made on where training will take place and whether or not logistics will need to be resolved?



Figure 4.25. Project Team Training

The project members must take all relevant level 2 and level 3 training by the end of the baseline configuration. Ideally, level 2 training is taken by the end of the project preparation phase, as part of the preparation for business blueprint phase. The level 2 preparations are also crucial to obtaining the special configuration knowledge for the applications in the level 3 training. Ideally level 3 training should be completed prior to, or early in, the baseline configuration. In this way, the project members should be able to go over the training again, and then be able to apply quickly their newly gained knowledge in final configuration.

One of the objectives of realization phase is the implementation of the system as specified by the business blueprint, its overall test, release and documentation.

The configuration is realized in two work packages;

- Baseline configuration and configuration (planning, implementation, test and release)
- Final configuration and confirmation (planning, implementation, test and release)

In order to do final integration test, you must also plan, realize and test all relevant interfaces, system enhancements, and so on. The business process list (BPML) is the central tool to properly plan and document realization. Supporting documents, which provide the additional detail to actually carry out configuration and testing, are produced using templates designed for this purpose.

BPML is the central data repository. It contains all R/3 business processes and transactions that represent the scope of the project. The project scope was determined in the business blueprint phase. The BPML is also generated then, prior to the commencement of the realization phase.

As the central data repository, the BPML is used to feed required business process information to the working documents (worksheets) used to specify, manage, monitor and control the work packages of:

- Baseline configuration and confirmation
- Final configuration and confirmation (cycles)
- Final integration testing

During project scope definition in the business blueprint phase, adjustments (process variants) to R/3 business processes may have been to meet customer needs e.g. a distinction between a goods receipts with and without bar code recognition might be required, in which case a process variant would have been created.

In addition, business owners will probably have been identified. Applications consulting will probably have been identified. Applications consulting will also have defined, with the customer, the order of realization.

They will now be reflected in subsequent BPML worksheets derived from this master list in the realization phase.

The data conversion and interface to other programs or modules are certainly one of the most critical points in any project. Data conversion in the material area incorrectly is transferred the data from old computer system to the materials management module in SAP.

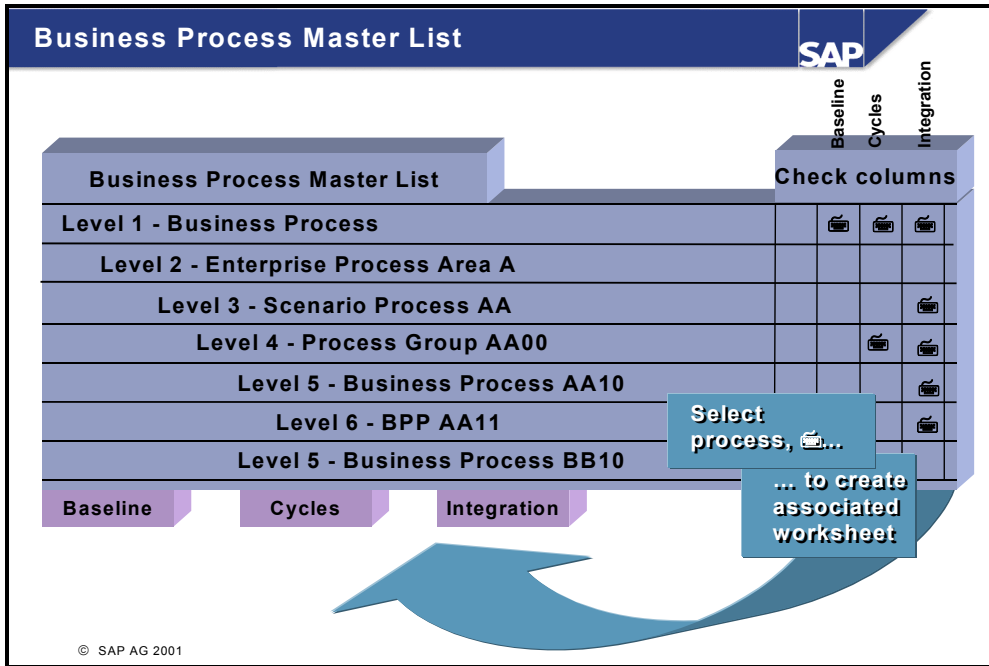


Figure 4.26. Business Process Master List

4.3.4. Conversion and Interfaces:

Below are a few important points to take into consideration for conversion and interfaces: (Welti, 77)

- **High priority necessary**

The importance of the conversion and interfaces is usually realized too late, since other direct project-related problems are given higher priority

- **Conversion is time consuming**

The amount of time used for planning, programming, testing, and converting the data is often underestimated. It is important that the conversion and interface topic is already taken up in the planning phase of the project, and that the necessary preparations are initiated. The conversion and interfaces have to be fully programmed, planned and tested during the realization phase.

- **Expert know-how needed**

Hire additional external consultants for programming the conversion and interfaces in case you run into a human resource bottleneck during the realization phase.

- **Data has to be tested by the user**

The conversion is not just an IT matter to be completed after the technical data transfer. The data has to be checked and tested after conversion by the project members and key users before it is released into production. The same is valid for interfaces: they have to be tested in advance to guarantee a correct data flow.

- **Plan the conversion**

The data conversion usually takes place on a weekend because the data must not be changed during the conversion. The people involved must be informed well in advance.

- **Set up a handbook**

A conversion and interface handbook helps to organize and control the conversion.

- **Check the quality of the old data**

The quality of the source data must be checked and corrected before it is transferred. Otherwise incorrect data might be transferred to the new system.

- **Consider manual data transfer**

If the source data is not at least 90% compliant with the SAP software standards, a manual transfer should be considered.

Conversion and interfaces are a very critical part of every project. However, they usually do not get the required attention from project leaders, mainly because they lack the necessary IT knowledge. The conversion and interface project must, of course, be in line with the main project, and is directly controlled by the project manager.

Setting up the conversion and interfaces as a separate project has the advantage that this project has to fulfill all requirements of a normal project:

- The IT members become the owners of the project and take over full responsibility for it.
- A handbook or procedure describing all the steps of the conversion must be produced.
- An implementation schedule guarantees detailed planning of all activities and human resources involved.
- The reporting allows the project management to monitor and coordinate progress.

To get a better insight into conversion and interfaces, it is necessary to produce a conversion and interface handbook containing the information.

4.3.5. Final Configuration:

Final Configuration and confirmation is one of important parts of realization phase.
(Look at **Figure 4.27**)

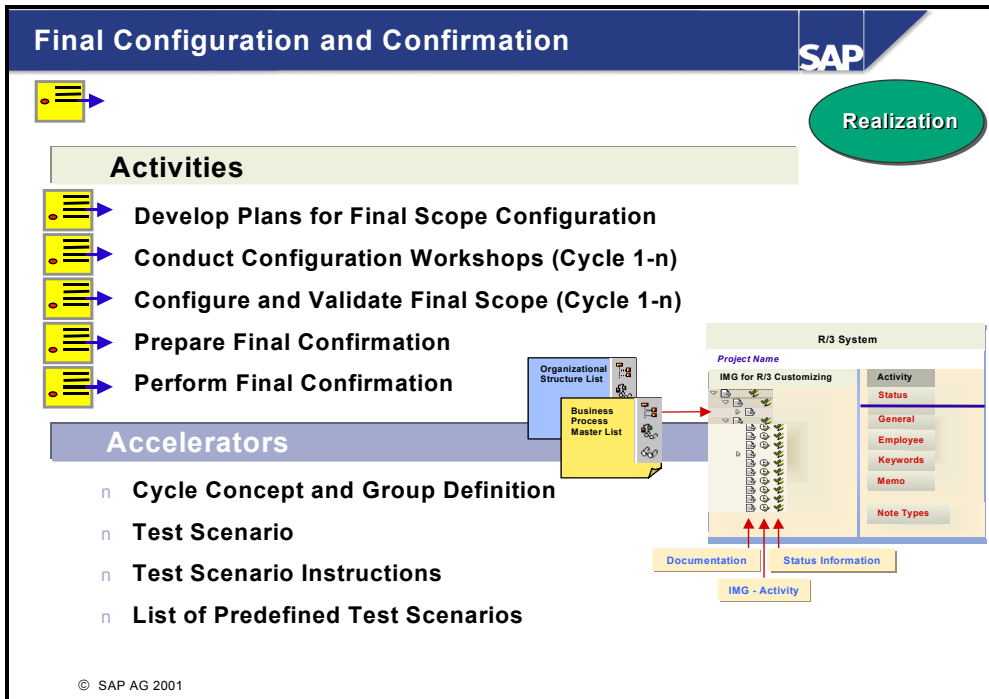


Figure 4.27. Final Configuration

- The cycles in the final configuration represent an iterative process that coordinates the configuration with your business processes and business requirements. This is normally carried out at the same time as the development activities.
- The application consultants assume the initial responsibility. As the end user retention increases during the knowledge transfer, this responsibility is gradually passed over to members of the project team.
- The result of the final configuration using cycles is a completely configured system that is based on the business requirements, the trained project team, the planned user procedures, the documented issues, and the system prepared for integration test.

4.3.6. Tests

Within realization phase, there are several testing types: Look 4.3.5

- Unit Test
- Scenario Test
- Development Unit Test
- Integration Test

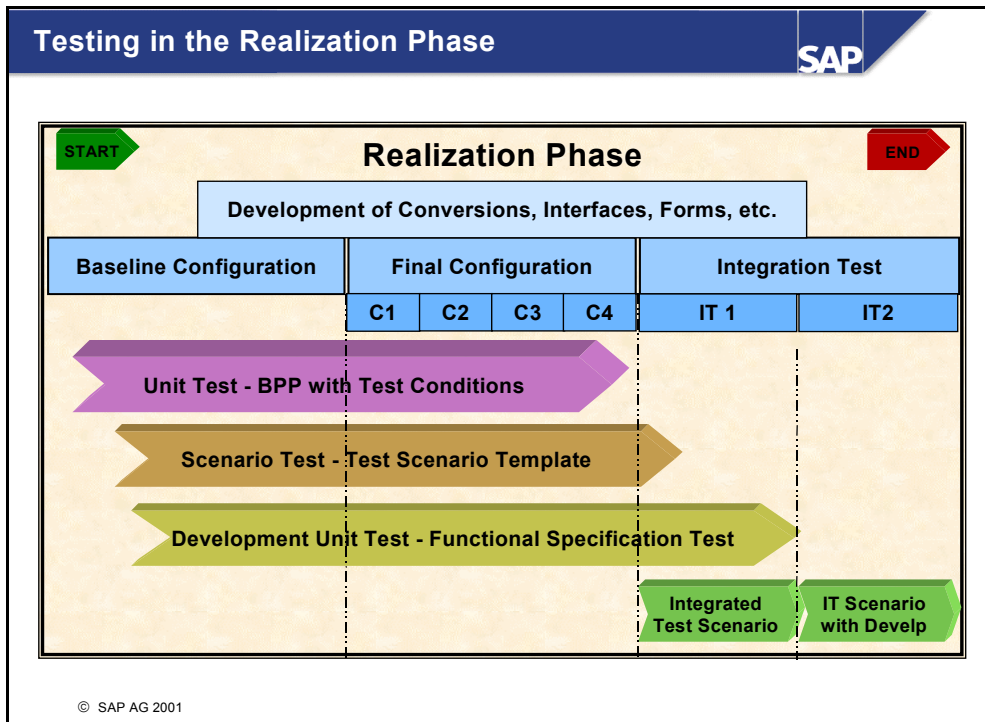


Figure 4.28. Testing

Unit Testing: This is the lowest level of testing where the program or transaction is tested and evaluated for errors. Unit testing is normally the first test that is completed during the configuration effort, and is focused towards the program's functions, rather than towards the integration. Testing focus: master data & business processes

Scenario Testing: During the configuration there is a need to test chains of transactions that flow together and which reflect important business processes and scenarios. Testing focus: Multiple transactions within one enterprise area. Workflow and business processes which cross enterprise areas. During subsequent integration testing these small scenarios can be used to build larger end-to-end scenarios.

Integration Testing: Final integration testing is accomplished through the execution of predefined business flows, or scenarios, that emulate how the system will run your business. These business flows, using migrated data from the pre-existing systems, will be performed in a multifaceted computing environment comprised of R/3, third-party software, system interfaces and various hardware and software components.

It is this environment that builds the necessary level of confidence that the solution is complete and will perform in your business.

Final integration tests need to be an evolutionary process that is driven from your previous efforts. The test cases and scenarios that were used for baseline and final configuration need to be reviewed and enhanced for the integration testing.

4.3.7. Final Integration Test

Integration Testing is an activity carried out by the test team rather than the developer. The major objectives of integration testing are:

- To verify that the interface between application software components function properly
- To verify that the interfaces between the application and its external entities function properly
- To verify the design specification

Integration testing can begin when the first, developer-tested software components are available. It will not be complete until all of the applications are finally integrated into a functioning system. Integration and integration testing are conducted many times during the system development effort. Each time, the identity of the components that are to be integrated, and thus the result of the integration, will be different.

In an early iteration, windows may be integrated and tested, with the result being a complete GUI.

In a later iteration, applications may be integrated and a system will result.

Activities in final integration test:

1. Prepare final integration test
 2. Conduct final integration test
- Set up test team and logistics and prepare for the final integration test
This involves extended team members in this test. They can provide a fresh outlook and closer knowledge of the business concerned.
 - Define integration test objective and define the integration test goals and objectives.
An important point is that you must choose which criteria will be used to consider the integration test complete.
 - Define integration test cases and determine and define test cases in the integration test plan
There are many cases in your business environment. To test them all using end - to - end scenarios is not practical. A method of selecting end-to-end scenarios and limited scenarios, or touch-point scenario, such as inter-company transactions, is used for integration testing.
 - Create final integration test plan and create a detailed final integration test plan
Final integration testing is a critical task in your implementation. Your test plan must include the following processes and components: Business processes, output, reports, interfaces, conversions, enhancements, technical setup and authorization and etc.
 - Approve final integration test plan and obtain approval of the test plan from the business process owners and members of the test team

All members must have the same goals and objectives to get commitment to the plans. When approvals are obtained, integration testing can begin.

4.3.8. Authorization:

SAP is a completely integrated system. (Welti, 80) Main target here is establishing user roles and authorization concept. The creation of an authorization concept for a specific module is time consuming because it has to be set up and approved by the line manager and customized by the IT people. Neither of these activities is easy to carry out.

Line managers must define the access rights of their staff. Such access rights must be formulated in terms of transactions.

The customizing of the authorization request in the SAP system is not an easy task, and must be done by experienced IT staff. For security reasons only one IT person per site was responsible for customizing the authorizations.

Responsibility for authorization rests squarely with the whereas customizing is a matter for IT personnel.

In order to accomplish a task, employees need to traverse a variety of business applications. The transactions and reports that characterize a typical job position can be summarized in a user role. It is important that users can only perform those tasks for which they are authorized and prevent them from unintentional or unskilled changes in other system areas.

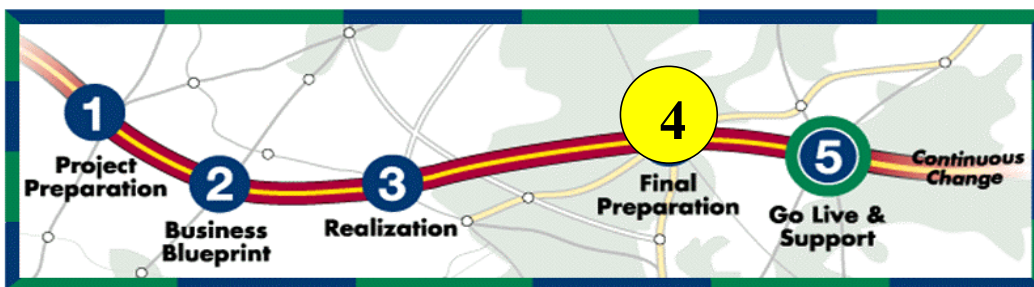
Since each SAP business application component provides options for controlling the use of functions through authorizations, a user role is associated with a set of authorizations that are required to accomplish the tasks of the role.

Besides the assigned authorizations, a user role further contains the definition of the user menu. The user menu specifies in a hierarchical structure the access paths to transactions, reports and websites for the end user, thus defining the interface for system access.

4.3.9. Prototyping

The goal of this section is to prepare a test system for initial user demonstrations. All processes must be customized, and reliable test data must be made available. Prototyping theoretically should take place at the end of the realization phase.

4.4 FINAL PREPARATION



4) Final Preparation

Objective of this section is to identify both the required system tests before cutover and the SAP support you can use for cutover and final testing.

And also it will complete the final preparation, including testing, user training, system management and cut over activities, to finalize your readiness to go live. This phase serves to resolve all critical open issues. On successful completion of this phase, you are ready to run your business in your productive R/3 system.

This phase shortly includes the following elements:

- User Training
- System Management
- User Manual and support
- Data Transfer
- Final Integration and System Tests

- Quality Check Final Preparation Phase

This phase can be shown like the following figure.

Final Preparation - Roles & Key Focus						
Phase Content Role Groupings	Proj Mgt	Training	Sys Mgt	Detailed Proj Plan	Cutover	QC
	Steering Meetings					Signoff
Steering	Steering Meetings					Signoff
Sponsors	Review / F/U on Recommends			Approval for Cutover		Signoff
Project Mgt	Review, Status Meetings		Go-Live Check	Refine Cutover & Prod Support Plan	Approve Prod System / Verify User Readiness	Quality Check /Signoff
Consultant			Asst w/ volume & stress testing			
Customer			Asst w/ printing & stress tests		Manual Entries, Conversions	
Technical			Production Sys Admin	Production Support Plan	Perform Conversions / Secure Prod. System	
Training	Conduct EUT	Conduct EUT & Evaluate Effectiveness				
Change	Con't Org Chg Mgt Process					
Security						

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Figure 4.29. Final Preparation Phase

4.4.1 User Manual and Support

The user manual serves as a training handbook, as system documentation, and as daily reference resource. A good manual promotes user acceptance of the software. It should be ready before the training begins so that people can familiarize themselves with its use, adding personal remarks as appropriate. (Welti, 83)

The manual must be revised, supplemented, and improved from time to time, and with this in mind its structure should be kept as flexible as possible. In this way, chapters can be easily amended and/or expanded. Above all, the user manual should be user friendly: that is, as simple and concise as possible.

Responsibility for the manual clearly carries with it a role in training the users. The person allocated that responsibility and role naturally will be identified by the users their expert adviser.

The concept of a support center is potentially very attractive to users. It is certainly important that they know where they can get help, particularly after a module has gone into production.

Secure in the knowledge of instant support, the users first reflex is to pick up the phone even for the most minor problems, which could be solved easily by consulting the manual. Whereas they should review user manuals and related textbooks instead of asking help desk. But they always prefer to call there. May be to ask them is quite easier than reading.

Below, we would like to share some brief conclusions;

- Resources are better invested in producing a high quality manual than in manning a

continues hotline with highly qualified staff.

- Most user problems do not require urgent attention, and will often work themselves out.
- It should not be made too easy for users to get through to the hotline.
- Hotline personnel should not be too approachable. They should discourage routine contacts.

4.4.2 End User Trainings

Here, aim is to ensure that all end users are adequately trained prior to the "go live" date. They should define, develop and finalize training & documentation content. And so they should conduct "go live end user training". So briefly, you will see a to do list related to this section:

Implementing training logistics plan:

- Finalize logistics for training and the end user training schedule.

Conducting end user training:

- Conduct end user training
- Obtain end user training evaluation data
- Track attendance

Evaluating training effectiveness & implement improvements:

- Analyze end user training evaluation data & implement improvements
- Identify post go-live training requirements

End user documentation and training is included;

- Setting the standards and review process for training content and documentation development, in addition to defining an evaluation and improvement process.
- Denoting power and other users in order to define, with the help of the training and development plan, the necessary training for production.

End user training and the preparation of training material are often the most time consuming and costly aspect of the system implementation. Changes in the procedure can influence considerably the time and costs of an R/3 implementation.

4.4.3 System Management and System Tests

The objective of this process is to perform the relevant technical activities to prepare for production operation. These activities cover monitoring the infrastructure needs for production operation and determining required system administration activities.

In case of local rollout projects as part of a global program, the involvement of the customer competence center (CCC) is quite important. A customer competence center is an organization within the corporate enterprise that fulfills various functions related to SAP software and administration, and serves as the link between the enterprise and SAP. Its purpose is to ensure that SAP systems are implemented and run as efficiently as possible across the enterprise:

- Facilitating the implementation process
- Getting the best return on investment
- Providing advice on changing business conditions

Within preparation for production operation, they should conduct system tests. If it needs to express which elements cover;

- Conduct failure scenarios test
- Conduct system administration tests
- Conduct backup and restore procedure test
- Conduct disaster recovery test
- Conduct printing and fax test
- Conduct volume test
- Conduct stress test
- Conduct going live check

Here the purpose of going live check is to determine any potential problem areas in the R/3 system that could influence performance. This preventative measure is important for a successful R/3 implementation. R/3 customers who are preparing to go live should take advantage of the going live check from SAP.

For these, test a time schedule and a test plan should provide the necessary time and functional controls. You should spent good time in preparing this test phase. Here there are 2 important decisions.

- Time schedule
- Test plan

Time Schedule:

Time schedule describes the sequence and time frame of all tasks to be done during the test phase. Here to use Microsoft project tools could be more efficient as planning tool, with columns for task, start, estimated finish, actual finish, resources, and comments.

Test Plan:

The test plan should cover all functions of a module. As a checklist it must describe all activities and in detail. They should list all transactions, tables, forms, reports, menus, authorizations, master data, etc. The links to other modules also must be assured and tested.

4.4.4 Cutover Plan

Cutover Plan covers the following activities;

- Review conversion timing and planning
- Create checklist
- Determine production readiness
- Approve cutover
- Establish help desk
- Reorganize team for production support
- Define long term production support strategy

In this section to set up an internal help desk is very important for production support. In the final preparation phase, procedures and responsibilities are fixed according to the current plan. Help desk procedures need to be documented. Personnel need to be nominated and, if necessary, the project team needs to be organized for the production phase.

Next to support of single end users, the help desk team must be proactively involved in the support of the whole end user community. This means, for example, planning workshops for reviews of live functions, and checking new functions for system use optimization.

The help desk is particularly important in the first weeks after go live, but it will require help desk support throughout the production life of R/3.

4.4.5 Final Approval and Validations

The objective of this step is to obtain final approval from the steering committee for the system to go live. All preparations for the technical application, and organizational aspects of the project are ready for live business operations.

4.4.6 Going live Check List

All manual data entries must be completed before cutover.

Confirmation for going live depends on the readiness of the R/3 system.

Decision factors are;

- End user training is completed
- R/3 system administration is ready
- Stress test is completed
- Conversions and business processed in the production system have been checked
- Perform internal quality check
- Final Preparation Review

4.4.7 Data Transfer

Data transfer is the most critical aspect of the project. Most of the problems are encountered after introduction of a module is related to incorrect data transfers or interfaces.

Below are a few considerations that should be taken into account:

- The data transfer must be given a high priority.
- It is a time-consuming process, and sufficient time must be set aside not only for the technical data transfer but also for checking it afterwards.
- The transferred data must be fully tested in every detail by the line organization whose data it is.
- The transfer should be done at the latest possible moment in order to keep manual transfer to the minimum.
- The people involved must be given sufficient warning so that they can work at weekends or late nights.
- The data transfer needs to be coordinated with the other modules that might also require weekend working before going live.

5. How to maintain SAP

During the process of going live, there are two critical periods. In the first few days, you must execute the production support plan and check the results. Any problems must be resolved as quickly as possible.

Following the first few days of live operation, you must then address monitoring issues for the long term, particularly system performance, capacity and functions. Line organization must take over the ownership of the implemented system. Meanwhile the project team has to adjust and redesign the system continuously. They must conclude the business process re-engineering and follow-up projects and assess their results. These projects focus mainly on adapting the organization to the newly implemented software or add-ons while improving its processes and procedures.

5.1 Post Implementation

Optimizing the system is needed since not all business scenarios can be fully tested until they are in their real environment. Also in many cases the users realize their actual requirements only when the system is up and running. (Welti, 90)

During go live they will request further adaptations and even new programs for reports and forms. The users will realize just how much information can be retrieved from their new system. And also users always more and more change from the SAP support desk. Support service should become ready for these complicated requests. Their requests never will be over. That is why support desk approach should be strategic and organized to all these requests.

This phase is continued and available to improve continuously. In this point, system optimization process is always applied and the system is always optimized to use efficiently more.

During stabilization process, the required time to stabilize the system varies from project to project depending on the project setup. Here there are some factors that may influence the required time.

a) Data conversion and transfer

When data is not converted correctly, possible problems can occur, and that is why seriously effect the life system.

b) System test and preparation

If you have not give sufficient time to all system tests within the project, again you can face the some problems after implementation.

c) To-be concept

It is quite important for the project to finalize a well designed to be concept. If not, then this can avoid surprise during and after project implementation.

d) User training and information

If the users are well trained and informed about the project they will be able to solve own matters themselves.

Post implementation begins immediately after Cutover and continues until our Exit Gate Checklist is complete and you are ready to close down the project at the implementation site.

Below you can see post implementation objectives:

- Guide transition of responsibilities
- Review support services, pre-determined post-implementation activities, and outstanding issues
- Assign responsibilities and clearly communicate transfer of responsibility
- Have a clear understanding with client
- Make client feel confident

It will need to ensure that things like the help desk and other support services are working appropriately. Also need to ensure that knowledge transfer has taken place.

Post-implementation covers;

- Reviews support services
- Uses the implementation exit gate checklist to determine that all mandatory activities have been completed by the implementation team

- Assign responsibilities for outstanding issues and post-implementation enhancement

It is also important at this point that we go back to the Business Case and assess how well we did with regard to what we said we are going to do. Again this is how we are able to demonstrate our value to the client and justify our 41%.

Even though we will have prepared extremely well for cutover, some issues simply can't be anticipated and need the urgency of a new system, and job role, etc. in order to be uncovered. These are the things that we should learn from and communicate back to the development team.

You will need to prepare a post-implementation plan otherwise activities can be complicated. Post implementation plan combines defined post-implementation activities, post-implementation management, the completed implementation exit gate checklist, and post-implementation communication.

It is important to recognize that this is a process, not an event. This can take up to 6 months depending on the size of the implementation.

Once the main part of the work is completed, it is very tempting to move on rather than ensure that the work is completed and the maximum benefit yielded from it. (Maylor, 2002)

These final Processes carry a number of challenges, which the project manager will have to address:

- Trying to make the review process objective while taking into account a rich picture of the events surrounding project performance
- Relating procedural conformance to project performance
- The establishment of long term programmes of improvement while being assessed on short term measures which are predominantly financial
- Satisfy all the relevant stakeholder groups, while looking ahead to the next project

There are many reasons that work stops on projects. For some, it is because of the successful completion of the task. Some are stopped by their sponsors, due to changing needs or poor project performance, and others, due to lack of the necessary resources to continue.

Proper completion of projects requires discipline. Carrying out a worthwhile review requires investment of time and resource. The following elements that will require the attention of the project manager during this phase are:

- Ensuring there is an incentive for the project to be finished and that activities are completed
- Ensuring documentation of the process is provided to allow review, and of the outcome to facilitate any future support activities
- Closing down the project systems, particularly the accounting systems
- Constructing the immediate review of activities – providing a starting point for all improvement activities
- Appraisal and relocation of staff who have completed their activities and disposal of assets that are surplus to requirements
- Ensuring that all stakeholders are satisfied – sell your achievement and maximize the business benefit from your project

In this stage, they must officially close the project. At this time, any open issues are review and completed. In case of local rollout projects as part of a global program, there should also be a feedback to the global team.

5.2 Completion

The situation the project manager needs to avoid is where a project spends 90 per cent of its life 90 per cent complete. Finishing the activities so that resources can be released for other work and minimizing the costs incurred during the close - down phase are vital. (Maylor, 2002)

There is a trade-off to be considered here how much time and resource should be put into the closing the activities.

In the kind of organization where people are brought in on contract for the duration of that project alone and are paid a time rate. (According to the amount of time they spend working on it), there is little incentive for the work to be finished on time. The provision of some form of bonus for early completion should be considered where personnel have an active input to the result. Contractors and sub-contractors should be treated as suppliers in this respect and be eligible for development effort.

5.2.1 Complete Analysis and Documentation

Project analysis and documentation involves collating project records, ensuring that they reflect project objectives, analyzing success and effectiveness, and archiving all of this information for future reference. (Wolti,2001)

You must document your project from beginning. This is the basis for the extensive analysis and the material presented in this book. You will need to measure project performance and draw lessons for future projects. The documentation itself represents a valuable source of corporate information.

Documentation is one of the important parts of the project closing step. The purpose of providing documentation is:

- Provide evidence that the project has been completed in a proper manner, increasingly important given the requirements of ISO 9000.
- Give the customer of the output of the project guidance on the operation and maintenance of the item provided.
- Allow any future work on a similar project to have a good starting point, knowledge of what was done in this project.

Formal documentation includes all project correspondence including contracts, permissions, letters and memorandum. A procedure should be established for electronic documents and e-mails as to whether these need to be stored in hard-copy form and whether the electronic data can be consigned to a data warehouse.

In order to complete exactly you will need a check list to control which tasks are okay and which ones are not okay yet. And it will provide a highly visible means of ensuring that the finishing tasks are carried out.

5.3 Providing Live System Support

After implementation, the project organization remains active until all the problems are solved and the necessary follow-up projects are implemented. Once this is done the product should be handed over as soon as possible to the line organization. The project organization is then converted into an SAP maintenance and coordination organization, which is line oriented, and responsible for the stabilization, maintenance and improvement of the SAP.

This conversion is necessary on the following grounds;

Objectives:	New SAP organization
Ownership:	The new SAP organization must take full responsibility and ownership
Management:	SAP management needs a consolidating approach
New Blood:	In this point, it goes better if new SAP team and approach enter into to management

During the process of going live, there are two critical periods. In the first few days, you must execute the production support plan and check the results. Any problems must be resolved as quickly as possible.

Following the first few days of live operation, you must then address monitoring issues for the long term, particularly system performance, capacity and functions.

Here it is quite important that whenever a problem arises, end users know who to contact, and how. The help desk is particularly important in the first weeks after "go live" but you require Help Desk support throughout the production life of your SAP system. The help desk is a single point of contact with access to internal first level support for hardware, network, operating system, database, training, and application system problems.

Nowadays, there are many opportunities to get SAP support. Especially <http://service.sap.com> can be used if it needs. Internet platform provides personalized access to all SAP services necessary to design, build and maintain a high qualified solution.

Furthermore, you can benefit from SAP Service Marketplace. The SAP Service Marketplace is Sap's one-stop internet platform that provides personalized access to all services necessary to design, build and maintain a quality solution. Beside that SAP or SAP Solution Partners can help you for various services after go live. These services can basically be divided into 3 components. In other words, if we review some service types and possibilities for SAP customers and partners;

a) Support services

- Submit messages, access support packages and SAP notes
- Request remote service sessions

b) Consulting & education services

- Request hardware sizing, consulting project or re-engineering
- Online booking of training sessions worldwide

c) Information services

- Detailed information around the SAP solutions
- SAP related new offerings
- Download best practices materials

5.4 Managing The Scope

You should establish procedures for a program to ensure that scope changes are made at the program and project levels. (E&Y, 1999) Program wide changes may be documented in detail and key points summarized in the charter of the affected projects.

In the scope management, usually it must follow up the following steps.

1. Establish guidelines and standards for change request

- a. Define the categories that will be used to identify and track the change request
- b. Define the levels of severity for the change request
- c. Define the priority classification
- d. Define the roles and authorization level that each role has in processing a change request

2. Establish the change request evaluation procedures

- a. Develop and document the procedures used for evaluating requests

3. Create a change request worksheet

- a. Create a mechanism for submitting and processing change requests

4. Create a change request log
 - a. Create a change request log summary
5. Define how to administer scope updates and change requests
 - a. Identify the procedures needed to administer and manage change request
 - b. Define the procedures for updating and communicating the project scope when it changes due to approved requests
6. Define the change request reporting requirements
 - a. Determine any standard reports that should be produced from change request log
7. Create a change storage mechanism
 - a. Create a mechanism for storing change request. All change requests should be maintained regardless of their status.

5.4.1 Managing Change Requests

You can review change request step by step as follows:

1. Log the change request
 - a. Log the change request
2. Approve, reject, or defer investigation
 - a. Review the change request log with the project sponsor weekly to determine whether to accept, reject, or defer investigation of new change requests
3. Assign an investigator for accepted change requests
 - a. Assign an investigator with sufficient technical ability, knowledge and credibility so that user management will take recommendations seriously
4. Assess the impact of the requested change
 - a. Assess the change request by estimating and describing the impact of the change and determining the effect on the project schedule. These effects;
 - i. Deliverable effects
 - ii. Work effort impact
 - iii. Financial impact
 - iv. Schedule impact
5. Document an overall change assessment and recommendation
 - a. Synthesize the impact assessment into an overall assessment and recommendation

5.4.2 Closing The Change Request

In this section, briefly you can resolve open issues like above, and formally close them.

If we need to sort out concerning how to close , you can close the projects by the following route.

1. Review and close open issues
2. Review business benefits
3. Summarize and review lessons learned change process
4. Complete change management process
5. Follow-up on recommendations
6. Signoff and close issue list

So we close the projects officially. At this time any open issues are reviewed and completed. Resolution and closure for all outstanding issues in the issue management system must take place formal signoff from project team members.

The business drivers (the reasons the project was undertaken and why it is important to the corporation) and the business measurements (quantifiable business-related measurement by which the success of the R/3 implementation project is judged), both of which were defined at the start of the project in phase 1, are reviewed to check project results against the goals set at its outset. This review is presented to executive management.

An ongoing evaluation procedure is established to monitor the benefits of the R/3 implementation over time.

5.5 Project Audit

The project Audit is a thorough examination of the management of a project, its methodology and procedures, its records, its properties, its budgets and expenditures, and its degree of completion. (Meredith, 2002)

The formal report may be presented in various formats, but should, at a minimum, contain comments on the following points:

1. Current status of the project. Does the work actually completed match the planned level of completion?
2. Future status. Are significant schedule changes likely? If so, indicate the nature of the changes.
3. Status of critical tasks. What progress has been made on tasks that could decide the success or failure of the project?
4. Risk assessment. What is the potential for project failure or monetary loss?
5. Information pertinent to other projects. What lessons learned from the project being audit can be applied to other projects being undertaken by the organization?
6. Limitations of the audit. What assumptions or limitations affect the data in the audit?

These are 6 parts of a project audit. Project audit is not a financial audit. The project audit is far broader in scope and may deal with the project as a whole or any component or set of components of the project. It may be concerned with any aspect of project management. While the project audit may be concerned with any aspect of project management, it is not a traditional management audit. Management audits are primarily aimed at ensuring that the organization's management systems are in place and operative.

If we summarize the relationship between management and project audit, the management audit looks at managerial systems and their use. The project audit studies the financial, managerial and technical aspects of the project as an integrated set applied to a specific project in a specific organizational environment.

There are several practical constraints that may limit the depth of the project audit's investigation. Time and money are two of the most common limits on the depth of investigation and level of detail presented

in the audit report. Accumulation, storage and maintenance of auditable data are important cost elements.

The type of project being audited and the uses for which the audit is intended dictate some specifics of the audit report format. Within any particular organization, however, it is useful to establish a general format to which all audit reports must conform. This makes it possible for project managers, auditors, and organizational management all to have the same understanding of, and expectations for, the audit report as a communication device.

Negative comments about individuals or groups associated with the project should be avoided. You should write in a clear, professional, unemotional style and restrict its content to information and issues that are relevant to the project. The following items cover the minimum information that should be contained in the audit report:

- Introduction
- Current Status
 - Cost
 - Schedule
 - Progress
 - Quality
- Future Project Status
- Critical Management Issues
- Risk Analysis
- Limitations, and Assumptions

The auditor/evaluator must maintain political and technical independence during the audit and treat all materials gathered as confidential until the audit is formally released.

A project audit covers the following routing;

1. Assemble a small team of experienced experts
2. Familiarize the team with the requirements of the project
3. Audit the project on site
4. After completion, debrief the project's management
5. Produce a written report according to a specified format
6. Distribute the report to the PM and project team for their response
7. Follow up to see if the recommendations have been implemented

5.6 Structuring Improvement Activities

There is much written on the subject of process improvement from almost any perspective you care to imagine. The project manager can carry out activities that will improve the performance of future project processes on several dedicated criteria. (Maylor, 2002) A suitable structure is to separate two elements:

1. Learning before doing and ensuring that the necessary knowledge and skills are available in advance of their in a project
2. Learning by doing and so those elements that can be learned from previous activities

To improve the process, learning process from projects is suggested to be at least twofold, through learning before doing (through identification of appropriate knowledge in advance of need), learning by doing (through review and integration of that knowledge into the organization), and longer-term reflection.

With SAP or ERP you can improve your business activities if you know how to use right the system or you are able to use it with maximum performance. SAP or any ERP can increase the productivity better if you or a consulting company works on it.

5.6.1 Consultants for SAP and Process

There are many large SAP consultancy firms in the world. For instance; PriceWaterhouseCoopers, Accenture, Ernst&Young, McKinsey, etc. There are between important consultancy firms and they serve worldwide within clients.

The general role of consultants is in the provision of specific services such as accountancy, strategic analysis, human resource development or information technology. The consultants during SAP implementation or after implementation have some responsibilities. First of all we can categorize them into 3 basic business functions:

1. SAP Module consultants
2. Process Consultants
3. Technical Consultants

But, while improvement process we need process consultants more than the other consulting services. The consultant within improvement process can have the following roles: (Maylor,2002)

- An integrator – providing an overall project management service as a single point of contact for a customer. They arrange the allocation of tasks between sub-contractors and are responsible for overseeing progress
- As an honesty – broker – gaining an external “independent” viewpoint on a situation can be beneficial.
- As a change-agent – providing the focus for activities while keeping an overview as to what is happening
- As a knowledge provider in one or more specific areas or techniques
- As a resource provider – to allow tasks to be carried out that people from within the organization would claim that do not have the time or capability to do
- As a checker of the way in which the process is being carried out
- As a trainer – rather than doing the job for the organization, the knowledge is imparted to the members of the organization through training.

In the future consultants are going to have an important role to play in the management of projects and in the provision of resources that companies are not large enough to have in-house. Their role will need intelligent purchasers of their services if it is to be successful.

5.6.2 BPR (Business Process Re-engineering)

After implementation of the project as second step is to meet all of the objectives set at the beginning of a project; this may even be a more crucial factor. (Wolti, ?)

The company has to improve and adapt its organization, processes, and procedures to the standard software. By implemented an integrated software package such as SAP, the IT environment is upgraded. However all other business management elements, processes, organization, methods and procedures cannot be improved so quickly. As most of the management goals set for a project concern the three latter elements, subsequent projects must ensure that these objectives are achieved.

Business Process Reengineering has to be conducted after the project implementation of an enterprise resource planning package, for the following reasons:

- BPR requires good knowledge of the enterprise planning package to reorganize business processes to conform to the integrated standard software processes.
- BPR during the SAP implementation is likely to fail, because a combination of an IT system change with BPR will exceed the capacity of most employees to absorb the-changes
- Complexity is reduced, because organization, processes, and procedures are determined by the standard software

- Capable human resources from the project with the requisite knowledge of processes are more readily available after project implementation

To get the full benefits of the package and eventually to improve effectiveness and efficiency throughout the whole company, it is necessary to align and balance all of the four basic elements :

1. Processes
2. Organization
3. Methods and Procedures
4. Information Technology

The aim of the post-project activities is generally to improve further these elements of business management and to integrate them with information technology.

Weak points in business processes must be identified during implementation of the enterprise resource planning package so that they can be covered in the subsequent BPR.

The project management must initiate BPR projects and pass them over to the line organization whose processes and procedures they affect. However, these line projects still fall under the umbrella of the total project implementation, and so the project manager is still jointly responsible for them, and should take an active role in their implementation.

After implementation, you should follow the action list to improve your process. The action list has to carry out under the supervision of the steering committee, because this issue is mainly conducted as BPR projects.

For example, you will see a action list as below;

- Define customer information matrix
- Define performance measurements
- Reduce amount of self-collectors
- Clarify definition of functions and tasks
- Set up activity plan for lead time reduction
- Investigate allocation policy
- Decrease stock and material transactions
- Reduce start-up losses
- Decrease number of cores
- Planning for foaming and cross-linking
- Investigate and improve supply-chain management
- Evaluate process for orders
- Decrease payment timing
- Optimize manufacturing
- Produce optimum timetable

Standard software is incapable of supporting all company-specific processes and procedures. SAP is continuously in change and development. As soon as all the modules are implemented, new versions of the software are available and, with it, new functionality.

The project management team and, the module coordinators have to know the improvements in the next releases for their modules. That is why, you can plan follow up projects to complete your implementation. Certainly it will get the next requirements and new request within SAP live system. That is, you always will have to plan new small projects, which are usually add-on or process improvement aided.

Considering the impact on the organization in which the BPR activities are being undertaken, the project manager has to consider the assumptions that underlie the existing processes and how these might be removed. Organizational rules and working practices are certain to be compromised by the changes.

(Maylor,2002) The objectives of activities will also be reassessed in line with a process rather than a function.

In short, the case for arguing for continues improvement is proven, while the case for going with BPR as described here is not. Many firms have used such initiatives to improve performance and it is not always necessary to badge it as BPR. In every SAP projects, if you establish a business process improvement team, they will try to keep the system live, update and productive always.

In setting the objectives of the re-engineering process, many organizations have chosen to try become more 'lean'. This provides a set of principles that will guide the organization in its re-engineering efforts.

You can define various small projects like above. And with a schedule you can initialize to implement these projects. Aim here is to develop, add, control and so measure of the benefits. Because standard software is incapable of supporting all company-specific processes and methods. So it needs to be developed accordingly customer specific needs. Furthermore, as soon as all the modules are implemented, new versions of the software are available and, with it, new functionality.

Sometimes it arises mistake or error message, sometimes add on needs in terms of customer specific. These can continue during company life cycle or can be over. But generally this kind of projects always carry on within organization or business life. The reason of this; there is always a challenge or change in business, technology, personnel or in others factor. That is why follow up projects will be available continuously.

If we would like to give some examples relating ongoing projects without going into detail look at table 5.1

Table 5.1 Follow up project examples (Welti, 100)

<u>Module</u>	<u>Description</u>
Classification system	Improve setup and usage with regard to material master
Batch number management	Investigate possibilities of changing the batch number for finished product
Purchasing extension	Extend scope with transport and services, including invoice verification
Capacity leveling	Implement detailed scheduling
Cash management treasury	Introduce new functionality
Rough cut capacity planning	Implementation RCCP via SOP, rolling sales plan
Plant-wide purchasing	Introduction of plant-wide replenishment function
Electronic bank payments	Connection with banks regarding all posting. Introduce electronic banking in relation with SAP
Improvement of budget Functions	Shortcomings of the actual release to be corrected and possible improvements to be installed (such as link to sales Orders, link to sop)

In the current market, you can find various tools to re-engineer your processes no doubt. But here I will present a toolset called "ARIS". ARIS is integrated software products that enable you to apply the ARIS framework to your business. This remarkable set of business tools handles the entire life cycle of a business process, from design to analyze, though installation to continuous improvement. ARIS product suite enables you to document, analyze and improve your business processes – in a single department or across your entire enterprise.

My aim here is never to market ARIS products, of course. However, I wanted to present a example BPR tool with its capabilities, functions, flexibility, knowledge and objectives. Clearly you can investigate and reach your most convenient BPR tool to improve your process. Briefly ARIS could become a good

example relating to BPR tools to describe. You can use it during SAP implementation as a tool or independently of SAP. It could be a option instead of Value SAP or ASAP.

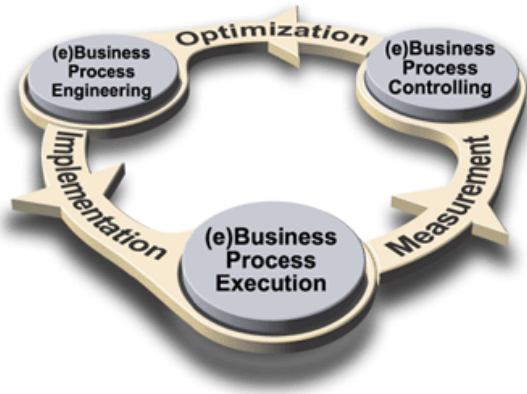


Figure 5.1 The Business Process Intelligence Life Cycle

The ARIS Framework forms the basis of a business blueprint: a scale model of your company that can immediately tell you the impact in time, money and resources of any change you propose. To put into practice, the ARIS Framework helps shape a more flexible, customer-focused company, and stores the information you need to make smarter business decisions.

ARIS developer company has also developed the software products that provide tools for capturing, editing, simulating, and improving business processes in a truly comprehensive way. The ARIS Toolset has been recognized by GartnerGroup as the finest tool of its kind on the market.

Using the ARIS Product Suite, you can measure your business processes and compare them to industry benchmarks or process variants. You can create reusable process standards, and apply them across your enterprise. Most importantly, you can see the impact of change on your existing business processes before you implement. And everything maps back to your business objectives.

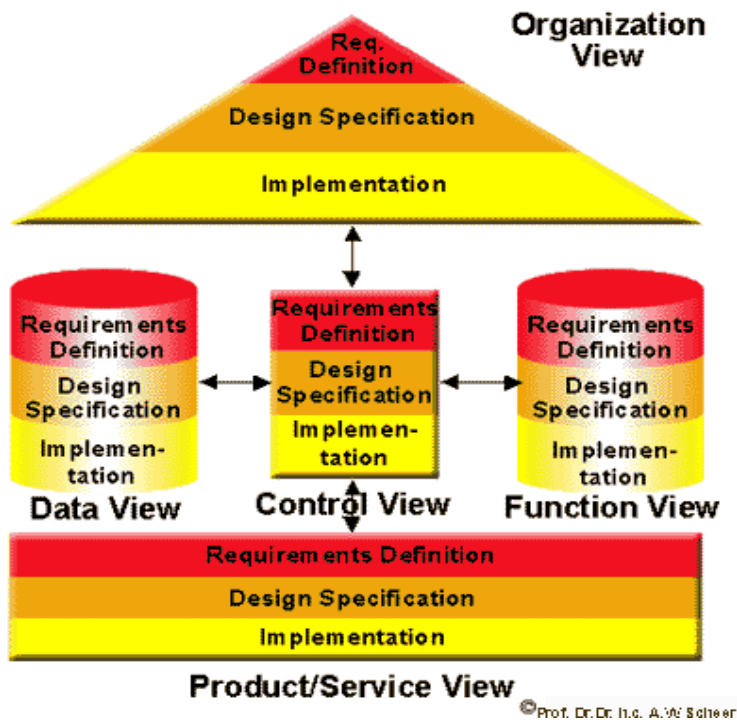


Figure 5.2 BPR Toolset Product/Service View

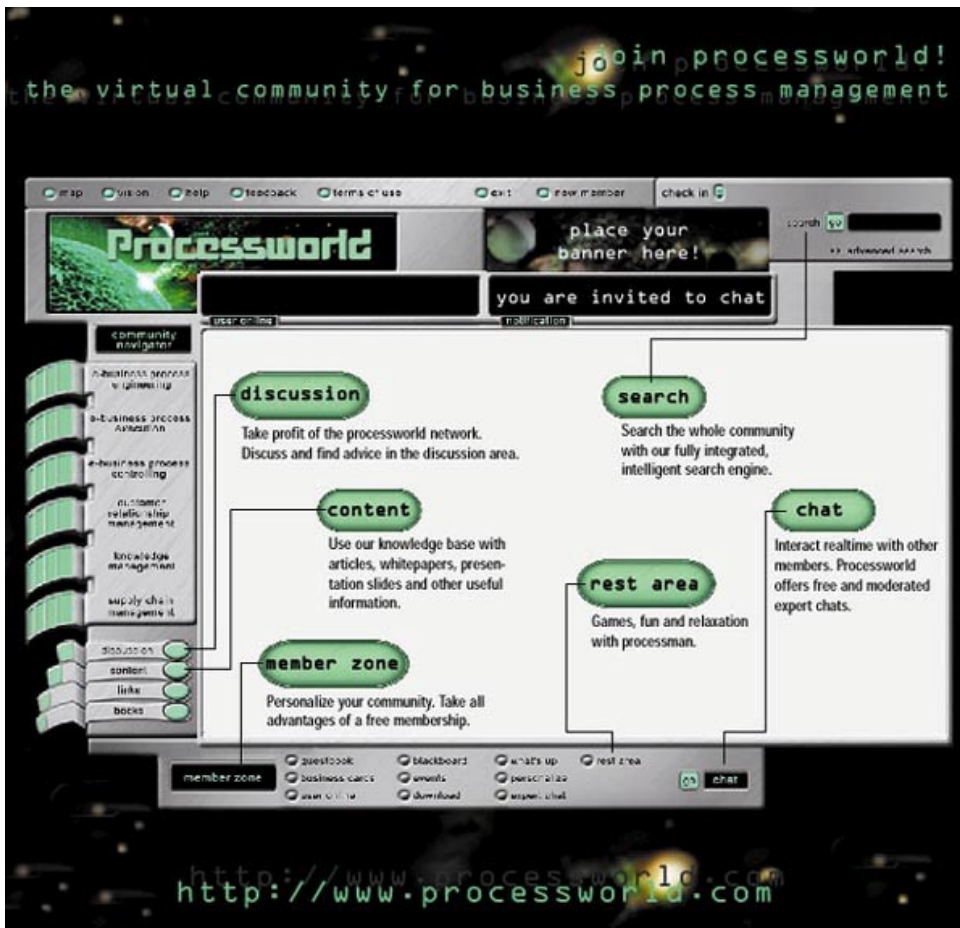
Technology continues to change and markets are always in flux. What hasn't changed is your need to make sound decisions in support of your business objectives: to increase market share, to improve your bottom line, to reduce your time to market. BPR tools like ARIS give you the knowledge and flexibility to make those decisions, quickly and intelligently.

In fact this kind of improvement sounds complex. Actually both is more difficult and the the easier. Depending on the tools and methods can facilitate the improvement process. BPR tools simplify the complexity of your business so that you can focus on running it more efficiently.

About every major company around the world is engaged in some kind of business process improvement exercise. Whether it's business process reengineering, knowledge management or e-business, everyone is looking for better ways to do business.

To communicate ideas and identify opportunities for improvement, companies have traditionally turned to graphical modelling tools. There are hundreds of tools available, each with its own focus and functionality. Most tools support standard modelling methods, and many boast some kind of analysis capability. But in today's complex business environment, traditional modelling simply falls short.

Below, I attach a internet site to review what is going in virtual process management world. Look at **Figure 5.3**



5.3 Process World

6. Importance of Local Culture

6.1 Effect of cultural features on communication and teamwork

(Kramer, 2001) Understanding cultural background is critical to successful international business communication abroad, as the examples in this chapter will illustrate. Today's economy requires doing business all around the world. International mergers and acquisitions have increased many employees interaction with their counterparts in other countries. Chrysler has merged with Daimler-Benz, Amoco has been acquired by British Petroleum, and Merrill Lynch has gone shopping for Japanese firms.

Understanding cultural backgrounds is equally important to successful business communication within the United States. If you work in the hotel or restaurant business, the cultural backgrounds of the employees may be Pakistani, Salvadoran, German, Vietnamese, or a dozen other ethnic groups. If you work for a company, the cultural backgrounds of your customers may be Swedish, Jamaican, Lebanese, Ethiopian, or one of the many other nationalities that are business owners in our pluralistic society. Your hardware suppliers may be French, Japanese, or Irish. Your software may be written in India, Russia, or any place in the world with an internet connection. Increasingly, your own personal business success may depend on your facility at intercultural communication.

Here is a definition from Vijay Sathe, who has long studied the relationship between culture and business management: "Culture is the set of important understandings (often unstated) that members of a community share in common.

A key word in this definition is "unstated". Culture is usually so internalized, so much a part of the way people believe and act, which is transparent to them.

In order to help the "important understandings", we use the words beliefs, values, attitudes, behavior and norms. Let's briefly examine these terms to further develop our understanding of intercultural communication issues.

Beliefs are basic assumptions about the world and how it works. **Values** are basic assumptions that imply "should" or "ought to". They govern expectations about right and wrong, preference, and desirability. **Attitudes** express values and influence group members to think and act in certain ways in specific situations. **Behavior** is human action. Norms reflect what is expected or considered typical behavior in a cultural: what is normal?

When people from different cultures and nationalities interact, miscommunications can result. These miscommunications can occur in nonverbal behavior, in speech, in writing, in any area because we interpret the behavior of others according to our own culture, which is to say we may misinterpret it.

Knowing some of the dimensions of cultural difference can help us be more mindful of our communications behaviors of others. One important cultural dimension is individualism versus collectivism.

Individualism versus collectivism

Individualistic cultures emphasize the individual, as the term implies. Such cultures value self-realization, personal growth and fulfillment, and individual initiative and achievement.

Democracy, in which citizens have an equal voice ("one person, one vote"), is a form of government compatible with individualistic cultures. Individualistic cultures tend to control the behavior of their members by means of guilt, internal pressure the individual brings to bear upon himself or herself.

On the job, American businesses have spent much time and money introducing their workers to the concepts of quality circles, team production, and group decision making.

Organizational cultures of many corporations reflect the historically individualistic nature of American business. For example, individual rewards for top sales or increased production emphasize competition between rather than cooperation among employees. Employees may focus their energies on personal goals and on beating the other fellow. Some companies have discovered, however, that rewarding team efforts rather than individual efforts encourages people to pool their strengths and apply them directly to company goals rather than using their energies in competing against each other.

Collectivistic cultures emphasize group membership. Such cultures value belonging to and fitting into a group. Group goals take precedence over individual goals. People value cooperation, loyalty, consensus and harmony.

Collectivistic cultures tend to be particularistic. That is, they apply different value standards for members of the "in-group" and the "out-groups". They do not assume that people from other groups should have the same natures, rights or privileges as those from their own group. Even within the culture, there may be rankings for in-groups. For instance, some collectivistic cultures (such as Mexico) place family ahead of workplace; some (such as Japan) place workplace ahead of family.

Table 6.1 lists some of the key norms that differentiate collectivistic cultures from individualistic cultures.

Table 6.1 Norms Differentiating Collectivist and Individualist Cultures**Collectivist**

People are born into extended
Families or other in-groups that continue
To protect them in exchange for loyalty.

Identity is based in the social network to
which one belongs.

Children learn to think in terms of "we"

Harmony should always be maintained and direct
confrontations avoided.

High context communication.

Trespassing leads to shame and loss of
face for self and group.

Purpose of education is learning how to do

Diplomas provide entry to higher status groups

Relationship of employer to employee is
Perceived In moral terms, like a family link.

Hiring and promotion decisions take employee
in-group into account

Management is management of groups.

Relationship prevails over task.

Individualist

Everyone grows up to look after himself or herself
and his or her immediate family only.

Identity is based in the individual.

Children learn to think in terms of "I"

Speaking one's mind is a characteristic of
an honest person

Low context communication

Trespassing leads to guilt and loss of
self-respect

Purpose of education is learning how to learn

Diplomas increase economic worth and/or
Self-respect

Relationship of employer to employee is a contract
Supposed to be based on mutual advantage.

Hiring and promotion decisions are supposed
to be based on skills and rules only.

Management is management of individuals.

Task prevails over relationship.

Source: Geert Hofstede, Cultures and Organizations: Software of the Mind (London: McGraw-Hill, 1991), 67

Speaking and writing across cultures

Cultures differ in their attitudes toward the uses of speaking and writing in business transactions. Some cultures seem to prefer doing business orally; some rely more on writing.

Cultures also differ in the level of formality appropriate for business conversation. Almost all other cultures are more formal than North Americans in the way they address one another in public. Many people find this informality disrespectful and offensive.

The flow of conversation also differs across cultures. North Americans typically want to dispense with small talk and "get down to business". North Americans tend to be "linear" thinkers and thus talk through a subject in more or less a straight line, one step or idea at a time.

Southern Europeans, in contrast, are much more likely to interrupt one another during conversation.

The role of writing in intercultural business communications varies from culture to culture, as do the formats and levels of formality. Consider the differing attitudes toward a common business document,

the contract. In the USA, a contract is a final, legally binding written document that formalizes an agreement. Not so in other parts of the world.

As these different attitudes toward contracts suggest, written documents may carry great authority and finality or they may be viewed as fluid and negotiable. Attitudes may also vary depending on at what stage of a business transaction the writing occurs. For example North American businesspeople may write a series of letters or memos throughout the process of arriving at a business decision.

Despite the prevalence of English in business, we should not assume that our business audience knows our variety of English or understands it well. Furthermore, we should not make the universalistic mistake of assuming that because someone speaks the same language we do, his or her thinking will also be much the same.

In contrast, many Asians, Latin Americans, Africans, and Europeans know two and even three or four languages. Even if we are dealing with somebody who is fluent in English, that person may be insulted if we ignore his or her native language. If you come from a background that includes another language besides English, practice that language and keep it fluent. If you have the opportunity to study a second language in school, take advantage of it.

6.2 SAP in Turkish cultural context

SAP is the largest ERP in the worldwide market as known. Both ERP implementations and SAP projects are one of the most difficult and complicated works. Because, it needs a strong project management, a good timing, financial support, qualified project resources, management, which controls, gives authorization, interested in and produce prompt solutions. Whereas, in our country we have so many constraints and problems so project management faces serious stress management within SAP implementation.

SAP is quite very known and very popular software but also in Turkey not only in the world. But except large corporations or multinational companies, small and mid sized companies get into confused actually. They both have to gain money and manufacture profitable products together their technology projects. Sometimes they have to choose which works they are privileged supposed to deal with? Which one has priority?

If we consider of the main problem sources within implementations for our country, we can determine a list as below;

- Top Management
- Functional Departments
- Personnel
- Financial Constraints or limited budget
- Time as a limit
- Lack of Training
- Lack of methodology
- Weak project management
- Weak sub-contractors

ERP project management consists of a strong teamwork too much. Whereas, we sometimes would prefer individual work though they know about us friendly, flexible, large and hospitality. But here in our country everybody wants to be leader though they have not sufficient knowledge and experience. In this point, project manager can behave emotionally instead of being logical. SAP projects require very serious and organized teamwork. May be module or group leaders can be authorized more administratively.

In Turkey, decision makers believe that they have a licensed product and that is why project management costs like consultancy and training can be ignored. They do not want to pay extra money for consulting and trainings. Furthermore, SAP or business partners cannot clearly explain about the costs in detailed within sales process. Or they cannot prefer to tell potential clients at the beginning. For them

is sometimes important to sell the product license only. Whereas they must identify all the costs, benefits, advantages and expectations in detailed. So let them evaluate the system completely.

When they are not satisfactory trained in pre sales step, some parties in project can be get in trouble in time. Beside that, users sometimes don't get interested in agreement conditions after sales and leave it to the project manager. In this case, project managers can be confused dependently. Project manager must be close to decision makers.

In local market implementations, one of the problems is not to use a strong methodology or not apply it as all because of time limitation. If time is so limited then project gets smaller and some modules or process can be ignored. In this case live system cannot run successfully. And it needs improvement continuously. Instead of this, if they separate time to improve their process, it will possibly be much more productive.

The reason of always change is exactly the partial implementation. They don't let them for full implementation as they don't want to give them too much time for implementation. People or project resource is generally from the company and they have responsibilities both functional and project tasks. Post implementation they are going back their functional roles immediately. This is a part of problem of resource assignment.

As part of our culture, we manage the project emotional and handle the time management. It always takes more time and so we have to face and discuss concerning budget and time factor several times. In the meanwhile project managers can change or rearrange. This is also waste of time. In country sometimes the decision maker cannot motivate project people good, they change job in the middle of the project or some time. This changes aren't good for the project. Decision makers should learn how to motivate the project team. They always think about if they leave job then they can find the new one. But such projects like SAP needs very qualified people and they try not to loose the SAP employees. Otherwise SAP projects takes much time and never finalize.

Another matter is about business consulting. Multinational companies usually sign a contract with a SAP consulting partners to help them in process analyzing and designing. Before installation, it probably requires a process analysis and design work. This phase is available in most of the SAP methodologies. But here they cannot prefer a process engineering or reengineering because of the financial matters. That is why implementation starts wrong and within the project they feel a need to change some things. This outcome is also one of the factors, which cause extra time.

In local market, multinational corporations are more successful than local companies as they use the global methodology and they establish a good team in terms of international. Also multi cultural team gives much more benefits and advantages into SAP implementations. There they apply more stricter and planned task management. Perhaps, to use the ready templates is more practical for project team but they can not add a value extra. Within SAP implementation they should change some wrong process and perform a engineering or re-engineering for this reason. SAP implementation is not installation and data conversion only.

If the steering committee members or plants in Turkey wish very successful project management, then we advice to take care of the followings;

- Strong stress management
- Motivation and support
- Dateline
- Business or consulting Partners
- Process Engineering
- Good license contract
- Good maintenance contract
- Project control and documentation
- Not too much load but enough
- Sharing risk and benefit

Chapter 7 Implementation Experiences

7.1 CASE I – PHILIP MORRIS

Company Profile

- *Philip Morris in the World*

Philip Morris is the biggest company in the sector of packed consumption goods in 200 countries all over the world. In 2000, the general budget of the company exceeded 80 billions US dollars. Philip Morris companies can be grouped as; Philip Morris USA, Philip Morris International, Kraft Foods North America, Kraft Foods International, Miller Brewing Company and Philip Morris Capital Corporation. With a history of 40 years, the number of total employees is approximately 178000. www.philipmorris.com

- *Philip Morris in Turkey*

- Philsa Leaf Office, Oriental Tobacco purchases
- PM in Joint Venture with Sabancı
- Philsa (75:25); Cigarette Manufacturing (employment: 700), Agronomy (2000 farming families)
- PMSA (75:25); Distribution & Sales (employment: 800)
- Marsa – KJS Marsa Kraft - Sabancı JV 49:51
- Kraftsa Kraft - Sabancı JV 51:49

- *About Philsa - Philsa- Philip Morris Sabancı Sigara ve Tütüncülük Sanayi ve Ticaret AŞ*

- Number of Employees: 700
- Average Age of the Employees: 34.8
- Average length of Service of employees in Philsa: 7.1 years
- Departments: Production, Engineering, Administrative Services, Production Services, Environment, Health & Safety Services, Human Resources, Information & Communication Services, Finance, Institutional Relationships
- Production: The factory produces packed cigarettes with filter, which are distributed and sold in Turkey.

Products: The brands are Marlboro, Parliament, Chesterfield, Lark, L&M.

Company's ERP Approach:

Turkey is one of the key affiliates in Europe who produces and distributes cigarettes. The philosophy of our company is to share good ideas and best practices and if possible accomplish this centrally instead of re-inventing the wheel several times. This philosophy is valid in IS side as well. Selecting SAP as an Enterprise Resource Planning package was the example of this central decision making process. As PM Turkey, we did not spend time to evaluate several ERP packages like SAP was chosen for us before.

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The Project Phases:

As PM International we had project management (PM-PM) and project execution methodologies. PM tailored Method-1 methodology was the project execution methodology once we started our project. Therefore, we started our project with those methodologies and prepared project

definition plan according to PM-PM. When we checked the ASAP methodology, we decided to use this methodology for SAP Project Execution Methodology. In ASAP there were 5 main phases:

Project Preparation: This phase was the heart of the project when all budgeting, scooping, planning, implementation strategy and resource arrangements were handled. Also team orientation, team training and AS-IS studies were done during this phase.

Business Blueprint: In this phase business processes of our company and SAP R/3 business background were comprehended and tried to be matched as much as possible.

Realization: In this phase SAP R/3 was configured, necessary reports, interfaces, conversion programs and authorization set up were completed and tested in detail.

Final Preparation: This phase was just for preparing production environment in both technical and user wise. Users were trained, data were loaded, cutover studies were handled and technical production environment was prepared.

Go-live and Support: This was the last phase of the project and supporting the live operation and fine-tuning studies were done.

Project Implementation

1. Project Preparation:

1.1 Project Background

In 1996 SAP Package and its benefits were presented to our top Management and they decided to implement SAP in Turkey as soon as possible. It was decided that Czech Republic will be the first to implement SAP in the region; therefore they will start their SAP implementation project in 1996.

In 1996 we sent two of our colleagues; from IS and Finance; to Czech Republic to participate to their projects and have an idea about the implementation. IS person participated to SAP execution methodology selection and the Finance one was involved in investment budget implementation.

In 1997 our top management decided to start SAP Project and this decision was approved by the region as well. At that time we had two small packages; one for Finance (GL, A/P, A/R) and the other for Inventory Movements (purchasing, stock movements, costing, spare parts). The packages were used to their maximum extent. Although lots of effort and attention was spent trying to integrate these systems; they were not able to be integrated due to the infrastructure and design behind. This caused unnecessary inefficiency, redundant data entry, and no automated cross-checking due to information maintained on individual systems.

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Additionally, the installed packages could not support all the business functionality that we would like to implement such as:

- Fixed assets integration with Investment budget and Accounts Payable
- Purchasing cycle has several manual checks, inefficient controls
- Financial Management Reporting
- Investment Budget and Project control
- Budgets are not integrated with actual
- Most of Internal controls are paper based
- Cash Flow Forecast
- Spare-parts Statutory inventory valuation

Continuously a big part of IS and end user department resources were dedicated for support, maintenance and enhancement of these non-integrated existing systems. However, due to the

different technologies being used, these resources were not used to their maximum extent, and common business practices throughout the company were difficult to implement.

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Moreover the packages were not Year-2000 compliant and needed capacity limit modifications before the year 1999.

It is for sure that the potential of the old systems was exhausted and their Year-2000 issue was the last drop. Also dynamic business requires quick adaptations in the systems and our systems could not answer these kinds of requests. All of these factors triggered the new system implementation.

1.2 Implementation Strategy:

We decided to implement our project with big-bang approach because we needed to have the integrated system functions immediately. Also it was a good opportunity to think the processes globally and set up the system accordingly. It would reduce redundant customizing and having interfaces. Again if we wished to implement the best practices in our business, it was better to concentrate for the whole and design the system for once. The fallback of the big bang approach was; more resources were required than the phased approach both during the project implementation and the support phases at the beginning.

1.3 Objectives

Our project objectives were:

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- To create a fast, flexible and integrated system
- To ensure effective long-term support to our organization's needs and requirements

Project Announcement: Our top management made an announcement in July 1997 to all employees that PM Turkey SAP Project had started and would be completed in December 1998. The objectives of the project and all of the project members including vacant positions were announced.

1.4 Project Organization:

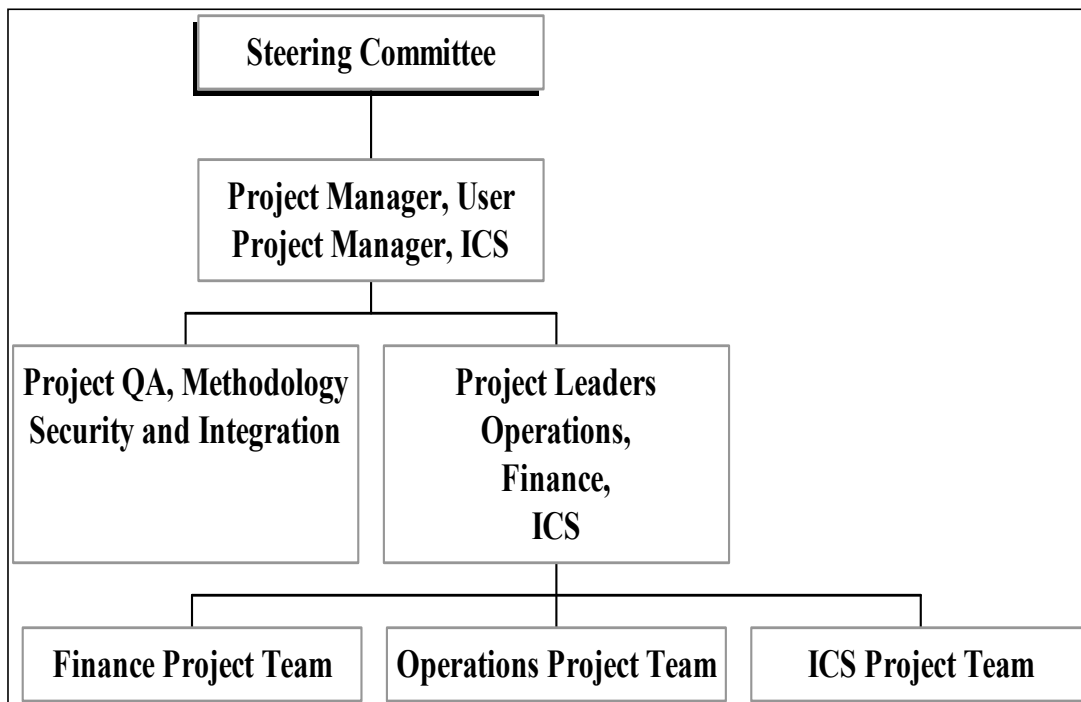


Figure: Original project organization

Steering Committee: General Manager, Finance Director, Operation Director, Sales Director and IS

Director in HQ were the Steering Committee Members.

Project Team:

It was decided to set up a project organization with 18 full-time members; 5 from Operations, 5 from Finance, 7 from IS and 1 from Internal Control departments. We had experiences before without full-time assignments but in those cases it was really difficult for one person to concentrate to the project totally. All of the ex positions of the members were replaced by other people and existing business have not been interrupted.

It was a well managed task because all of the project members had business experiences and knowledge to drive the project properly and in addition, also their replacement did not create a major problem in the business. Besides, our management considered the career plans of the people because project involvement always improves people' knowledge, conceptual thinking, presentation skills and management capabilities.

Project Managers: One of the difficult tasks in the project was selecting the Project Manager/s. In our case it was decided to have two Project Managers; one from IS and one from the Business side. It was common to have a IS Project Manager but uncommon to have a Business Project Manager. Actually our management wanted to have a mixture of IS & Business. Managers were complementary in terms of business and technical knowledge. It was easier for a user to communicate with a business person rather than a technical one. Besides, there were some specific tasks for IS and some for Business.

Project managers were very good in Project Management skills starting from planning to presentation skills. They had experience before with the same sized projects and one had international project experiences as well. They were very good in people management, leadership and communication skills. It was also considered for them to have an experience to lead international team and/or interdisciplinary team. They had very good network in the company and could easily reach the information knowing who to contact.

Project Leaders: Project leaders were selected from IS, Operation and Finance. All of them had very good business or technical knowledge as well as having leadership skills and achievement orientation skills.

Project Members: The project members were also selected by considering their business and technical knowledge. All of them were good in communication and team working concepts. Most of the people in the project had 3-5 years experiences before joining this project and they were all willing to learn more, achieve more and make changes, if necessary.

External Resources: It was decided to start with SAP Switzerland and Deloitte-Touche (Switzerland) for SAP Project Management consultancy and Quality Assurance reviews and in addition I-BIMSA (Turkey) for project execution (functional side) and training. Then, we worked with a variety of consultants from several companies and countries. For technical side we worked with ICC (Turkey) and Tata (India).

1.5 Project Facilities:

One building was established for our project close to the factory area. SAP Building was ready as of September, 1997. It had one open area for the team members and the consultants and separate rooms for the team leaders and the project managers.

Three pool cars were assigned to the team in order to allow flexible time working periods, late leaving and weekend hours. The photocopy machine, fax machine were leased. Temporary helps were hired for project administration and secretarial tasks.

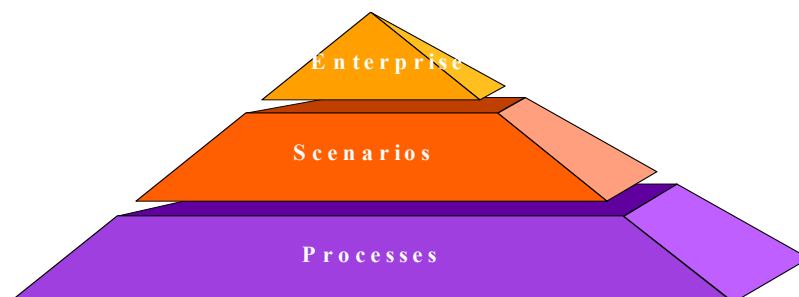
1.6 Scope:

Enterprise areas, scenarios, processes:

There was a list of enterprise areas in ASAP and reference model in SAP, which helped us to define initial scope. We started with 'Enterprise Area Scope'. When we checked enterprise areas and the scenarios we decided to implement:

- Procurement Logistic,
- Production Logistic,
- Sales logistic partially,
- External accounting,
- Financial Mgmt,
- Business Planning and Control

It was decided to implement Plant Maintenance and Organization and Human Management in Phase II (1999 and later).



Organize Around Business Concepts



“BIG BANG” IMPLEMENTATION

Then we worked together with the consultants to determine in-scope scenarios and processes. We used BPML (Business Process Master List) to mark the processes that would be covered during the implementation. That was high level of scope determination and fine-tunings were done after the workshops with user departments.

1.7 Scenarios Planning

Enterprise Areas	Scenarios	Modules		
Procurement Logistic	Processing Stock materials	AM	Asset Management	FI-AA
	Processing consum. mater	CO	Product Costing Overhead	CO-PC
	Management of consignment stock	CO	Management	CO-OM
	Subcontract order process	FI	Accounts Payable	FI-AP
	External Services Management	FI	G/L Accounting	FI-GL
	Quality management in procurement	FI	Financial Budget	
	Complex procedure for investment(CAPEX)	MM	Purchasing strategic Purchasing	MM-CBP
		MM	operational	MM-PUR
		MM	Goods accepted	MM-IM
		MM	Invoice Verification	MM-IV
		MM	Vendor	
		QM	Quality Management	QM-IM
		PP	Materials Planning	PP-MRP

PP	Production	PP-REM
PS	Project System	PS-EXE
SD	Sales operation	SD-SLS
TR	Cash Management	TR-CM

Enterprise Areas	Scenarios	Modules		
Production Logistic	Processing consumable mater.	AM	Asset Management Overhead	FI-AA
	Management of consignment stock	CO	Management	CO-OM
	Subcontract order processing	CO	Profitability Analysis Product Cost	CO-PA
	Repetitive manufacturing	CO	Accounting	CO-PC
	Process manufacturing	FI	GL Accounting	FI-GL
			Purchasing	
	Quality management in production	MM	operational	MM-PUR
	Cost obj. Contr. during repetitive prd	MM	Goods Accepted	MM-IM
	Cost obj. Contr. during process manufacturing	PP	Materials Planning	PP-MRP
		PP	Production	PP-REM
		PP	Job preparation	PP-SFC
		QM	Quality Management	

Enterprise Areas	Scenarios	Modules		
Sales Logistic	Standard Order handling	SD	Sales	SD-SLS
	Third-party order process	SD	Shipping	SD-SHP
		SD	Billing	SD-BIL
		FI	Accounts Receivable	FI-AR

Enterprise Areas	Scenarios	Modules		
External Accounting	Vendor Processing	FI	Accounts Payable	FI-AP
	One-time vendor	FI	GL Accounting Accounts	FI-GL
	Vendor branch/head	FI	Receivable	FI-AR
	Customer processing	AM	Asset Mangement	FI-AA
	One-time customer	MM	Vendor	
	Customer branch/head	MM	Invoice Verification	MM-IV
	General Ledger	CO	Product Costing	CO-PC
	Consolidation	MM	Goods Accepted Inventory	MM-IM
	Fixed asset processing	CO	Accounting Overhead	CO-PC
	LVA processing	CO	Allocation	CO-OM
	Leased asset process	PP	Production	PP-REM
	Special Purpose Ledger	SD	Customer	
		FI	Billing	FI-AR
		FI	Financial Budget	
		TR	Cash Management	
		FI	Legal Consolidation	FI-LC

Enterprise Areas	Scenarios	Modules
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Finance Management	Cash Management	TR Cash Management TR-CM
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Enterprise Areas	Scenarios	Modules
Business Planning and Control	Complex Procedure for Investment measure (CAPEX) Overhead management with static standard costing Cost Object controlling during process manufacturing Cost Object controlling during repetitive manufacturing Profitability analysis with static standard costing Account based profit center accounting using the period acc method Account based profit center accounting using the cost of sales method	CO Overhead Cost Controlling PS Project Controlling CO Product Cost Accounting CO Profitability Analysis AM Asset Accounting

1.8 Project Standards:

PDP (Project Definition Plan): It had several sections like descriptions, benefits, scope, project approach, cost-benefit analysis and risk assessments. This document was required before starting the project.

SAP Project Implementation tools:

The Reference Model: In Business Engineering we decided to use Process Model in R/3 Reference Model. It was possible to use both component view and process flow view to use EPC diagrams (Event-Driven Process Chain). We preferred to use Process Flow version of view because process flow showed us business background of the SAP. In addition, to understand business, it was also possible to reach help documents when necessary and reach transactions when we want.

The Procedure Model: The procedure model was the implementation methodology of SAP. It was good to start reading sections of Procedure Model to familiarize the SAP terminology and step by step implementation steps.

ASAP: That was the newly announced product in 1997. We got the training from SAP Germany. The tool was helpful to define roadmap of the SAP project implementation and also it had accelerators to help project managers. We decided to use ASAP methodology for the execution of the project to be in-line with its steps in the roadmap and use templates to define project standards.

Live Model and Visio: Their usage was limited because of having single license and their complexities.

MS Office tools: Excel was used during some documentation. Word (in doc and html format) was mainly used in CI Templates, BPPs, Workshop documents, minutes of meetings and in user documentation (HTML). PowerPoint was mainly used in presentations and MS Project was used in project planning.

1.9 Project Communication Standards:

Project Communication:

Project Communication was the vital part of the project. Communication included both the internal and the external team and their communication with the Steering Committee, power users, other company people and the communication with the project management and within the team.

The first communication was made by our management to make the company aware that the SAP Project has started, to announce the objectives of the project and state the details of the project organization.

Each month project status was sent to the management and each quarter Steering Committee meetings were held to discuss the issues and take the necessary actions.

Also Power users were selected and communicated before starting Business Blue print phase. Also they were kept informed about the workshops, prototypes, approval of BBP's, integration tests and user training phases.

Internal communication was also very crucial; each week team meetings (separate for each group), project management meetings and whole team meetings were held.

The project going-live announcement was also an important announcement, people were made aware about the change and how they would get support when necessary.

1. 10 Meeting standards:

Before the meeting: The meeting schedule should be sent to the relevant people with mentioning the; type of the meeting (Steering Committee, Project Leaders, Team, etc), date, time, location, agenda and duration of the meeting.

During the meeting: The status of the project and update on outstanding action points should be discussed. Decisions taken and new required actions should be written.

After the meeting: The minutes of the meeting should be prepared and sent. Action items should be assigned to the relevant people and decisions taken during the meeting should be written for approval.

Status Reports: Each team member should prepare a time sheet for each week. In these sheets people need to show:

- Task
- Time spent on this task
- Task completed or on-going
- Overtimes

The time sheets of the external resources should be signed by the relevant Project leader for approval. Monthly work plan should be prepared by the Project Managers.

1.11 Documentation standards:

The templates were prepared using ASAP accelerator for minutes of meeting, time-sheet, work plan, CI Template (BBP Documents), Customisation Documents, ABAP Spec definitions, End-User documentation, Issue Form, Change Request Form, OSS Corrections, Action lists, etc. All of the standards were communicated with the team by having workshops.

1.12 Issue Handling:

Issue handling procedure was prepared:

- To establish effective procedures and to manage and resolve a wide range of ongoing issues that occur throughout the project.
- To ensure the issues are documented properly and resolved in timely manner
- Communication critical path
 - Escalation from the team member to the leader
 - Escalation from the team leader to the management
 - Escalation from the management to the Steering Committee

It was decided to escalate one issue from the team member to the leader in one day. If the solution is not possible at that level, then escalate the issue from the team leader to management in one day. Again, if necessary the escalation time from the project management to the Steering Committee should be completed in one day. Therefore, the total duration for one issue should not exceed 3 days.

Change Management: The changes in scope should be approved by the Steering Committee. The log should be kept for the changes.

Planning and Monitoring: The planning and monitoring ASAP Plan was used with MS-Project. Weekly time sheets were used to record actual. The tasks were classified as completed, in-progress, QA check and not relevant.

Synergy: PM Czech, PM Swiss and PM Holland had already implemented SAP R/3 and we had synergy visits to understand their set up and get their documentations. Synergy options were PM Business knowledge (to check better business processes), PM project experiences, PM SAP experiences, PM project documentation, SAP contacts and lessons learned sections. We shared lots of solution with Czech Republic because of the common issues. When we had checked the synergy opportunities, we found out that investment budgeting, Cost Center Accounting, Product Costing, production planning and management reporting activities were the high synergy opportunities, but the other sides were not shareable.

AS-IS Documents: We defined series of visits to the business for understanding their current processes. All of the findings were documented under AS-IS documentation. These helped us to give an orientation to the team in business and have documentation about the processes before the SAP implementation. In AS-IS documentation, we defined our current business processes, the in-use applications and their relation in-between.

1.13 Team training:

We classified the trainings as Level 1 (just overview info) and Level 2. The trainings could be taken from local companies or from SAP UK but the last option was to have customized trainings in our premises. We preferred to have customized trainings in our premises in order to squeeze the trainings into one month.

However, we sent people to SAP UK and Turkey to participate the scheduled trainings. When we checked the local training and consultancy companies, we decided to hire consultants from I-Bimsa (SAP partner) and have customized trainings.

Overview trainings (Level 1): We decided to give FI, CO, MM, PP and SD overview trainings to the whole team members to integrate the teams and to realize the touching points properly. We arranged several overview sessions to handle these trainings.

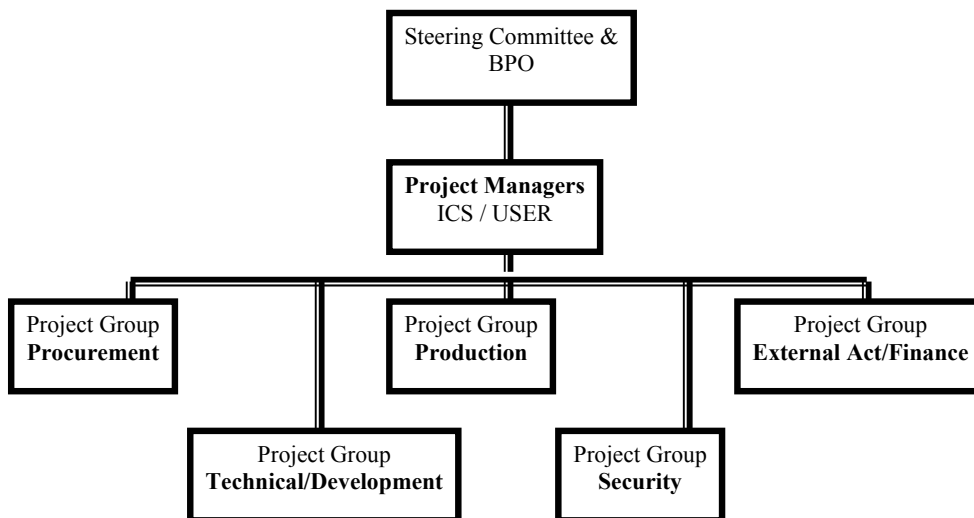
Level 2 trainings: We checked the business knowledge of our team members and prepared one matrix about which member would work in which enterprise area. For each enterprise area we defined specific trainings. For example; for the Production Logistic enterprise area, it should be PP training, CO-Product Costing and MM – Inventory movements. Therefore, we prepared cross module training based on enterprise areas.

Total training days at the beginning were 255 days and in FI, CO, MM, PP and SD.

2. Business Blue Print Phase:

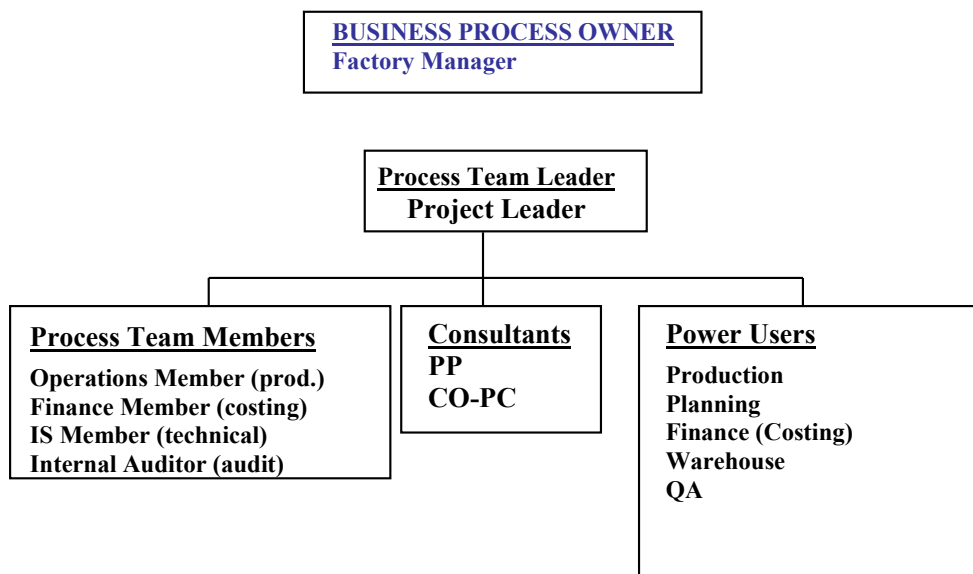
New Organization in BBP Phase:

We focused on enterprise areas and scenarios in BBP Phase so we changed our organization in-line with the enterprise areas. The new structure was:



New roles in the organization:

PRODUCTION LOGISTICS



BPO (Business Process Owners):

BPO is a management level person who owns the business process from a strategic point of view, ensure the business targets and objectives are met by SAP system and is ultimately responsible for approval of the SAP solution for their business area(s). BPOs allocated 10% of their time to the project. Our Operation Services manager became the BPO of the Procurement group, our Factory Manager became the BPO of the Production group and our Finance Manager became the BPO of the External Accounting and Finance Group.

Process Team Leader: S/He has ownership of the process area and project deliverables and has to develop and manage scope, assign and schedule resources and responsible for identifying the impacts and requirements for the processes. Process team leader also needs to verify that the business objectives are being met by the SAP project team.

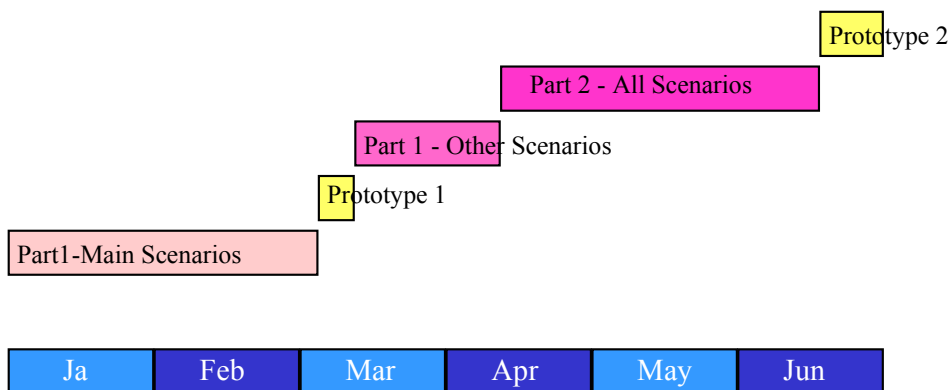
Process Team Member: Process team member is responsible for analysis and decomposition of the business processes, documenting the business process requirements and designing and configuring the SAP system to support the organization's process vision.

Power User: Power users are responsible for providing all of the required specific information, documentation and data for successful implementation and assists in documentation, review and approval of requirements along with subsequent testing of SAP solution to meet these requirements. They allocated 30% of their timings to the project. 28 Power Users were selected from the relevant business departments.

BBP Documents: The objective of the BBP documents is to prepare the base for PM Turkey SAP R/3, to define business requirements of the company and to design business on SAP R/3. During the BBP preparation we used:

- AS-IS Documentation
- Synergy documentations with other affiliates
- SAP R/3 EPC Diagrams,
- Best Business Practices
- Workshop minutes and the proposed business defined by/with Power users.

BBP documents were prepared for each selected process and discussed during the workshops. Over 300 BBP documents were prepared. The content of the BBP was the same as the CI template of ASAP methodology starting from requirements and expectations and ending with screen fields.



Workshops: During the workshops; business processes were discussed, business requirements were agreed on with power users, relevant SAP processes were explained and business requirements were tried to be matched with SAP solutions. Also further and future improvements and business changes were covered. Before each workshop, the agenda and schedule were sent in advance. After each workshop, minutes of meetings, action points and open issues were sent to the power users and BPOs. More than 60 workshops were held.

Prototype I: The objective of prototype I was the simulation of core business requirements in SAP R/3. Every selected process was demonstrated to power users by using presentations and SAP R/3 system.

Prototype II: The objective of prototype II was to present the SAP solution for the business requirements in an integrated system, get confirmation from the users that all deliverables were completed and accurate, obtain sign-off to proceed to customisation and configuration. The second prototype was the integrated prototype and it took start with creating sales forecast to production planning and purchasing and producing necessary items and selling them. Also all support and control processes were presented (like assets, cost center reporting, investment controls, etc). It took 7 days to complete. Prototype data and cases were prepared beforehand and all of the groups used the same data to show the cycle properly. Then sign-off was obtained from BPOs and power users.

3. Realization Phase:

Configuration/Customisation: The objective of the customisation documentation was:

- To register customizing outside of SAP,
- To give additional project specific information to project members who will maintain the customizing in the future
- To get approval within the team on common parts of customizing
- To develop a re-usable document for the next phases
- To force teams to go through every customizing point

The document had the following properties:

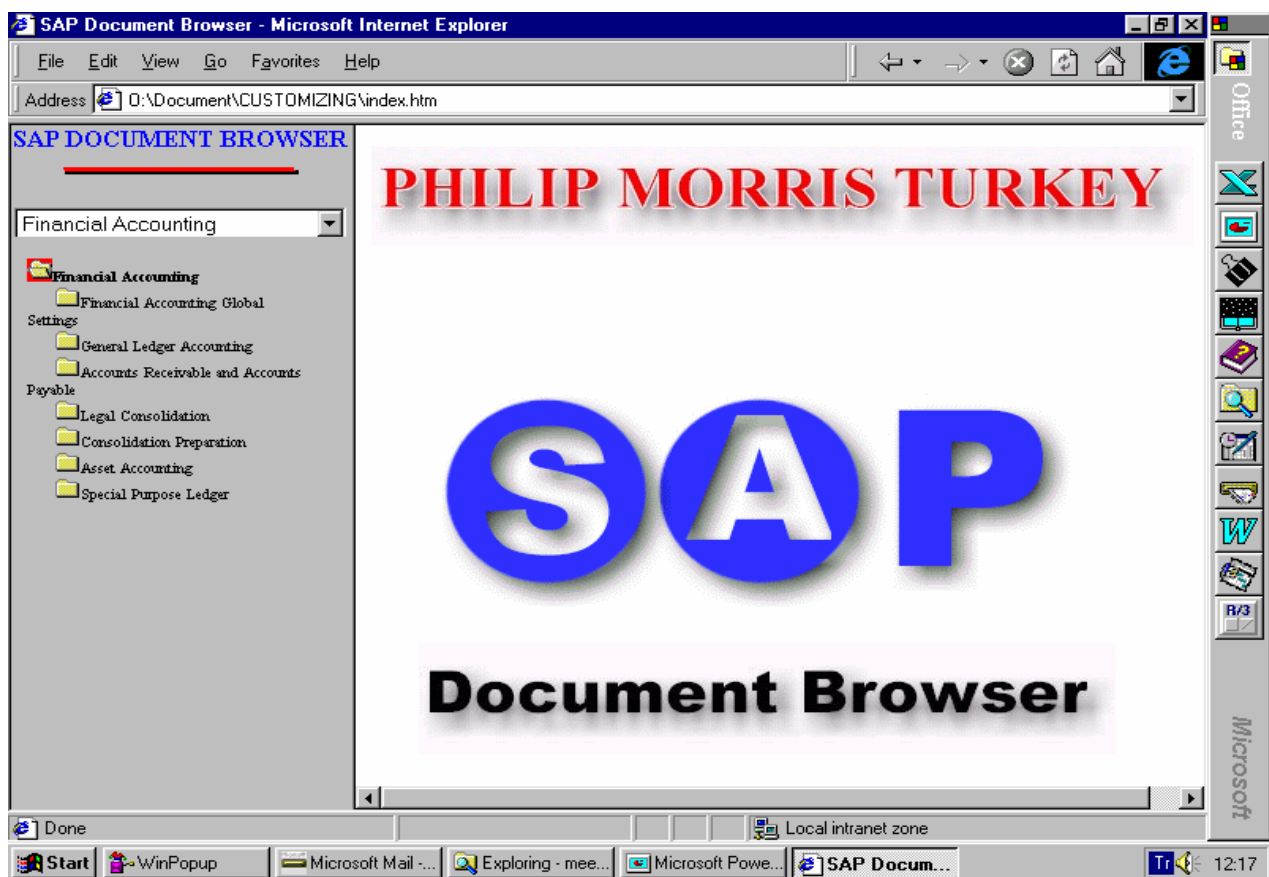
- The structure of the customization document was, according the IMG:

- A customizing menu of one module was divided and described in several customizing documents
- One customizing document described a group of customizing points
- Every customizing document was assigned to one project team
- The customizing documents were developed in MS-Word by using the template and saved as HTML

The content of the document was:

- Table of contents
- Versions
- Customizing
 - Comments
 - Description of use in project
 - justification of current content
 - Considerations on future maintenance
 - Content of customization table

About 3000 items were documented and stored in Intranet for further use.



Conversion:

First, all required objects need to be converted were listed and inventory of business objects and SAP objects were prepared. Then, type of the conversions was decided; like manual or batch input. Some of the objects were created manually like Bill of Material but some of them were transferred using batch inputs like Chart of Accounts. The order of loading process was defined. First GL Accounts (B/S, P/L) was loaded, and then Vendors, Customers, Cost Centers, Assets, Profit Centers, Material Master, BOM, etc. followed.

For the batch inputs required fields were defined, existing systems were checked if it was possible to get data from them. Most of the case data were in need to be manipulated or required additional fields. Therefore, excel sheets were prepared to prepare data. There were two types of data that should be converted; master data (like Material Master) and transactional data (like open purchase orders). For the transactional data it was decided not to load historical data to the system and to stop the transactions as early as possible considering the going-live date. For example; to stop opening purchase orders 3 days before and not receiving goods 1 day before the going-live date.

Approximately 20 conversion programs were prepared and some other entries were made manually.

Interfaces:

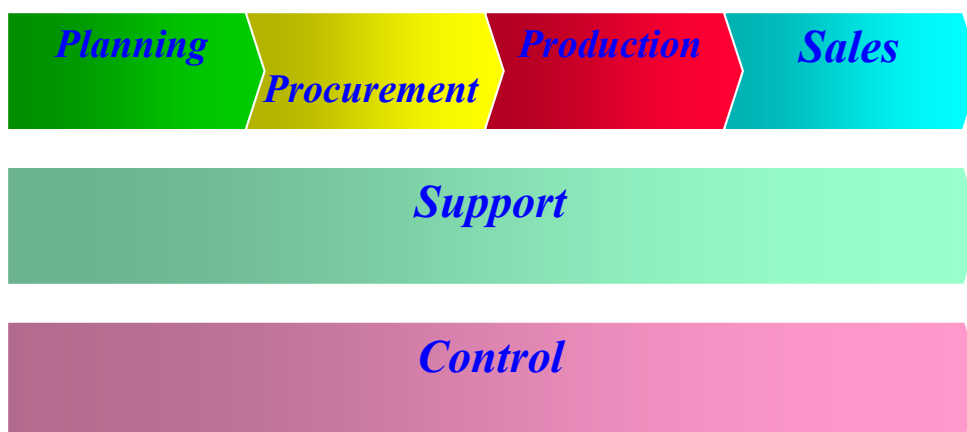
The inventory of the interfaces was defined. If there would be a replacement plan for the other systems in near future, interface was not developed. For the 'must' interfaces the specification documents were prepared and the codes were developed. Testing was done specially to ensure that the interfaces were working. At that time the only feasible interface method was text file loading interface and the interfaces were developed with this method.

Reports:

All of the report requirements were defined and prioritized. External ABAP resources were hired and the team started to develop reports from the high priority ones to the low ones.

Final Integration Test:

The objective of the integration tests were functional verification of the productivity of the system, simulation of live operations, verification of business dependencies and verification of new programs. It was decided to have 3 integration tests; first inside the team, second together with key users and third for technical aspects (like printers, authorizations, stress test, Y2000 compliance, etc). Tests started with master data entry and continued with forecasting, planning and then purchasing, production and sales cycle. All relevant support functions were checked also; like costing, finance, reporting, etc. It took 11 days to cover the first test and 15 days for the second one. All of the issues and action points were highlighted and planned to be solved before starting the end-user training.



Authorization concept:

An authorization is the privilege to perform a transaction in SAP. During our project, by chance, there was an initiation in the region to implement SAP Security Guideline. Using our BBP, we prepared Job-Role Matrix. Using the Job-Role Matrix, we created activity groups and then profiles were generated.

TASK \ FUNCTION							
Flexible Planning for Sales Planning		Y33P01FLXS					
Mat.Mast. MRP, Work Scheduling, Sales Org. view for FG & SF		Y58M01MDAV		X			
Material Master MRP, Basic Data view for FG and semi FG		Y58M01MFDK					X
Local Leaf Purchasing and MRP view		Y58M01MLED	X				

Network Infrastructure:

In order to establish more reliable and high performance data communication infrastructure in Turkey a new project was initiated. We changed our network backbone for the new technology called Frame-Relay. We had also Satellite connection for backup purposes.

4. Final Preparation Phase:

DRP: For disaster recovery purposes IBM Izmir DRP office was selected.

End-user training:

Trainings started in November and completed in December before going-live. 230 people were trained in 83 different classes. All of the end-user documentation was prepared by using MS-Word saved in HTML form.


PM Turkey - Online SAP Training Documentation - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit


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- [Purchasing \(Production Materials\)](#)
- [Purchasing \(General\)](#)
- [Purchase Requisition \(PURF\)](#)
- [Spare Parts](#)
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PHILIP MORRIS TURKEY



Online Training Documentation

002353

Done Internet zone

CASE II – YASAR HOLDING GROUP

Why SAP?

The information technology requirements of Yasar Group Companies have been meeting by Yabim, which is established for this purpose in 1983. Yabim, that has preferred Unix as IT platform in 1988, was serving the user requests by Cobol business applications. Standardization was available only in finance applications of the group. Later on, standardization was completed converting a new account system and within group was started to use it. On time, applications started to get various problems because the standardization was not available in the business processes beside finance. So Yabim had to develop new solutions about how to standardize. Because the integration was leaving in time and so consolidation and reporting had started to make difficult as group or community.

Furthermore, actual time had also started to increase and so information flow was less safe. Yabim started to look for a new effective solution. In that time Mr. Selcuk Yasar, President of The group companies, parallel suggested to implement a finance package and up to date management information system.

It was established a team of 22 people and was started to look for an integrated system. They examined the leader ERP packages in the world. Also they believed ERP advantages and trusted the ERP logically. This investigation was facilitated especially after Mr. Selcuk Yasar`s support. And at Sept. 1995 They decided that SAP is the best business solution for Yasar Group.

According to this decision, Yasar Group was the first local companies group, which decide SAP system to implement in Turkey. And so yasar group had a mission their SAP implementation experience to transfer into the other large companies in Turkey.

A manager within Yasar Group is sharing his idea with the potential SAP clients as follows;

We initialized this project by a big excitement . We are considering that we have investigated not only for today but also tomorrow and 21st century because of this project.

Project Phases:

Support of executives, and adoption of company managements were two major factors of success. Project management team formed after this support. Companies were asked for choosing members, qualified ones if possible, for the project team. SAP Turkey's suggestions were considered for choosing these members. Financial manager summarizes the further steps as: " We wanted to find a name for the project first. A questionnaire distributed and the selected name was: ASTRON, the star, in the name of, enlightening our studies. We used to have some standards in our finance department. In consideration of these standards, we formed the the prototype of our corporation with SAP. Informative committee, which formed in this cooperation with SAP, worked very effective and helped us very much in decision making steps. Finally, although there are some differences for food and dye groups, an FI prototype appeared for the whole corporation".

ASTRON Project logistics manager shares his experience about the adaptation period as: "A team of 4-5 members can easily learn an SAP module in 3 months and apply for their own company in 6 months. The only condition for this is firm's adoption and working in a scheduled manner. Our 2-year schedule worked perfectly for the project. We owe this discipline to unconditional support of Yasar family and executive committee members. They provided us a very special working environment. Also the help of Yasar corporative culture and methodological working discipline were very important".

The followings are the reasons that executive officers of DYOSAD A.S. and DYO Matbaa Mürekkepleri A.S. mentioned for choosing SAP R/3:

- More powerful inter-company communication with the integration support of SAP R/3 software.

- Easily accessed and shared information
- Benchmarking capability with domestic or foreign companies
- Clarifying working methods and standardization
- Increased control and evaluation ability
- Reformation of the company organization
- Decreasing stock costs and following material circle
- Reporting mechanisms that helps decision making steps
- The confidence of SAP on product and service
- With worldwide SAP R/3 software users, it is very open for development.
- Ability to work with a totally localized and translated software
- The modular structure of R/3
- Y2K support

CASE III – BASARI HOLDING

BAŞARI in BRIEF

BAŞARI HOLDING ,which was established in Ankara as Başarı Electronics in 1989, is presently among the top conglomerates in the IT and telecommunications sector, and continues operations with seven different companies under its umbrella.

BASARI COMPANIES

- [BAŞARI BROADCASTING CO.](#)
- [BAŞARI ELECTRONICS CO.](#)
- [BAŞARI TECHNICAL SERVICES TRADING CO.](#)
- [BAŞARI TELECOMMUNICATIONS CO.](#)
- [BAŞARI TRADING CO.](#)
- [KAAN CHEMISTRY](#)
- [KAAN TELECOMMUNICATIONS](#)

With seven companies, and revenues of \$270 million, it manufactures wireless telephone systems, KAAN 100 series Electronic Electric Meters and produces COOLIKE alcohol-free, hygienic and perfumed refreshing towels, provides technical services, and is heavily involved in the television and broadcasting industries.

Başarı is a value-added establishment in the mobile telephone retail sector, it carries out the distribution of Philips, Nokia, Samsung, Siemens, and Sony brand cell phones with 700 permanent, and a total 2,000 sales outlets in Turkey and has taken its place amongst the largest firms in the IT sector. It has started mobile internet services with the brand name of HIPIR.

WHY SAP R/3?

Başarı selected SAP R/3 in 1997 as its ERP system and replaced all other legacy systems for its mission critical business processes to continue its success and develop a more effective competitive advantage. After a fast implementation in seven months, a smooth go-live was achieved in the beginning of 1999.

This system is successfully used within the Production Planning and Control System structure, whereby all stages of production, starting from ordering and purchasing, are planned and audited in a computerized environment. Thus, reducing the time taken from receiving the order until delivery and increasing efficiency allows Başarı to achieve its goal of maintaining the highest level of customer satisfaction, which is the firm's primary principle. Moreover, the ability of monitoring is facilitated in production and after sales services through an extensive data base application all production and test information is stored.

Başarı wanted to take its customer relationships to higher level, while improving business processes. With new customer focus strategy in place, it sought integrated IT solution to support comprehensive customer program. That is why, Başarı decided to implement the SAP ERP System. It was available comprehensive software support and additional properties were strong such as user interface, enhanced reporting capabilities and easy customization. And also they needed to improve their processes. They believed that SAP would help them to reach their goals and objectives.

SAP R/3 Project at a glance

- **SD, SM, MM, WM, FI, CO, HR, PP, QM, AM modules are implemented.**
- **ERP software SAP R/3 was acquired for use in four companies in January 1999, whereas it was implemented in all the companies in the group structure in January, 2000.**
- **Başarı was accepted by SAP Turkey as a reference company after a successful implementation period in 1999 which lasted in seven months.**
- **250 users**

WHY mySAP CRM ?

In 2002 Başarı initiated CRM project. Başarı utilizes CRM as a customer-focused strategy aimed at anticipating, understanding and responding to the needs of an enterprise's current and prospective customers. The objective of Başarı's CRM strategy is to develop a competitive advantage and to improve quality of service. Başarı view the customer lifetime value rather than just one time transaction value of a customer.

The new standard that Başarı had caught is as follows; treating different customers differently. This is the key point that should be achieved in a "one-to-one" revolution. This is a long and detailed process of identifying, differentiating, interacting and customizing. Peppers and Rogers' 1to1, Dick Lee and Jim Novo have been chosen as "milestone" for defining business strategies process design and analytical CRM.

Başarı selected mySAP™ Customer Relationship Management (mySAP™ CRM) to support its goal of enhancing customer loyalty, increasing sales and profitability, and building long-term relationships. Easy of system integration and software support were major differentiators. Other differentiators were:

- Functional differentiators: user interface, suitable for our mission critical business processes, reporting capabilities, easy customization.
- Technical differentiators: web-based and desktop capability, operating system, database compatibility, ease of implementation, system integration, openness of architecture.
- Operational differentiators: technology and user license fees, resource costs, software and hardware support and training.

mySAP CRM Project Phases:

PHASE I

- **Phase I: (April 2002- September 2002)**

- **Addressing business reengineering and technology requirements**
- **Substitution of the current B2C site of Başarı Trading Co.**
- **Migration of R/3 reports and sales analytic to Business Information Warehouse (BW), BW implementation was made for all Başarı companies:**

PHASE II and PHASE III

Phase II: (November 2002-January 2003)

- **Integration of B2B and marketing. Implementation of Balanced Scorecard, implementation of Enterprise Portal.**
- **At the beginning B2B implementation will be made for Başarı Trading Co. Enterprise Portal will cover all group companies.**

Phase III (February 2003-)

- **Analytical CRM with BW for all companies.**

About Benefits:

They implemented B2B and B2C scenarios of mySAP CRM. Today they are using segmentation feature to model target groups, and its product recommendation capabilities. And now they have fully integrated SAP system. They can determine some operational benefits from SAP implementation. For example they save time and they can respond the faster to the market needs. Plus, business partners can track their orders, which is a really value added service.

In Current :

SAP BW is used for reporting requirements. Employees can report sales analytic using the Web or by a PDA. Sales activities are exported to SAP R/3 where reporting is done from SAP BW, while credit control reports are created through SAP BW, along with KPI reporting. Balanced Scorecard is used for evaluating the performance of companies and employees. Pricing is much easier using the Internet pricing and configurator after the project.

SAP Project Organization

SAP Project Team is just like below. (2003, May)

- **SAP project manager : Cihat Onbaşı**
- **E-Business manager : Erman Erkan**
- **1 BW consultant: both process and technical plus MM responsibility**
- **7 CRM consultants: 1 business (R/3 SD), 6 technical (1 admin., 3 developers, 1 network admin, 1 web designer)**

About The Problems:

They said that they hadn't important matters within the project and they had trusted their project team which had selected the right. However they got a few problems related to system integration and they needed more robust tools to sell more effectively and streamline. They solved most of their problems by OSS (Online Service System), and SAP's Service Marketplace.

Technology was implemented smoothly but they had some problems in reengineering processes. In the business side they faced some resistance to change.

CASE IV – Project Experiences from the World:

1. Fischerwerke, addressing the challenges of high volumes in a midsize global company, SAP Case Study, mySAP™ Supply Chain Management SUMMARY

In Tumlingen, a small village nestled in Germany's Black Forest, is the headquarters for a global company that sets the standards with innovative products in construction and automotive market niches. Fischerwerke, founded in 1948, has annual revenue of €383 million (U.S. \$345 million) including 64% foreign sales, holds more than 1,800 patents and more than 8,000 trademarks, manufactures and distributes on three continents, and has 24 subsidiaries in all regions of the world. The company's unique construction anchoring technology is essential for the structural integrity of underground transportation systems including the Eurotunnel, the world's largest suspension bridges, and many other structures requiring state-of-the-art construction materials.

As a testament to the company's flexibility, Fischerwerke collaborates closely in international automotive centers on advanced, ergonomic interior systems and has won awards in several countries for educational toys created from its novel technology. But pioneering products alone do not make a company successful – especially in the world of today. Fischerwerke faces competition on several fronts – from companies that offer similar products at a lower prices, from innovative companies that provide unique services to customers, and from companies that simply operate more effectively in the geographic regions in which Fischerwerke does business.

To grow profitably, to extend its core competencies into new product areas, and to broaden its international reach, Fischerwerke recognized that it must improve its supply chain infrastructure. To accomplish this, the company turned for assistance to its long-term partner, SAP. Fischerwerke first went live with mySAP™ Supply Chain Management (mySAP™ SCM) in 1999. Since this initial implementation, the company has continued to develop its advanced supply chain processes, supported by the full range of SAP Advanced Planner and Optimizer (SAP APO) capabilities. mySAP SCM has enabled Fischerwerke to achieve measurable

mySAP SCM at Fischerwerke at a Glance Strategic Goals

- Address growing global competition
- Provide superior customer service
- Reduce costs
- Achieve excellence in planning for the growing number of products

Approach

Improve demand and supply planning processes, reduce inventory and production costs, reengineer operations to improve efficiency, and improve delivery performance. This approach is enabled by elements of SAP® Advanced Planner and Optimizer (SAP® APO), including demand planning, supply network planning, production planning and detailed scheduling, and global available-to-promise, integrated with the existing SAP® R/3® system.

Results: (achieved in Germany during the first year and to be extended in Europe):

- Achieved nearly 100% on-time and in-full delivery through precise order planning
- Reduced inventory by 20% for finished products and 20% for subcomponents
- Increased production capacity by 10% through optimisation (without additional capital investment), improving profit margin and volume throughput
- Serviced a 10% increase in output with no increase in headcount

- Reduced back orders due to visibility across the supply chain, resulting in more flexibility for short-lead-time orders and reduced costs – saving more than U.S. \$200,000 in the first year
- Reduced the headcount in planning departments by up to 50% and significantly improved the planning quality in all planning departments, with more reliable forecasts, shorter planning cycles, and faster identification of changes in the ecosystem
- Achieved classic reengineering benefits by establishing a process entered organization, enlarging the job scope of planners, and redeploying workers who were no longer needed in the planning function
- Expects to recoup the supply chain management implementation investment in approximately two years improvements in customer service, inventory, and productivity.

Continuing to build on this mySAP SCM platform – with its range of planning, execution, coordination, and networking capabilities – is key to ensuring Fischerwerke's profitable growth into the future.

"mySAP Supply Chain Management creates the environment companies need in order to adapt to the market growth and new sales channels that are characteristic of e-business," says Rainer Wein, executive vice president of development and production management of the fischer group companies. "This is one of the major prerequisites for ensuring that the company can continue its manufacturing activities in Germany, despite the high wage costs."

BUSINESS

With some 15,000 sales items in its catalog and 40,000 SKUs, Fischerwerke manufactures a broad and growing line of anchoring technologies. Its products are used to secure pipes, electrical wires, and a variety of other objects, and they are used in heavy construction projects throughout the world. Fischerwerke also manufactures a variety of products used in automobiles, such as cup holders, media storage, and other items.

Fischerwerke's products are inventive but simple in their geometry, and once competitors have examined a product, they can easily copy it. As a result, Fischerwerke must compete against companies that manufacture imitations of its products. The competitors produce the imitations at lower cost by circumventing the costs of original product development and patents and, frequently, by manufacturing the imitations in countries whose labor rates are very low. Fischerwerke manufactures some goods abroad but produces many parts in Germany to reap the benefits of keeping production close to the source of technical innovation.

"mySAP Supply Chain Management creates the environment companies need in order to adapt to the market growth and new sales channels that are characteristic of e-business," says Rainer Wein, "This is one of the major prerequisites for ensuring that the company can continue its manufacturing activities in Germany, despite the high wage costs."

Fischerwerke has chosen to compete in the global market by pursuing the following strategies:

- **Extend core competencies and brand leadership** into specialized products (such as custom anchors), system components (such as modular ceilings with elements preinstalled for water and air distribution), and engineering and other services. With these types of offerings, Fischerwerke can command higher margins and face less price pressure.
- **Implement first-class logistics processes** that span national borders and business sectors by building alliances with customers, suppliers, and partners. These efforts enable Fischerwerke to improve its cost competitiveness. The market for system components demands fast and reliable delivery, and Fischerwerke is committed to continuing its historical approach of delivering standard products from its catalogs anywhere in Europe within 24 hours. Its success in this rapid-delivery arena has helped Fischerwerke become a leading

supplier in Europe. However, in the past, meeting these delivery goals required maintaining high levels of safety stock, relying on extra production shifts, and sometimes using expensive special transportation to ensure rapid delivery – all of which added to Fischerwerke's costs.

SUPPLY CHAIN CHALLENGES

In light of its business realities, Fischerwerke's objective was straightforward: to improve its ability to compete in the global marketplace. To accomplish this, it identified three key requirements:

- Improve planning (for a growing number of products)
- Reduce costs
- Provide superior customer service

By concentrating its efforts in these areas, Fischerwerke would strengthen its position in the market and improve its profitability. Addressing these business goals involved focusing on specific supply chain processes:

Improve planning

Fischerwerke's business strategy called for increasing the already large number of SKUs by introducing customized products, system components, and other new products. Planning problems would worsen unless Fischerwerke adopted more efficient requirements planning for the increasing number of active items.

Fischerwerke's former demand forecasting process required as long as three weeks to collect product data, create a new demand forecast, and distribute the forecast to the appropriate sales and production teams. Because of the complexity of the forecast process – which was not well-understood by internal users – the discrepancy between the forecast and the market demand was often large.

As a result, few people within Fischerwerke trusted the forecasts, and the company's nine production planners tended to rely instead on their instincts. Moreover, forecasts were available for product groups, but not for specific items. Production requirements for specific items were therefore not clear, and item level planning had to be done manually.

Thus a key requirement for a new system would be to perform planning for single items.

Reduce costs

Fischerwerke's German resources are the basis for its advantages in innovation, so substantially moving production to other countries to obtain lower labor rates is not a viable solution. In examining the company's internal processes, however, Fischerwerke managers saw the company could lower costs by reducing inventories of both finished products and subcomponents, by improving the efficiency of production, and by reducing the number of people dedicated to planning processes and order control.

To optimize machine utilization, Fischerwerke often produced twice the number of components necessary to fulfill a specific customer order and kept the excess components in inventory until needed.

However, the advantages were outweighed by the costs to transport the unsold products, store them until needed, and then transport them again to fulfill the order (plus handle the associated administration). To sustain its ability to deliver products to any location in Europe within 24 hours, Fischerwerke had been willing to maintain large inventories. Yet clearly, the opportunity to reduce inventories was significant.

In addition, Fischerwerke's plant-focused planning methods did not afford visibility to customer orders, did not permit efficient control of deliveries, and generated substantial need for manual intervention. As a result, machine utilization was running at 50%, and the back-order situation was unsatisfactory. Replacing these plant-focused methods with a more comprehensive planning process thus could offer opportunities to reduce costs in several areas.

Provide superior customer service

Fischerwerke processed 40,000 order lines per month across its broad range of products. The company wanted to improve its ability to fulfill orders on time and in full, even as orders grew in volume and complexity. This posed a significant challenge: To quote guaranteed delivery dates rapidly to customers, employees needed a full view of the flow of orders, the commitments that had been made, and the impact of special orders on priorities in their production system. In addition, Fischerwerke wanted to improve customer service by managing its customers' inventory.

IMPLEMENTATION

mySAP Supply Chain Management (mySAP SCM) provided the full range of capabilities that Fischerwerke required to address its immediate and long-term requirements. Today, mySAP SCM is the key tool in Fischerwerke's continuing transformation to a process-oriented workgroup organization, positioning Fischerwerke for collaboration with customers and suppliers and providing visibility throughout the extended supply chain.

With mySAP SCM, Fischerwerke workers make planning decisions, respond efficiently to exceptions, and adapt to changing market conditions.

The first phase of Fischerwerke's supply chain management deployment focused on demand and supply planning, coordination, and execution by coupling SAP APO with the SAP R/3 execution system. Fischerwerke began its SAP APO deployment project at its subsidiary in Emmendingen, Germany, in 1999. The objective of the SAP APO implementation was to unite the planning data in SAP APO with the transaction data in SAP R/3 to improve planning and forecasting. To align the application software with its business processes, Fischerwerke used the ARIS for mySAP.com methodology of IDS Scheer.

ARIS for mySAP.com offers tools for designing, analyzing, implementing, and optimizing business processes that will be enabled by a mySAP.com e-business solution.

The SAP APO deployment included modules for demand planning, supply network planning, production planning and detailed scheduling, and global available-to-promise.

Planning

Forecasting: SAP APO Demand Planning (SAP APO DP) gives Fischerwerke's planners timely access to the information they need to do effective planning online and to address the growing number of SKUs using aggregation and disaggregation capabilities. They no longer rely on the suspect forecasts of the past: They work with demand information generated by statistical models in SAP APO DP based on historical data.

Moreover, improved forecasting is enabling Fischerwerke to evolve its planning processes from a make-to-stock to a maketo-demand philosophy.

Production planning:

Fischerwerke planners use SAP APO Supply Network Planning (SAP APO SNP) to ensure that production capacity and raw materials are available to meet demand, to establish dynamic order networks that more effectively match supply and demand, and to provide scalability as planning requirements grow. In the event of bottlenecks, demand figures can be adjusted to arrive at a constrained demand that is certain to be fulfilled.

Execution

Production scheduling: The integration of SAP R/3 and SAP APO enables Fischerwerke to check the availability of materials and machinery. Detailed scheduling with SAP APO Production Planning and Detailed Scheduling (SAP APO PP/DS) allows Fischerwerke to create an optimum sequence for the production lines based on customer orders and plans from SAP APO SNP.

Order fulfillment: Fischerwerke uses global ATP to ensure that its customer service staff can have well-informed discussions with customers about the availability of standard and special products, incorporating information about inventory, constraints, and planned production. The integrated systems enable any changes – in stock or sales orders, for example – to be transferred in real time between SAP R/3 and SAP APO, ensuring that modifications to availability status and to the plan can be made rapidly.

Coordination

Event management: Fischerwerke is increasingly using SAP APO event management capabilities throughout its business processes. Events such as delayed deliveries, demand that is out of line with expectations, and overdue production are managed by exception with more efficient use of manpower. In the future, Fischerwerke anticipates that planning and controlling will be performed together. That is, employees engaged in planning will also be empowered to recognize and react to deviations from expectations.

Networking

Collaboration: Beyond initial activities to monitor customers' inventories, Fischerwerke will extend its supply chain using the capabilities of mySAP SCM to enable collaboration on various processes with customers, suppliers, and other external partners.

OUTCOME

mySAP SCM is now the primary solution used by Fischerwerke planners at the Emmendingen subsidiary. Planners access the main SAP R/3 system only to obtain the master data or to record the goods receipt. Since 1999, twenty people have been working with SAP APO, and today, the complete set of business processes – from order handling through detailed production planning – is enabled by SAP APO.

In total, Fischerwerke invested ≈3.0 million (U.S. \$2.7 million) for the entire project. Due to performance improvements achieved with SAP APO, Fischerwerke will recoup its entire supply chain management project cost in approximately two years. The cost to deploy SAP APO was only 20% of the entire supply chain management investment, but the return on SAP APO accounts for more than 90% of the entire return on investment.

Inventory 53%
Back-order reduction 16%
Transportation 18%
Other savings 13%

Total 100%

These are only the initial savings: Fischerwerke expects to save more in the future, particularly in production, where the company expects to increase the utilization of machinery by an additional 20%.

Savings in inventory

In the past, because of imprecise planning, raw materials and prefabricated products arrived an average of two weeks too early. Materials had to be stored, then transported to the right location at the appropriate time. With the planning improvements enabled by SAP APO, raw materials and prefabricated products arrive precisely when needed. The supplier simply receives a target date and delivers on time. Inventory has reduced by 20% across the supply chain, translating to a 20% reduction in stock expenses, depreciation, and capital costs. These inventory cost savings amount to 53% of the total savings.

Savings through back-order reduction

The entire forecasting process has shortened from six or seven days to three or four days, and forecasts are now significantly closer to actual demand than in the past. With more accurate data and the easy-to-understand SAP APO forecasting methods, Fischerwerke planners and other employees are more interested in understanding the link between forecasting and planning, and plans have become more accurate. Higher forecast accuracy and greater visibility across the supply chain have significantly reduced back orders. Along with greater visibility and better use of production resources, Fischerwerke has more flexibility to handle short-lead-time orders, which further reduces back orders.

Backorder reduction has helped reduce extra work shifts, special handling, and idle time. The net result of the back-order reduction is a cost savings representing 16% of the total savings in the first year.

Savings in transportation

The transparent processes and the automatic alert function of SAP APO have reduced the number of delayed deliveries and the cost of extra shifts, special handling, and express transportation services. These savings contribute 18% of the total.

Other savings

Savings in the following areas represent 13% of the total savings.

Productivity: Sales at Fischerwerke have increased as much as 10% per year – and the increase has been handled without adding personnel in the indirect planning area. Fischerwerke saved the salaries of five additional people that would have been needed had the planning staff expanded at the same rate as the increase in sales and production. In fact, the automation enabled by SAP APO has enabled a reduction in headcount in the planning departments of up to 50%. People can not only handle more orders than before, but also perform activities such as detailed planning and scheduling.

Capacity utilization: Setup time for machinery has reduced, and the utilization of the machinery has increased. Early results at Fischerwerke indicate that machine utilization has increased from 50% to 60%.

Visibility into raw materials: Availability checks provide increased visibility into raw materials that are in stock and ordered. Production planners have more accurate information and can answer inquiries faster.

Additional locations: The integration of SAP R/3 and mySAP SCM met Fischerwerke's expectations. As a result, the implementation was rolled out to other Fischerwerke locations in Germany and the Czech Republic. The result is contributing to the decrease in costs, bringing still greater improvements in planning and forecasting and further improvements in Fischerwerke's ability to compete.

NEXT STEPS

Fischerwerke plans to extend its supply chain across enterprise boundaries to integrate external partners, including customers, suppliers, and transportation companies. Collaborative processes, automatic replenishment, and alert-based control of various

processes will accompany these implementations, building on existing and emerging capabilities of mySAP SCM.

These efforts will enable Fischerwerke to provide still greater improvements in customer service and will bolster its leadership position in the global marketplace.

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2. At Palm Reduced Planning Cycle Times Bring Improved Business Performance, SAP Case Study, mySAP Supply Chain Management, SUMMARY

Palm Inc. is a pioneer in the field of mobile Internet solutions and a leading provider of handheld computers. Palm's handheld solutions allow people to carry and access their most critical information wherever they go, and Palm handhelds address the needs of individuals and enterprises through thousands of application solutions. The company believes that more users will access the Internet wirelessly than through wired connections in the not too distant future, and the company's vision is to make Palm Powered handhelds the mobile Internet solution of choice.

Palm was founded in 1992 and introduced its first handheld device in 1996. Immediately prior to its initial public offering in March 2000, the company was a wholly owned subsidiary of 3Com Corp. The company's sales have grown substantially since 1996; its fiscal year 2001 revenues were \$1.56 billion.

While the Palm OS operating system and related software has been the cornerstone of the company's success in the handheld device market, substantially all of Palm's revenues to date have been generated from sales of Palm's handheld devices and related peripherals and accessories. To manage the shipments of handheld devices, Palm has used SAP® R/3® since 1998. SAP R/3 provides Palm with an execution platform for managing sales operations, procurement, finance, and other functions.

The SAP R/3 system has served the company well for execution as Palm's business has grown rapidly. However, after initial implementation of SAP R/3, opportunities were arising in the supply chain arena that an execution platform alone was not equipped to address. Time-to-market pressures and decreasing product life cycles in its high-technology segment mandated that

mySAP SCM AT PALM AT-A-GLANCE

Strategic Goals

- Improve time to market
- Achieve excellence in product life-cycle management
- Enhance manufacturing performance
- Achieve tighter collaboration with contract manufacturers
- Improve service to channel
- Reduce inventory

Approach

Develop joint demand and inventory plans with key customers; establish accurate production plans for suppliers, taking into account forecasts, material and capacity constraints, and other factors; and establish a process for assigning finished goods at the account level. This approach was enabled by mySAP™ Supply Chain Management (mySAP SCM), including its supply network planning and global available-to-promise (global ATP) capabilities and its robust interfaces to SAP® R/3®.

Results (enabled by mySAP SCM and implementation of associated business processes):

- **Reduced planning cycle time** by 50%, improving the quality and stability of the overall supply chain plan
- **Increased inventory turns** from 6 to 10 times and customer service levels, achieving stronger sales growth, doubling shipments, and reducing stock-outs
- **Decreased cash-to-cash cycle time** from 23 to 14 days, with further improvements expected as inventory positions improve
- **Improved visibility**, which enables better deployment of finished goods inventory worldwide and better management of upstream supply
- **Improved the quality of plans**, which positions Palm for continuous improvement in time to market, product life-cycle management, manufacturing performance, and other areas of strategic focus

Palm enhance its business processes to become more agile and reduce costs. To remain competitive, Palm needed to reduce its planning cycle time, obtain greater visibility into supply and demand, and collaborate more effectively with its contract manufacturers. To address these requirements, Palm initiated a number of process improvements in the areas of collaborative demand and supply planning, enabled by mySAP™ Supply Chain Management (mySAP™ SCM). The solution went live in July 2001.

These initiatives delivered quick results. In December 2001 equity analyst reports, it was noted that Palm's balance sheet showed signs of strengthening as inventory, cash flow, and accounts receivable all improved. These balance sheet improvements, coupled with a reduction to six weeks of channel inventory at the end of November, created a common view among analysts that management's execution had improved.

BUSINESS

Palm's fiscal year 2001 total revenue of \$1.56 billion represents a 47% increase from fiscal year 2000 and a 75% increase in unit

PALM AT-A-GLANCE

Founded: 1992

First handheld shipped: 1996

IPO: March 2000

FY2001 sales: \$1.56 billion

2000-2001 growth rate:

47% revenue

75% unit shipments

Palm-branded handhelds shipped:

6.4 million in FY2001

13.7 million since founding shipments from the prior year. While Palm is developing its strategy with Palm platform licensing and Internet services, the core of the company's growth remains unit shipments of its handheld devices and related products. To this end, operational excellence covering the manufacturing and distribution of physical products is a cornerstone of the company's strategy to deliver profitable growth.

The importance of sound forecasting, inventory management, production planning, and fulfillment execution processes has been reinforced as the economic context has changed substantially. Profitability suffered the first three quarters of 2001 as the company needed to purchase supply-constrained components at premium prices. Conversely, in the fourth quarter, excessive inventory became the key issue as demand diminished substantially. Orchestrating processes to respond rapidly to such variations in demand and supply is thus a key strategic imperative – and is growing in importance as the company pursues geographic expansion and a broadening product mix.

Competition

Beyond needing to respond to changes in the overall economy in 2001, Palm continues to operate in a highly competitive, quickly changing environment. Innovation is the key competitive weapon – product life cycles have decreased from 12–18 months to 6–12 months. Palm's handheld computing device products compete with a variety of smart handheld devices, including keyboard based devices, sub notebook computers, smart phones, and two way pagers.

The company's principal competitors in the hardware space include Casio, Compaq, Hewlett-Packard, Research in Motion Limited, and Sharp. In this highly competitive consumer market, factors such as price, availability, and delivery performance are also essential determinants of growth and profitability.

Outsourcing

From its inception, Palm has outsourced significant operational and administrative services whenever it has been economically favorable to do so. In particular, a key strategy has been to outsource all Palm handheld device ("viewer") manufacturing. Palm relies on third-party contract manufacturers (CMs) to produce Palm products in sufficient volumes, in a timely manner, and with satisfactory quality levels. Palm also employs third parties for pack-out of viewers into shippable boxes. The company relies on CMs to place orders with suppliers for components necessary to manufacture products.

SUPPLY CHAIN CHALLENGE

Operations Overview

Palm's supply chain planning cycle encompasses development plans based on market demand signals. The two main components of a Palm unit are the viewer and the box (which includes documentation and accessories such as the cradle); each of the Palm products can be manufactured in various configurations. The Palm supply chain model is primarily a two-tier supply chain. The first tier includes the pack-out manufacturers (Tier 1), and the second tier includes the viewer manufacturers (Tier 2). The CMs purchase components and packing materials, based on requirements communicated by Palm, and build to forecast. Finished goods are sent to third-party logistics providers, which deliver the product to customers.

Build plans for CMs are derived from forecasts provided by field sales. These forecasts are adjusted based on input from channel partners and customers, as well as from Palm's new product development group, marketing, finance, and senior management.

In the original planning process, the lead time from forecast development to creation of the build plan was much longer than desired. This long planning cycle made forecasting more difficult, forced Palm and its channel to carry more cycle stock and safety stock, and increased the time Palm needed to detect and react to changes in demand. A primary goal of the new processes was to shorten this cycle substantially.

Outsourcing is the most economically favourable method of providing many of Palm's operational and administrative services. However, this approach also has risks, since the companies to which services are outsourced are not under Palm's direct control.

Supply Chain Pain

Palm's original supply chain planning process got the job done but left Palm facing some difficult management challenges:

- Shortening the planning cycle
- Managing critical components
- Improving logistics and control
- Anticipating turning points in the market for ramp up and ramp down
- Enhancing visibility

The importance of sound forecasting, inventory management, production planning, and fulfillment execution processes has been reinforced as the economic context has changed substantially.

Anticipating turning points in the market (for ramp up and ramp down): Palm had opportunities to improve planning and responsiveness throughout the product life cycle. During new product launches or phaseouts, the market demand signal is often different from the sales forecast. To address these product life-cycle issues, many at Palm believe that adaptability and improved internal collaboration are often more important than forecast accuracy.

Enhancing visibility: With Palm's heavily outsourced supply chain, lack of visibility among the partners created significant challenges. General consequences included the fact that Palm could not plan net requirements and could not easily halt a

• **Component supplier visibility:** Better information about supplier capacity would help determine the build plan earlier and more accurately and would improve inventory turns through better planning of common components.

• **Measurement of contract manufacturers' performance:** Understanding partner performance in a measurable way – and understanding relevant material constraints – would enhance build-plan quality and timeliness.

Shortening the planning cycle: Forecast development required about four weeks, and then about four to five more weeks were needed to develop the committed build plan. The time frames were as follows:

Forecast completion to build request: 1 week (up to 2 weeks)
 Build request to build commit: 2 weeks
 Finalization: 1 week

The total length of this planning cycle was the number one problem facing Palm's supply chain. Demand plans developed in this lengthy time frame were unstable, the build plans communicated to the CMs were therefore unstable, and this instability was propagated to the component and raw material supply plans. A related problem was limited attainment of production schedules; the fact that the demand plans were unstable caused limited schedule attainment. In fact, Palm often experienced demand fluctuations within its four- to five-week production cycle and wished to alter its commitments within this time frame.

Managing critical components: Palm's ability to secure supplier commitments was challenged by short supplies of liquid crystal displays, flash memory chips, DRAM chips, and other critical components. Moreover, there was not a good process to reallocate critical components across SKUs in a build schedule.

Improving logistics and control: Palm faced key challenges in its basic logistics and control processes, including:

- Inadequate customer delivery performance
- Inventory reconciliation problems
- Suboptimized deployment of worldwide inventory

IMPLEMENTATION

Palm undertook a project to revise its supply chain planning processes. These process improvements were enabled by mySAP SCM. Figure 1 shows a high-level project plan, Figure 2 depicts the systems, and Figure 3 shows the process using the SAP Advanced Planner and Optimizer (SAP® APO) planning model within mySAP SCM.

On July 2, 2001, Palm went live with SAP APO, the advanced planning and optimization component of mySAP SCM. The implemented solution supports the complete outsourcing of manufacturing, which is central to Palm's business model. The SAP APO solution is integrated with Palm's WebCAP system, which supports its collaborative account planning (CAP) process.

SAP APO runs in combination with the R/3 4.6C execution system, which was implemented at the beginning of March 2001.

Demand Planning

Palm's CAP initiative is based on the collaborative planning, forecasting, and replenishment (CPFR) concept of joint planning with key customers to develop a demand and inventory plan by SKU to meet in-stock and weeks-of-supply goals. A commitment manager is key to the CAP process, mapping the per-SKU supply, which is generated in the supply planning process, to the per customer demand and addressing associated allocation requirements. Goals of the CAP process include helping the channel customers to become more profitable, reducing the price protection that Palm pays to the channel, and facilitating a schedule attainment rate of 95% by delivering a more stable mapping of supply and demand.

FIGURE 1: HIGH-LEVEL PROJECT PLAN

PROJECT PHASES

PROJECT REASSESSMENT
 PROJECT REASSESSMENT
 CONFIGURATION
 REASSESSMENT
 INTEGRATION
 TESTING
 END-USER TRAINING
 END-USER SUPPORT
 2 WEEKS
 3 WEEKS
 6 WEEKS
 5 WEEKS
 3 WEEKS
 4 WEEKS

—
 —
 —
 —
 —
 —

APRIL 2001 MAY JUNE JULY AUG 2001

4/12 KICK-OFF
 4/27
 1. CHECK POINT
 6/8
 2. CHECK POINT
 6/22
 3. CHECK POINT
 START OF PRODUCTION
 (FIRST PLANNING RUN)
 SAP APO
 GO-LIVE

The CAP and commit processes are supported by WebCAP, which is an Internet-based system that allows field sales to work with customers to build the supply plan by week and by SKU and to plan inventory positions. Finalized forecast data in WebCAP is passed to the supply network planning function in SAP APO. Supply commitments flow back from the supply planning function in SAP APO into WebCAP.

Supply Planning

The capable-to-match capabilities in supply network planning (SNP) within SAP APO allow Palm to establish accurate production plans for its suppliers. The supply network planning process integrates inventory, supply data, customer forecasts, and critical material and capacity constraints to optimise inventory management and service levels. Palm uses a rolling 52-week, top-down planning process for supply network planning within the CAP process.

The supply network planning process enables comprehensive tactical planning and sourcing decisions to be simulated and implemented on the basis of a single, globally consistent model. The process uses advanced optimisation techniques, based on constraints and priorities, to plan product flow along the supply chain. The overall objective of the CAP-based and SAP APO-enabled supply planning cycle is to have pack-out material ready one week in advance of the demand at Palm's virtual distribution centers.

Order Commitment

Palm also improved its order management and order promising process. Real-time available-to-promise checking (enabled by global ATP) was implemented to allow Palm to confirm sales orders accurately and thus offer customers more reliable service.

Account-level finished goods assignments are performed by the commitment manager. The ATP check (by SKU for each week) examines a full 12 to 18 months of supply in the supply network planning horizon.

FIGURE 2: SYSTEMS

SNP

WebCAP Data
 Warehouse

ATP

SAP APO
 Suppliers
 DEMAND FORECAST
 SUPPLY COMMIT
 BUILD COMMIT
 BUILD REQUEST
 DELIVERY SCHEDULES
 WEEKLY SUPPLY/
 DEMAND SNAPSHOT

SALES ORDERS
 INVENTORY
 PURCHASE ORDERS
 MASTER DATA
 ATP CHECKS
SAP® R/3®

FIGURE 3: USE OF THE SAP APO PLANNING MODEL

SC01
 Load
 Worldwide
 Demand Plan
 APO APO APO APO
 APO
 APO APO APO APO APO
 APO
 APO APO
 DW
 APO
 LOAD
 WORLDWIDE
 DEMAND PLAN
 CREATE AND
 UPDATE
 SNP MASTER
 DATA
 TRANSFER
 SHIPMENT
 REQUEST PLAN
 FROM
 DP TO SNP
 PREPARE BUILD
 REQUEST
 VERSION
 LOAD
 INVENTORIES
 AND RECEIPT
 SCHEDULES
 (CRITICAL
 COMPONENTS)
 LOAD COMMIT
 PLAN INTO
 ACTIVE VERSION
 PUBLISH BUILD
 REQUEST PLAN
 DEVELOP BUILD
 REQUEST PLAN
 RUN CTM IN
 BUILD
 REQUEST
 VERSION
 PROCUREMENT
 FOR
 PRODUCTION
 TRANSFER
 PURCHASE
 REQUISITIONS TO

R/3 SCHEDULING
 AGREEMENT
 ADJUST FINAL
 PACKOUT PLAN
 RUN CTM IN
 ACTIVE VERSION
 PREPARE ACTIVE
 PLAN
 PUBLISH FINAL
 PACKOUT PLAN
 CONTRACT
 MANUFACTURERS
 CONTRACT
 MANUFACTURERS
 WORLDWIDE
 DEMAND
 PLANNER
 WORLDWIDE
 DEMAND EXCEL
 FILE FROM
 DEMAND
 PLANNER
 PACKOUT
 AND VIEWER
 CAPACITIES FROM
 CONTRACT
 MANUFACTURERS
 COMMODITY
 MANAGERS AND
 CONTRACT
 MANUFACTURERS

Unique Two-Phase Planning Cycle

Palm must plan with two different types of material constraints:

Critical component constraints and handheld product (viewer) constraints. Palm accomplishes this through a two-phase cycle, using the capable-to-match technology in SAP APO:

1. **Interim build commitment (using critical components as constraints):** The demand plan is composed of input from WebCAP and prioritized based on per-SKU business requirements. From this demand, a supply plan is derived with critical components as constraints to arrive at the constrained plan for viewers. This plan is sent to the CMs, which respond with a build commitment plan.
2. **Finalized supply commitment (using the viewer plan as the constraint):** The build commitment plan from the CM is loaded into SAP APO as firm production orders at the viewer manufacturing plants. With the viewer plan as the constraint, the capable-to-match capability in SAP APO matches the supply of viewers with the demand at the pack-out level. Purchase requisitions for one week are generated at the distribution center level and sent to SAP R/3 as the supply commitment.

Final pack-out plans are published for the CMs and Palm's worldwide demand planner.

OUTCOME

Many of Palm's supply chain issues have been addressed through implementation of the CAP process, WebCAP system, and the SAP systems. The systems, together with management decisions about business operations, initiatives, and processes, contributed to these results:

Reduced planning cycle time (the interval from forecast delivery to build commitment) from four weeks to two weeks:

This result was achieved through the implementation of supply network planning in SAP APO. This is a significant result, enabling improvement of plan stability and production schedule attainment. Moreover, this result provides the opportunity to reduce price premiums paid to CMs and component suppliers.

Improved inventory turns from 6 to 10 times and decreased channel inventory by 32%:

These results were achieved while maintaining customer service levels, achieving stronger sales growth, and reducing stock-outs. Quarterly shipments increased from 750,000 units to 1.5 million, and market share increased. In short, as Palm increased sales, its finished goods inventory position improved in a way that contributed to fulfillment performance and customer confidence. Palm's inventory reduction program was aided by shortened planning cycle times as well as the visibility afforded by SAP APO and the order commit process supported by global ATP.

Decreased cash-to-cash cycle time from 23 to 14 days:

The cash flow improvements achieved were attributable primarily to inventory reductions. In fact, though accounts receivable collections improved, sales growth caused a temporary increase in the receivables' days sales outstanding, so inventory reductions were a critical component of cash flow improvements. The cash-to-cash cycle time is expected to improve as inventory continues to decrease.

Improved visibility:

Implementation of SAP APO necessitates consolidating accurate data about critical materials, viewers, pack-out capacity, and CM capability. Over time, the supply-side visibility afforded by SAP APO will enable further improvements in inventory turns and better planning for use of key constraints.

Improved plan quality: Reducing the workforce required for planning allows Palm to spend more time analysing opportunities and improving planning quality. Through this enhanced analysis and the improvements in visibility and planning cycle time, Palm is positioned for continuous improvement in time to market, product life-cycle management, manufacturing performance, and other areas of strategic focus. In particular, the improved plan quality attributed to the CAP process has enabled improvements in customer profitability – the channel's in-stock percentages have increased, and weeks of supply have decreased.

NEXT STEPS

Palm will continue to improve planning cycle time, inventory levels, and customer service metrics. In particular, Palm's target is to achieve a one-week planning cycle time. Other next steps include:

Enhanced what-if analysis:

Palm intends to identify and model key what-if scenario capabilities within SAP APO to support sales and operations planning. These include inventory projections at the distribution centers, supplier capacity modeling for viewers as well as peripherals and accessories, and plan-to-plan version comparison analysis.

Collaboration:

Palm intends to build (and may encourage its external partners to build) on the CAP process and use additional software tools to develop further customer and supplier collaboration. Collaboration with suppliers will encompass the broad range of manufacturing and resource planning issues, including helping contract manufacturers and Palm collaborate with parts suppliers – through visibility to an

exploded bill of material, for example. Collaboration with the channel will cover promotion planning, competitive intelligence, returns handling, and more.

Design for manufacturing:

This approach will further address supply chain issues, enabling more postponement in the supply chain, reductions in cycle time, increased use of common components, decreased inventory, and reductions in other costs.

Product line simplification:

A proliferation of SKUs is increasing costs and causing lack of clear understanding in the marketplace about Palm's product lines. A reduction in complexity will help Palm address the full range of related issues.

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3. Automotive At VOLVO CE, SAP Case Study

Volvo Construction Equipment (Volvo CE) is one of the world's leading producers of heavy and compact construction equipment. In fiscal year 2001, the company generated revenues of SKr 21.1 billion (\$2.4 billion). With 7,800 employees, the company sells its products in more than 100 countries and maintains production facilities on four continents. Volvo CE represents one of AB Volvo's eight business areas. AB Volvo is a Sweden-based global manufacturer of commercial vehicles and diesel engines¹, with fiscal year 2001 sales of SKr 189.3 billion (\$21.4 billion).

Volvo CE manufactures more than 130 different models of excavators, wheel loaders, motor graders, and articulated haulers. The company also offers an extensive range of compact equipment. Volvo CE's products are used for a number of applications in the construction, mining, waste handling, and forest industries. The company has held leading positions in Western Europe and North America for many years. Since the late 1990s, the company has been extending its business to Latin America, Eastern Europe, and Asia.

In 1998, AB Volvo acquired the construction equipment business unit of Samsung Heavy Industries to form Volvo CE Korea, headquartered in Changwon, South Korea. This acquisition enabled Volvo CE to establish a manufacturing presence and enhance its distribution capabilities in South Korea. By 2001,

Volvo CE was able to strengthen its market share in Korea and other important geographies; the Samsung acquisition – coupled with a strengthening of the Volvo CE brand and an introduction of new products – played an important contributing role.

Though the Samsung acquisition enhanced Volvo CE's market position, the company realized that to ensure profitable growth in Korea and to sustain the viability of the newly formed company, it would face numerous challenges. The market for construction equipment had started declining in the late 1990s, and greater competition in the company's core markets meant.

ACQUISITION INTEGRATION YIELDS SUPPLY CHAIN PERFORMANCE GAINS AND IMPROVED MARKET POSITION

1) The Volvo passenger car business was purchased by Ford Motor Company in 1999.

AT A GLANCE: mySAP™ AUTOMOTIVE AT VOLVO CE

Strategic Goals:

- Ensure financial viability of new acquisition by reducing inventory, operating expenses, and cost of supplies
- Enhance market position by improving ability to respond to customer requirements
- Reduce product-development cycle times
- Improve product and service quality

Approach:

Volvo CE Korea implemented a process innovation program following the acquisition of the construction equipment business unit of Samsung Heavy Industries. The program focused on an overarching sales and operations planning process to better balance supply and demand. The company also improved its execution capabilities through the reengineering of business processes covering order fulfillment, product development, and procurement. Supporting actions included improving data accuracy; redesigning and integrating key shop floor processes; establishing collaborative processes with vendors and suppliers; and replacing standalone legacy systems.

This approach was enabled by mySAP™ Automotive software integrated with SAP® Internet Transaction Server and SAP® Business Information Warehouse.

Results Achieved over the Period 1998 to 2001 Include:

- Reduced available-to-promise commitment time from 15 days to 48 hours and reduced shipping lead times by 43%
- Reduced component development cycle times from 26 to 17 days
- Reduced inventory levels by 53% and reduced number of SKUs from about 100 to 40
- Enhanced per capita revenue from \$85,000 to \$340,000
- Increased sales by 89% and achieved 17% improvement in market share

It was also facing growing challenges from its competitors, particularly in the arena of cost reductions and customer service improvements achieved through advanced e-business initiatives. In particular, General Motors, Caterpillar, John Deere, and Ford had progressed well in their information technology programs and presented increasingly attractive product and service options to construction equipment customers. Volvo CE Korea had inherited business processes that were not performing at the levels necessary to enable it to grow profitably in the emerging competitive environment, which was characterized by global rivals with strong capabilities in process reengineering.

The time frames required to commit finished goods to customers and to develop new components were not competitive, and inventory carrying costs and other expenses inhibited achievement of adequate financial returns.

Even fundamental administrative business processes were not performing well; for example, it took nearly two weeks to complete the month-end closing cycle. The infrastructure to support any improvements was also inadequate: Inventory and related information were inaccurate; there were inconsistencies between engineering and manufacturing bills of material (BOMs); and applications that had existed in Samsung were isolated and did not allow integration of data and systems.

Thus, key goals for Volvo CE Korea included enhancing its ability to respond to customer requirements, improving market share, and reducing costs throughout the operation. Reducing ATP commitment times, shipping lead times, and component development cycle times would contribute significantly to providing improvements perceived as favorable by customers and contribute to market share growth.

On the cost side, reducing inventory carrying costs was paramount. Reducing the number of SKUs, improving inventory record accuracy, and ensuring BOM consistency would support inventory reduction efforts. Ongoing cost reductions covering procured material, personnel, facilities, and so forth were also targeted. Lowering these expenses would contribute additionally to market share growth by improving the price/performance of Volvo CE Korea's products. It had to increase marketing expenditures. The newly formed company was also uncompetitive in terms of its ability to respond to customer requests, and its high operating costs did not support attainment of required financial returns.

Given market factors and its financial performance objectives, Volvo CE Korea determined that it must improve its supply chain planning and execution capabilities if it wanted to achieve sustained profitable growth. Specifically, the company focused on ensuring that resource and production capabilities met market demand by implementing a sales and operations planning (S&OP) process. The company enhanced customer-facing business processes, including available-to-promise (ATP) capabilities, and focused on the efficiency of its internal operations through reengineering initiatives to remove unnecessary complexity and cost.

The company also realized that its legacy stand-alone applications would not support its requirements in the future.

After a careful analysis of alternatives, Volvo CE Korea selected mySAP™ Automotive, SAP® Business Information Warehouse (SAP® BW), and SAP® Internet Transaction Server (SAP® ITS) to help reengineer its planning and execution processes. "The SAP solutions have enabled Volvo CE to reinvent itself to become a process-oriented organization," says Yonghak Kim, CIO of Volvo CE Korea. "With our process innovation efforts, Volvo employees are now using an integrated system that supports its daily customer-oriented business processes."

CHALLENGES AND OBJECTIVES

Volvo CE's acquisition of Samsung was a response to a flattening of demand, price pressures, a shift in customer requirements to compact equipment, and consolidation throughout the worldwide construction equipment business. Following the Samsung acquisition, actions by rivals such as CaseNewHolland (majority owned by Fiat), John Deere, and Hitachi to strengthen their Asian construction equipment presence validated Volvo CE's consolidation moves. Volvo CE

IMPLEMENTATION

Shortly following the Samsung acquisition in 1998, Volvo CE Korea initiated a detailed evaluation of its operations to determine how best to satisfy customer needs and enable the newly formed company to participate efficiently in Volvo CE's global manufacturing and distribution network.

The business processes in place at the time of acquisition had evolved (until 1998) in response to many individual and independent requirements at Samsung – and throughout a period of time when the construction equipment business in Korea did not face substantial global competition. Moreover, Samsung's information systems architecture was characterized by independent applications covering sales, production, accounting, and human resources. As a result, the company's business processes were relatively inefficient because they had

been predicated upon a lack of visibility into operations and had tendencies to generate inaccurate information.

Two-Phase Implementation

Volvo CE Korea selected mySAP Automotive to provide the new, integrated application foundation. The company then undertook a two-phase implementation program.

Phase one, which involved system replacement, took place from April 1998 to August 1999. Volvo CE Korea replaced existing systems with mySAP Automotive to cover financials, order fulfillment, manufacturing, and other application areas in a big-bang implementation, and to ensure Y2K compliance of systems. The company also implemented SAP Business Information Warehouse to monitor relevant transaction data, actual financial results versus plan, and key performance indicators.

Phase two, which involved business process redesign, took place from September 1999 to January 2001. During this time, Volvo CE Korea redesigned all business processes to provide a platform for future innovation and to ensure consistency with best-in-class business processes enabled by the SAP application foundation. The company established an S&OP process to more effectively balance demand and supply. It also implemented a two-level master scheduling process (by product family and by product options) and established an associated ATP process.

During the second phase, the SAP platform was refined as necessary, and enabling results were achieved that supported strategically significant measurable improvements to inventory, customer service, and so on. For example, product development was among the key process areas addressed. Consistency between engineering and manufacturing BOMs was improved as the company moved to establish a single company bill of material, and BOM accuracy was enhanced from 88.2% to 99.9%. The manufacturing resource planning (MRP) run times were improved from 21 hours to 1.5 hours; the MRP cycle therefore could be executed daily instead of weekly.

Thus, with greater flexibility during the manufacturing process, the company could more easily respond to customer requirements.

Sales & Operations
 Planning
 Master Scheduling
 by Family
 Master Scheduling
 by Option
 Planning by
 Plant & Supplier
 Sequence & Activity
 Control
 Production Procurement
 Orders
 Forecast

ATP SALES COMPANY

Daily Delivery
 Instruction/Kanban

SUPPLIER

Rough Cut
 Capacity Planning
 Option over
 Planning
 Safety Time &

Stock Control

Moreover, the new processes enabled visibility into material requirements for scheduled orders, facilitated procurement planning, and ensured greater inventory accuracy through improvements to backflushing (relief of materials in the system following production). Inventory cycle counting accuracy improved from 88.0% to 98.3%, and as a result of more precise operational data, Volvo CE Korea reduced its financial closing cycle time from 13 to 2 days. The implementation covered other areas including:

- **Shop floor control integration**

In order to achieve real-time visibility into manufacturing, more control over line operations, and electronic gathering of production data, the company integrated its shop floor control systems with mySAP Automotive. This also helped Volvo CE Korea improve data accuracy and reduce work-in-process inventory.

- **Component development**

The company redesigned the parts development process by electronically integrating the SAP system with its suppliers. Volvo CE Korea now requests quotes from suppliers through the Internet, and is able to execute analysis, negotiation, and approval through paperless processes.

- **External collaboration and e-business processes**

Volvo CE implemented collaborative processes with over 350 domestic and overseas vendors and suppliers. The system handles exchange of purchase orders, invoices, and delivery notes; facilitates searches for product and parts diagrams; and enables collaborative exchange of forecasts, assembly plans, quality data, and other information. As a result, Volvo CE achieved important improvements in customer service; for example, domestic and overseas dealers now have access to electronic parts catalogs and Web-enabled processes so they can provide more efficient service to their customers. The SAP ITS server provides the technology backbone for these processes.

Volvo CE Korea has chosen to focus on business process innovation. The company recognizes that its process designs are not static – and that its business and enabling systems will continue to evolve in line with market demands.

In the future, Volvo CE Korea plans to advance its business processes by making use of mySAP Supply Chain Management capabilities to better forecast demand and to plan its manufacturing and distribution network.

The company also intends to implement SAP portal technology to enhance its collaborative processes and e-business capabilities. Ultimately, the company's achievements in customer service improvements, shortened cycle times, inventory reductions, and market position improvements will be further advanced by these implementations.

CASE V - Some experiences from the SAP Project Managers

The best the SAP Community offered to me over the last weeks was the mySAP Enterprise Portals Forum.

I got direct contact to others dealing with this topic and was able to clarify some of my questions with experts from SAP or other contributors.

The forum also gives me a picture about problems others have which is very important for me as a consultant for mySAP Enterprise Portals. I am therefore able to concentrate our service offerings towards the most wanted solutions out in the market.

Another very good thing about the community are the webcasts of the different SAP events worldwide. Often it is not possible to be on site but to view the live casts or the presentation afterwards is a good substitute.

What I would like to be the Community in the future is to be the entrance point to all the other helpfull SAP sites on the web such as the SAP Designguild or the forum on www.iviewstudio.com.

Kind regards,
Michael Wiedemann

Michael Wiedemann
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Siemens Business Services GmbH & Co OHG
Munich, Germany

While queries arise at various clients and our internal databases are utilized to seek answers. SAP Community provides direct access to SAP professionals on various queries that are not answered in other varoius SAP resources, this allows us consultants in the field to provide good credible answers to clients rather then "assumptions".

All the best,
Uday Gupta

Uday Gupta
Consultant
PricewaterhouseCoopers Consulting
Charlotte, USA

The SAP Community, especially mySAP Business Intelligence Forum has been a great resource of knowledge and expertise. SAP experts and peers share best practices and solutions to technical problems.

During my research on BW3.0, I came across many questions, mostly answered by SAP professionals in a timely manner. On one occasion, when I was experimenting with Process Chain, I came across a data load problem. I posted a question in the forum and by the next day an SAP expert had provided me with the solution.

With this resource I have not had to "reinvent the wheel" for each problem I have encountered. It has saved me valuable time.

Regards,
Hugo Miranda

Hugo Miranda
Kimberly-Clark
Appleton

As a Supply Chain Management Consultant working with mySAP SCM solutions, I am involved in a number of assignments with clients.

These assignments often involve assessments to clarify how APO can be positioned in the client's application portfolio. In the assessments I need to address the following types of questions:

- general questions regarding how APO 'fits' with other mySAP.com components (eg APO and SCEM)
- specific questions regarding APO functionality (eg labour planning in APO SNP, use of fixed pegging relationships in APO PP/DS)

I use the SCM SAP Community to help answer both types of question.

I have found the Community a good source of practical information from both other consultants who have faced the question already, and from SAP themselves via the 'SAP moderated' discussions.

The Community is certainly a 'network' which really works!

Regards,
Bob Austin

Bob Austin
SCM Consultant
Atos Origin

Regarding: SAP Community Webcast on Oct 23 on mySAP Human Resources and mySAP Financials.

There was another speaker, besides Dr. Robert Kaplan for balance scorecard, being Holger Huels CFO from Boehringer Ingelheim (the German pharmaceutical giant) who was narrating the importance of integration during implementation of SAP. He was emphasising the focus to be on Business Process than the Business functions and this was exactly the same way we did at Carrier aircon through PwC.

I was reliving the project while listening to Holger Huels and enjoyed it thoroughly. Was very glad to know that same approach worked well with another MNC elsewhere in the world. It was indeed a great amount of effort the project director Susheela Venkataraman, spent in convincing Carrier in advantages of going the process way than functional.

Thanks very much for having such useful webcast.

Kind Regards,
Sridhar Vasudevan

Sridhar Vasudevan
(Ex-PwC India Consultant)
SAP Business Analyst
ITC
Auckland City Council

(<http://www.sap.com/community/success/>,2003)

Chapter 8. Conclusion

This book focused on the topics: modeling the corporation, what is a project, modeling project management, ERP methodologies and finally SAP implementation approaches. It includes SAP project approaches of various companies, consulting firms, SAP headquarters Germany, users and authors. The book benefited from material from various textbooks, reference books, technique magazines and documentation of consulting firms. SAP consultants, implementers, related project companies and users have shared their current knowledge and expertise with us. And I would like to express my gratitude to everyone who has contributed for his or her valuable time.

The aim was to create a perfect reference book, not only for SAP users but also for undergraduate students. Topics regarding ABAP programming, modules and technical issues are avoided. During my investigation I observed there are satisfactory books on ABAP or module usage in the world. Therefore it wasn't necessary to incorporate these subjects in this book. Instead, the book mainly concentrates on a system approach and integrated project management. It addresses possible problems, risks, advantages and milestones. Examples and case studies are given, and comparison tables and many figures support the topics in order to clarify the theory. The purpose of this was to create a book that is a pleasure to read and without too many difficulties.

I might mention that I couldn't get a good response from the users regarding the questionnaire appendix. Therefore no analysis of this statistical questionnaire was included. Such an analysis might have given a good idea about SAP usages, personal user ideas and some comments. My apologies for that. However, some companies have supported us and presented their own implementation and company information. For this reason I would like to thank them again.

SAP project management was the concept, which is not known very well, we don't have enough information and expertise, sponsors avoid because of financial matters. Especially for some companies was too much expensive to think on it. It still continues to avoid it. Either large sized or mid sized companies can avoid to pay extra money on project management. They can think it as only license cost. Or in the starting point they cannot understand well what kind of costs they can afford. One of their reject reasons is not accepting the value of service or human. Whereas, the human is one of important parts of technology. In this book we often underline the value of human.

The SAP project management concept is in fact not different from general project management approaches. On the other hand the context of the product is sometimes complicated because of full integrated, involvement of all business process tasks, and flexible and has full functionality. Even the client is so large than job tasks become more larger as well and so project can get into more complicated statement, in time. That is why it requires strong project management skills, and a strong methodology evaluation process in the beginning.

In the book we included the cultural effects on the project management. We mentioned our cultural structures, our people behavior attributes, requests, their motivation factors, success criteria, and hesitations. Particularly some constraints like financial or budget are seriously affecting the success of SAP project management. If they extremely limit budget and project time it is unfortunately not possible to expect successful project management. Because in our country project resources are limited illogically, clients sometimes need years to implement SAP. So instead of cost cutting they will have finally end up with much more project costs.

At the time SAP established an office in Turkey (in about 1995), users still found it difficult to understand and implement. There was not enough experience, customization to local process and documentation and there were not enough reference clients. Consultants spent years to create it and spread them around. So knowledge sources, reference users, proven examples and case studies have increased in time. Nowadays most people in Turkish industry know about SAP as a concept or they can have an idea about its capabilities.

If we compare current SAP projects with approaches of past projects in Turkey we clearly observe as follows:

- Decision makers don't evaluate SAP just as product only but as a system
- He judges the price but with a cost-benefit approach
- He understands that his workforce is the most important resource
- He understands it is business process re-engineering and not only a product installation
- He must guard the project time and budget very much. But it should be logical.
- He believes that work is teamwork, not just independent individual work.

I included the human factor so much in the book. A qualified project manager, quality team and faithful and hardworking team are very important assets. However, clients sometimes can lose their successful employees because of an ineffective motivation system. Particularly in our country we have to define and execute the most suitable motivation type for the company, because people who work for a SAP project require more motivation than for other projects. Furthermore, job conditions in Turkey are clearly more difficult than in other countries. The project team sometimes hasn't got a flexible, comfortable and happy environment because they have a very tight task plan and hard responsibilities.

Additionally, the compensation is not motivating either, compared with salary policies in other countries, although SAP employees here both work much harder and earn less than in the European countries, for instance. Because of this there is a risk that SAP employees can be offered an alternative opportunity either during the project or after implementation. These things are known to happen. A qualified SAP consultant can find a good job in every country, wherever he wishes, because SAP business is an international career opportunity for an engineer.

Because of these reasons, employers in our country should offer better job conditions for their project team to keep them longer. They should motivate them and also control. If the project team is able to get a good support from top management, I believe the project is finalized with maximum success. The lack of experienced resource can be a serious loss for the project.

In the book, it has been involved the project tasks in detail. Sometimes it was detailed but sometimes it was so summarized that changes into company business processes, because the implementation is locally customized based on the company. That is why implementation methodology can change according to the company, in further steps because every company can get a different business flow. In this case you can benefit from the information in the book terminologically. But at least we incorporated the SAP and project terminology currently used. However these topics always improve and terminology gets larger more and more.

The decision to prepare a book concerning technology was not certainly easy. Briefly such a work was requiring a good teamwork. Additionally we haven't been found a good reference book to train and to implement. In fact it would be available but the books has been theoretical only and we would need a good guide, including multiple methodologies, methods, actual cases, and experiences. Perhaps they are sold in the market but most of them are about ABAP programming.

Another point I want to emphasize is related to project duration. In my opinion the length of actual project is far from predictable. Don't expect it to be short, and it will vary from project to project, in our country particularly. But instead of that we can set a deadline for project and try to keep it. In my opinion and experience, there are no suitable methods to determine accurately how long a project might take. So it can be much less or much more that desired. As a result, project team goes into the stress and stress makes them unsuccessful usually. Perhaps the system can go live on time, but will it run as intended? How often?

In short, logical timing has more advantages and is more productive than a very limited plan with the risk of having to re-implement the system continuously. This seriously damages the project.

How do corporations select a project method? In my observation, most of them used ASAP methodology or Value SAP, now. But are these obligatory? Perhaps there are more effective methodologies for the

particular company. Other options, like methodologies of global consulting companies, should be evaluated as well.

Another important point, they shouldn't ignore the phase of system analysis and design. Every company should analyze and design their processes at the beginning. Briefly, SAP implementation shouldn't become a system installation and module application. In this point, I can advice to evaluate various proven methods and decide the most convenient one. And also it shouldn't be forgotten to handle the system with re-engineering approaches.

In the world, there are consulting companies who specialize in SAP only. They develop methodologies, test and apply for the SAP clients. They also improve it continuously because SAP business is core business for them. SAP is generally focused on product family development.

Intelligent companies should consider pre-training before implementation. This shouldn't be SAP or ERP training but they should get training on project management skills. After the training, they can determine the requirements and expectations report detailed in order to distribute to ERP consulting companies. In brief, candidate users should live a good preparation period so they will feel ready to implement the system. This means orientation. There are also companies who provide service on this matter.

In the preparation stage, the following subjects are part of the basic decision process:

- ERP product?
- Modules?
- Methodology?
- Pre-trainings?
- Project, Vision, Mission?
- Contractor? Or Sub-contractor?
- Priority Task List
- Expected Start and Finish Date

As a result, reading this work completely will benefit you to be successful. And if it adds a value to you and I know this then I will feel I have completed a useful work for you.

Please kindly send your all-sincere comments, ideas and suggestions to the e-mail address below. Everything sent me will be gladly appreciated, thanking you for your time and effort.

arzubaloglu@superonline.com; abaloglu@eng.marmara.edu.tr

See you in a project. With my best wishes...

APPENDIXES:

Appendix 1

What's New in ValueSAP - Edition 2

[Introduction](#)

[ValueSAP Admin Tool](#)

[Question & Answer Database](#)

[Master Lists](#)

[Business Process Procedures](#)

[Solution Map Composer](#)

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Introduction

This document contains information on new functions, features and content delivered with ValueSAP Edition 2.

ValueSAP Admin Tool

The following changes have been made to the Admin Tool for ValueSAP Edition 2:

- ***Opening multiple projects.*** Edition 2 offers you the opportunity to open more than one project at the same time. You can open multiple Edition 2 projects, but only one project from an older CD. The actual number of projects that you can successfully open and run at the same time with reasonable performance will depend on your system resources. Available memory, processor speed, other open applications and your network connection may all affect performance.
- ***Project maintenance.*** The *Make Current Project* button has changed to *Make Default Project*. The default project is either the last project you installed or the last project you opened.

Implementation Assistant

The Implementation Assistant (IA) provides services, tools, and methodology to support your implementation project. You can make use of the ValueSAP Roadmap, accelerators, and tools to complete project tasks. The Implementation Assistant provides you with links to the Question & Answer database (Q&Adb), Knowledge Corner (KC), glossary, and project plans.

In addition to existing Roadmaps, this release includes new Roadmaps. Industry-specific documentation will continue to be offered on separate CDs.

New Features

- **Copying structure items:** It is now possible to copy structure items along with all of their subitems. "Copy of" appears in front of the copied parent node. All copied structure items appear in bold in the structure. All attributes, topics and links assigned to structure items are copied with structure items. Once you have copied a structure item, you can change its attributes.
- **Print options:** The print options have been enhanced for this release. When you print out a topic or a topic with all of its subtopics from the Roadmap structure, you now have the option of printing additional information for each document. You can include information on one or more of the following in your printout: Roadmap flavors, roles, subject areas, document type, accelerators and Internet links, customer status, and customer comment.
- **Generating a report:** After you have adapted the Roadmap structure to suit your enterprise's requirements, it is possible to directly import the Roadmap structure into a Microsoft Excel sheet. You can choose to include information on accelerators and Internet links in this report.
- **Filter options:** It is now possible to combine the role and subject area filters. This enables you to limit your view to structure items that are assigned at least one of the roles **and** one of the subject areas that you have selected as your filter.

New Content

ValueSAP Edition 2 offers new Roadmaps plus all the existing Roadmaps, some of which have been enhanced. New Roadmaps for ValueSAP Edition 2 are Business Information Warehouse (BW), Knowledge Warehouse, Strategic Enterprise Management (SEM), Small and Medium Businesses (SMB) & Hosting. The number of project roles for ValueSAP Edition 2 has been significantly reduced to eliminate unnecessary repetition.

Implementation Phase

- **R/3:** The R/3 Implementation Roadmap has been updated in line with current Organizational Change Management (OCM) methodology. In addition, you can now transfer documents you have created or changes you have made to documents in the Customer Solution Strategy Roadmap directly to the Implementation Roadmap. This reduces workload and improves consistency between the two Roadmaps.
- **CRM:** The CRM Roadmap for ValueSAP Edition 2 is based on the latest CRM Software (Release 2.0C). All content has been updated for Edition 2 and the solution, 'Pervasive Service', has been added. Some roles have been replaced and the rest have been updated.
- **Business-to-Business Procurement:** The Business-to-Business Procurement Roadmap has been enhanced to offer more BBP detail for your implementation project and contains new topic files and accelerators.
- **Workplace:** The Workplace Roadmap has been updated in line with the functionality provided in Release 2.10 of the mySAP.com Workplace.
- **BW:** The Business Information Warehouse Roadmap includes more detailed BW content, and additional accelerators to support implementation of BW in your enterprise.
- **Knowledge Warehouse:** The KW Roadmap for ValueSAP Edition 2 is based on KW Software Release 5.0 with three areas: Training Management, Performance Assessment Workbench and Web Content Management.
- **SEM:** This Roadmap provides an activity-based approach to implementing Release 3.0 of the mySAP.com component, *Strategic Enterprise Management*. The SEM Roadmap contains accelerators and Internet links to current information on SEM in SAPNet.
- **Global Template:** The Quality Management work package now includes newly developed program review topics and accelerators. Key accelerators include self-assessment checklists and templates that can be used to present findings for each phase. The program review is used with GlobalASAP, whereas the project review is used with ASAP. Deliverables taken from the strategy defined during CSS are addressed in *Global Program Setup*, the first phase of the Global Template Roadmap. There are new Organizational Change Management topics and accelerators and also more focus on the Global Solution Package in this release.
- **SMB & Hosting:** The SMB & Hosting Roadmap is used in smaller enterprises that require a rapid, turnkey implementation solution, and that want to adopt SAP Best Practices. A preconfigured, industry-specific system is tailored to an enterprise's specific business requirements. The *Project Preparation* phase for the SMB & Hosting Roadmap differs from the Implementation Roadmap in that it includes

presales activities that allow the customer to identify early on, which preconfigured solution is most suited to them. Most of the project work in the *Business Blueprint* phase consists of defining the differences (the delta) between the customer's requirements and the processes delivered in their preconfigured solution. The *Project Preparation* phase includes additional steps for preparing and installing a hosted SAP Best Practices system. This system can be used as early as the *Business Blueprint* phase as a demonstration and development system for determining the delta. In later Roadmap phases, data can be transferred from the demo system to the productive system.

- **Upgrade:** The Upgrade Roadmap now includes information on the procedure for a Customer-Based Upgrade (CBU), and information on the Reverse Business Engineer (RBE), which is used to analyze productive SAP systems. New work packages, activities, tasks and accelerators are provided to evaluate the need for an upgrade, to determine the release required and to upgrade and test the upgrade system. In addition, the Upgrade Roadmap now includes specific information to support IS-Oil upgrades.

Knowledge Corner

Knowledge Corner content has been updated, but the structure and functionality remain the same.

Question & Answer Database

The Q&Adb is a central information repository that you can use to define, document and store the business requirements of your enterprise. It is mainly used for implementation projects, either at a single site (standard implementation) or multiple sites (GlobalASAP).

The Q&Adb functions and content vary according to the project type and flavor you have installed. See the installation guide for ValueSAP Edition 2 for further details.

After feedback from various projects using ValueSAP in a wide area network (WAN) environment, we have improved performance for key Q&Adb functions. This improvement in performance is particularly important for customers using GlobalASAP.

Functions within the tool itself such as setting the scope, copying structure items or setting owners have been enhanced for speed. The speed at which you can access project documentation and/or other documentation templates located on a file server still depends upon the transmission rate (bandwidth) of the WAN environment.

New Features

- **Compose project structure:** It is now possible to integrate different SAP Reference Structures for mySAP.com components (flavors) into one Q&Adb. Project managers can combine various SAP Reference Structures to make up one project structure. This enables the project team to work on the entire implementation scope, for example, R/3, APO and BW in one Q&Adb.

Before you create your project structure, the SAP Reference Structure on the left screen area only contains level the 1 structure items for each substructure. Project managers and the Business Process Team compose the initial project scope using the *Compose project structure* function in the *Administration* menu. The *Compose project structure* dialog box displays all SAP Reference Structures for the Q&Adb flavors you have installed. If you want to use other SAP Reference Structures for your project scope, you can enable (or disable) additional SAP Reference Structures (*Administration -> Settings -> Set project flavors*).

In the SAP Reference Structure for R/3, you can access SAP documentation or display diagrams in the Diagram Explorer for some structure items. This helps you to decide on and set your project scope.

To select structure items from one or more SAP Reference Structures, use **CTRL + left mouse click** to select each structure item. You can then use one of the following options to transfer the selected items to your project structure:

- **Reference** creates a shortcut or link to the original structure item. Referenced structure items are included in upgrades of the SAP Reference Structure.
- **Copy/paste** creates a physical copy of the original structure item. Copied structure items are not included in upgrades of the SAP Reference Structure.

Recommendation

We recommend that you use the *Compose project structure* dialog box at the start of the Business Blueprint phase mainly for referencing or copying structure items and that you carry out other functions such as adding structure items, renaming, setting in scope or setting order directly in your project reference structure on the initial screen. We also advise you not to use the *Compose Project Structure* dialog box to refine your scope at a later stage in the project.

To ensure that your project scope contains the entire solution of the implementation project, compose the initial project scope on a high level such as level 3 and leave the details such as renaming, adding, copying, or setting detailed scope to the Business Process Team.

Note: Before you use the *Transfer scope from* function in the *Administration* menu (for example, from the Solution Map Composer), you have to set the initial project scope manually in the *Compose project structure* dialog box. The *Transfer scope settings to R/3* function will only transfer scope to R/3 Systems. Other mySAP.com components, for example, APO, BW are not supported at this time.

- **Logical systems:** Different SAP Reference Structures are used for specific SAP products (mySAP.com components). These products operate in a diverse SAP system landscape. The new logical systems function delivered with Edition 2 allows you to document the system landscape you require for your project structure.

Select *Logical system management* in the *Administration* menu. In the *Logical system management* dialog box, you can define logical systems and select one or more SAP Systems.

It is then possible to assign logical systems to structure items in your project structure. You can choose to filter your view to those structure items that are assigned a logical system. The reporting option allows you to reduce the scope of your Business Blueprint document to information on a specific logical system.

Recommendation

The following procedure is recommended for the *Logical system management* dialog box:

Select *Add logical system* to create one or more logical systems, assign a flavor to the LS, enter the required logon data for the SAP Systems and choose the corresponding system classification (for example, *Sandbox* or *Dev/Customizing*) for the logical system.

If your project system landscape requires additional system classifications, it is possible to create new system classifications and assign logical systems to them.

When you assign a flavor to more than one logical system, you need to set one logical system as a default system for this flavor. When you assign a logical system to a structure item with this flavor, a logical system is then automatically offered as a default system. To assign a logical system to a structure item in the Q&Adb project structure, select the structure item and choose *Assign to logical system* from the context menu (right mouse click)

You can edit and delete logical systems.

- **Q&Adb authorization concept:** In addition to the existing authorization levels, a new ownership-based authorization concept has been introduced with Edition 2. Modifications and changes to the Business Blueprint are limited to the assigned owner(s).

The following restrictions for editing structure items are available in the *Protection options* dialog box (*Administration* menu):

- *Full* restricts authorization to the assigned owner only.
- *Low* allows the owner and users with a higher access level than the owner to edit structure items and the Business Blueprint.
- *None* means that there are no owner-specific restrictions (default setting).

This function is especially useful in larger projects with larger project teams, where it is more difficult to control the activities of project team members.

Team member authorization has been extended for Edition 2. Team members are now also authorized to maintain status, and generate the Business Blueprint, issues report, and current questions report.

- **Change ownership:** It is sometimes necessary to change the assignment of owners during a project. Edition 2 provides a new function allowing you to change owners (*Administration* -> *Change ownership*):
 - *All* changes the owner wherever the previous owner was assigned.
 - *Structure items* allows you to assign a new business owner and/or consultant as owners of structure items.
 - *Issues* enables you to change and assign various owners for issues as Responsible 1, Responsible 2, effort owner, info-only user or action item owner.
 - *Documents* allows you to change the owner of a document.
- **Organizational Change Management:** Revised Organizational Change Management (OCM) activities for the Business Blueprint phase are supported by a new Q&Adb function called *OCM Rating*. OCM rating is available for level 5 structure items in the *Business Processes* substructure and can be accessed from the context menu (right mouse click).

OCM rating allows users to rate the potential risk for their organization of implementing a specific process and the business impact this would have on the organization. Information on how to approach organizational changes can be documented in the related CI template sections. You can access the CI template sections from the *OCM Rating* dialog box.

You can choose to filter your view to structure items assigned an OCM rating. The OCM rating can also be included in the Business Blueprint (*Reports* -> *Business Blueprint* -> *Organizational Change Mgmt*).

Feature enhancements

Usability improvements and the impact of new concepts such as composing the project structure or owner-specific authorization have resulted in the need to adapt the following existing Q&Adb functions:

- **Filter options:** The *Set filter attributes* (*Edit* menu) and *View by filter* (*View* menu) functions have been redesigned to include all new filter options (for example, flavor, logical system, OCM rating or status). The new filter options allow you to view the project structure according to one or a combination of filters.
- **Reports:** In addition to the new OCM rating report, existing report content, layout, and options have been enhanced to support new functions. For example, the new structure item attributes such as logical system or flavor can be documented in all reports.

Business Blueprint options: The *Blueprint options* dialog box has been reorganized and now contains three tabs (*Filters*, *Content*, and *Print options*). Unlike the standard filter

function, it is not possible to select more than one filter for the Business Blueprint.

When you generate a report containing all substructures, the report now also contains explanations for the questions. Any information on Key Performance Indicators (KPIs) has been removed. All KPI information is included in the KPI report, which is now available in Microsoft Excel format. The report provides an overview of all KPIs and their related business processes.

- **CI templates:** As of this release, it is possible to view CI template properties via the context menu (right mouse click) *Properties -> CI template properties*. The *CI template properties* dialog box contains details of the date on which the CI template section was last modified and who last changed the section. This allows you to track changes to CI template sections.

Recommendation for BW: The Q&Adb only contains the standard CI templates for reference structures within R/3. If you are working in a mixed reference structure environment and require the CI template for BW, you can copy the following CI template sections and insert them in the CI template. Select a structure item from the *Business Processes* substructure, and open the context menu (right mouse click) within the CI template for the structure item (lower right screen area). Select *Add as previous* or *Add as next* and copy the CI template section into the *Text* field and the quick info into the *Comment* field of the dialog box that appears. Choose *OK*. Repeat this procedure for all sections. The BW sections added appear for every structure item in the *Business Processes* substructure.

CI Template Section	Quick Info
1. Structure - calculation	Is this KPI calculated from other facts? (Define the formula). In which unit is this KPI represented? Should key figures be visible to all users? If not, the query must be split or authorization management set up respectively.
2. Structure - characteristics	For which business objects do you want to see the respective facts? Is there an existing hierarchical order that you would like to report on? Do you want to restrict the output on certain objects due to authorization?
3. Structure - period	What is the time level you need to report the data?
4. Technical requirements - past/future	What is the maximum relevant time span in the past? If you do time comparisons, what do they look like?
5. Technical requirements - sources	Do you know where the relevant data comes from?

- **Other usability improvements:** *Keep table view open* in the *View* menu allows you to continue to display information on associated items (for example, CI template sections, BP transactions) on the lower right screen area while navigating through the project structure.

'URL' has been added as a new document type for document management.

New Content

SAP Reference Structures (see also the installation guide for ValueSAP Edition 2)

- **R/3**: Release 4.6C with no major content changes
- **APO**: Release 3.0A (also available on a separate CD, ASAP for APO 3.0A)
- **BBP**: Release 2.0C (only shipped with ValueSAP Edition 2)
- **CRM**: Release 2.0C (only shipped with ValueSAP Edition 2)
- **SEM**: Release 2.0B (only shipped with ValueSAP Edition 2)
- **BW**: Release 2.0B (first official release)

See [Recommendation for BW](#) for information on working with the CI template for BW.

Note: The KPI substructure has not been updated for this release, but a new list of KPIs for Supply Chain Operations can be downloaded from SAPNet at <http://service.sap.com/asapcontent>.

Master Lists

Some minor improvements have been made to existing master lists, in particular to the BPML. It is now possible to access CI template attachments from the project documentation column.

Business Process Procedures

Business Process Procedures (BPPs) have not been updated for Edition 2.

BPPs are available with this edition for the SAP Reference Structure for R/3 and you can access them from the BPML or the BPPs subfolder (Windows Explorer) of the installed ValueSAP project.

The last update of BPPs for ValueSAP Edition 1 was based on Release 4.6C.

Solution Map Composer

The Solution Map Composer will not be delivered on the ValueSAP Edition 2 CD. You can, however, download the software from SAPNet or the SAP Service Marketplace using the alias 'solutionmaps'.

It is still possible to transfer scope from the following solution maps to the Q&Adb (as in Edition 1):

- Automotive Supplier
- Chemicals
- Consumer Products (CP)
- High Tech
- Mill Products
- Pharmaceuticals
- Service Provider

Concept Check Tool

As of this release, the Concept Check Tool (CCT) will no longer be delivered. CCT functions and content are covered by other SAP services.

Outlook 2001

In 2001, we expect to ship two support packages for ValueSAP Edition 2.

In the future, the contents of this CD set will be delivered as part of a set of online tools. This online tool set will serve as a portal for access to all tools, content, and methodologies required for the evaluation and implementation

of integrated business scenarios supported by mySAP.com, thus allowing you to optimize your use of the preconfigured content shipped with SAP Best Practices today. In addition, content in the Customer Solution Strategy and the Continuous Business Improvement Roadmaps will be more closely aligned with the corresponding services provided by either SAP or a partner company.

Contact Information

For further information:

Europe: 00800-VALUESAP (00800-82583727)

North America: 1-866-SAP-VALU (1-866-727-8258)

Email: valueSAP@sap.com

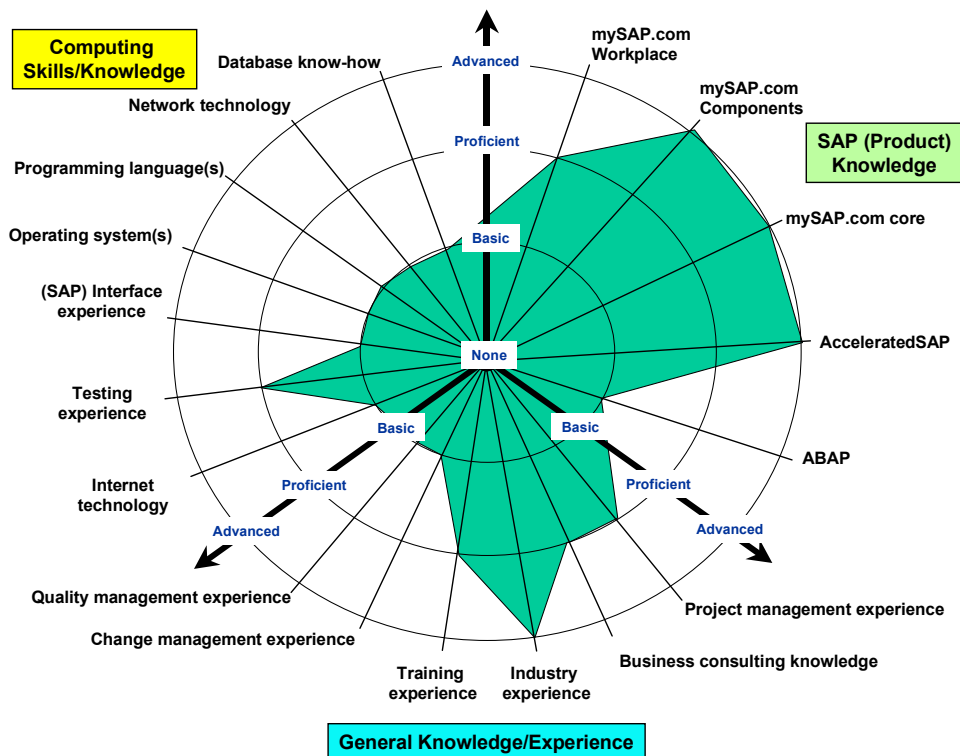
Appendix 2

Skill Profiles for Each Role

Application Consultant Description

The Application Consultant effectively designs how the required business processes and analytical/reporting requirements may be represented in the software configuration, and transfers application design and configuration knowledge to both business process team leads and other team members. The Application Consultant provides best business practices knowledge to aid the design process. He also acts as an advisor and aids the project team in all tasks, as necessary. Modifications often create significant change management issues. As a result, the Application Consultant is in a key position to provide valuable information for the organizational change management process. If legacy data is extracted, a close relationship is required with the legacy system expert.

Skills Profile



Other Related Skills

Product	Required Skills
mySAP.com Workplace	<ul style="list-style-type: none"> Web Tools MiniApps
BBP	<ul style="list-style-type: none"> SAP BBP Materials Management Catalog Setup & Maintenance Workflow experience not essential, but a plus
BW	<ul style="list-style-type: none"> BW Administrator Workbench InfoCubes and/or Queries Logical Models BW Process Models BW Enterprise Models BW Business Explorer Non-SAP Data Access Tools (for example Business Objects, Cognos, Crystal Reports, and other certified data access tools)

Key Tasks

The primary responsibilities of the Application Consultant include:

- Participate in or facilitate business process definition and modeling
- Check the feasibility of this business model concerning the SAP products
- Configure the software to replicate the required business processes and analytical/reporting needs
- Identify the global and standardization requirements versus the local requirements
- Identify requirements for organizational change
- Manage the CTS layer

- Facilitate knowledge transfer to other project team members
- Define authorization profiles and access
- Evaluate statistical performance and make recommendations to basis support for optimization
- Design and develop data solutions and strategies to satisfy the requirements of the relevant mySAP.com Components (APO, BW, CRM, and so on)
- Design the process of implementing blueprints, and design system solutions
- For smaller projects using Business Content: Perform activities in the areas of data access and data extraction (BW)

Tasks Not Required

The Application Consultant is not responsible for:

- Technical solutions
- Interface solutions
- Long-standing data quality problems (These must be escalated to the Customer Project Manager.)

Authorization Administrator

Description

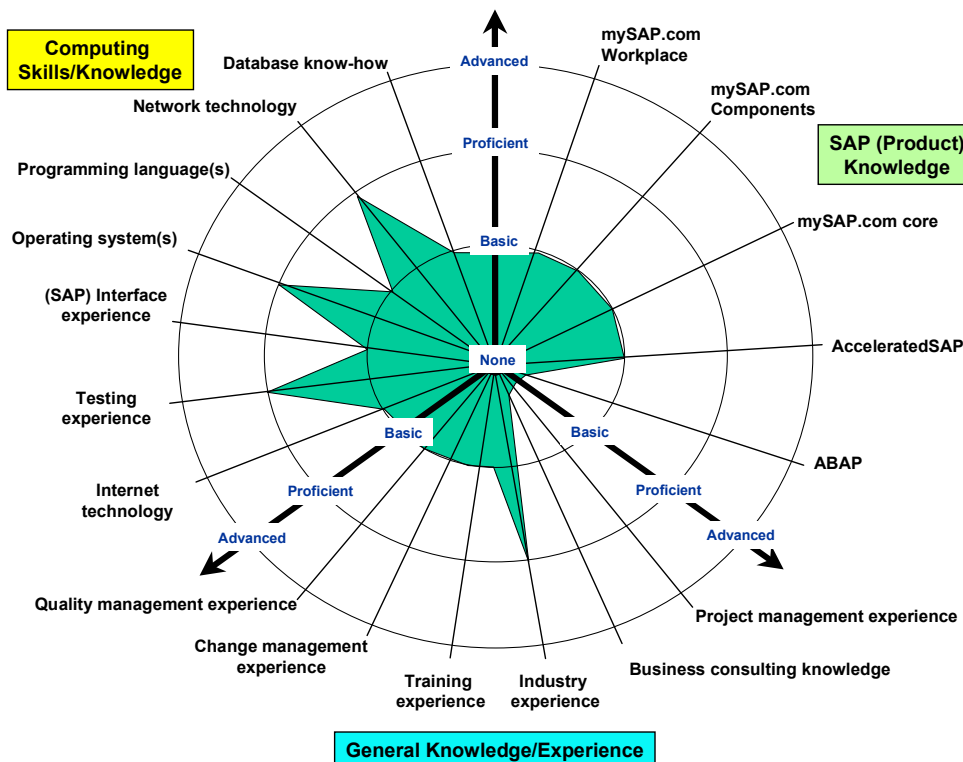
The Authorization Administrator is responsible for managing the systems and network security, and the authorization environment. In detail, this includes:

- Network security
- Operating system security
- Database security
- SAP System security
- Interface security
- Data privacy

The Authorization Administrator also needs to make sure that power users have sufficient knowledge to fulfill their job. Power users are responsible for providing the team members with all the site-specific information needed for a successful implementation of the system.

The role of the Authorization Administrator may be combined with other (technical) administrative roles.

Skills Profile



Other Related Skills

Product	Required Skills
All products	Experience in implementing and supporting security within SAP R/3 but also within another system environment

Key Tasks

The primary responsibilities of the Authorization Administrator include:

- Implement and maintain standards and procedures for system user administration (The "system" should include associated interfaces, for example EDI and Workflow.)
- Design and maintain user profiles

SAP Reviewer

Description

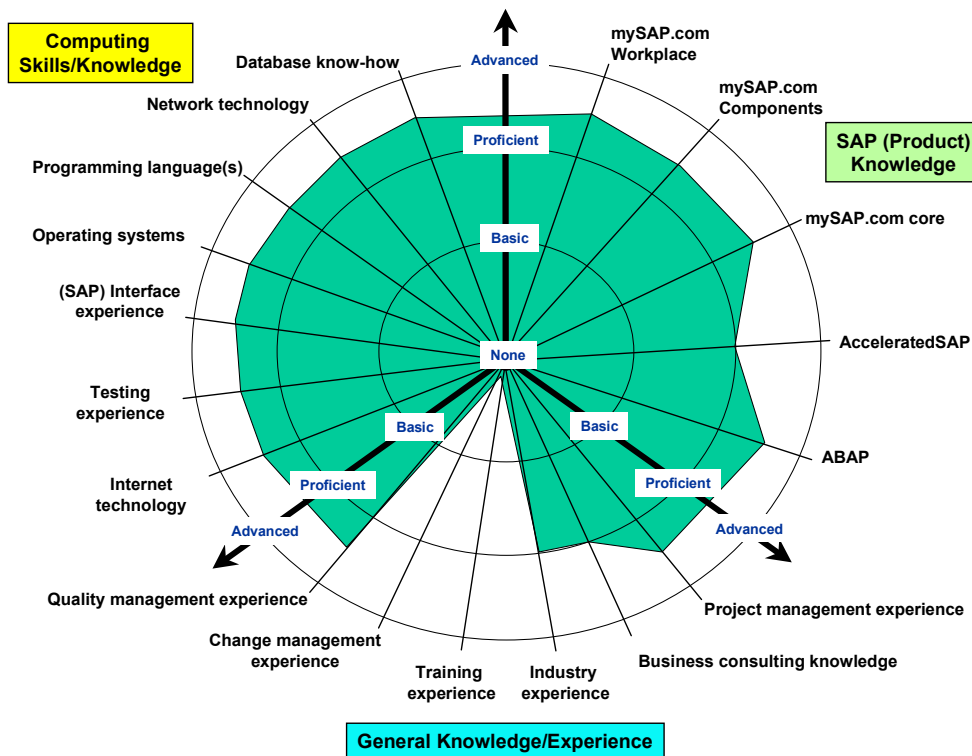
The SAP Reviewer is responsible for evaluating the project at project milestones or at the end of phases. In order to provide an objective point of view, an experienced project manager (or higher-level individual) who is not directly involved in the project should carry out the review. An SAP (or partner) consulting manager is ideal. The reviewer conducts periodic project reviews, assessing the following:

- Adherence to the project implementation strategy to make sure that the project does not drift away from its original goals and business objectives
- Effective use of the AcceleratedSAP methodology and tools
- Project progress compared to plan; milestone achievement
- Deliverables quality, and conformity to the documented approval process
- Project team, steering committee, and any other project dynamics, for example team structure and performance

Additionally, some companies may require project participation of the company's internal audit department. The internal auditor is responsible for assessing and evaluating the system implementation's

compliance with application, data or technical standards, controls, and procedures. The internal auditor communicates findings and recommendations to the steering committee and project management.

Skills Profile



Note: The required skills may vary depending on the subject to review.

Key Tasks

The primary responsibilities of the SAP Reviewer include:

- Assess and report on the match between the proposed implementation solution and the business objectives
- Ensure that scope creep is identified and justified (or corrected)
- Identify risks and proposals for effective risk management
- Provide an objective view of the project at pre-determined dates
- Document review findings
- Provide written communication and recommendations to the steering committee and the project team

Business Process Team Member

Description

Based on the current SAP Reference Structure, there should be one business process team per enterprise area.

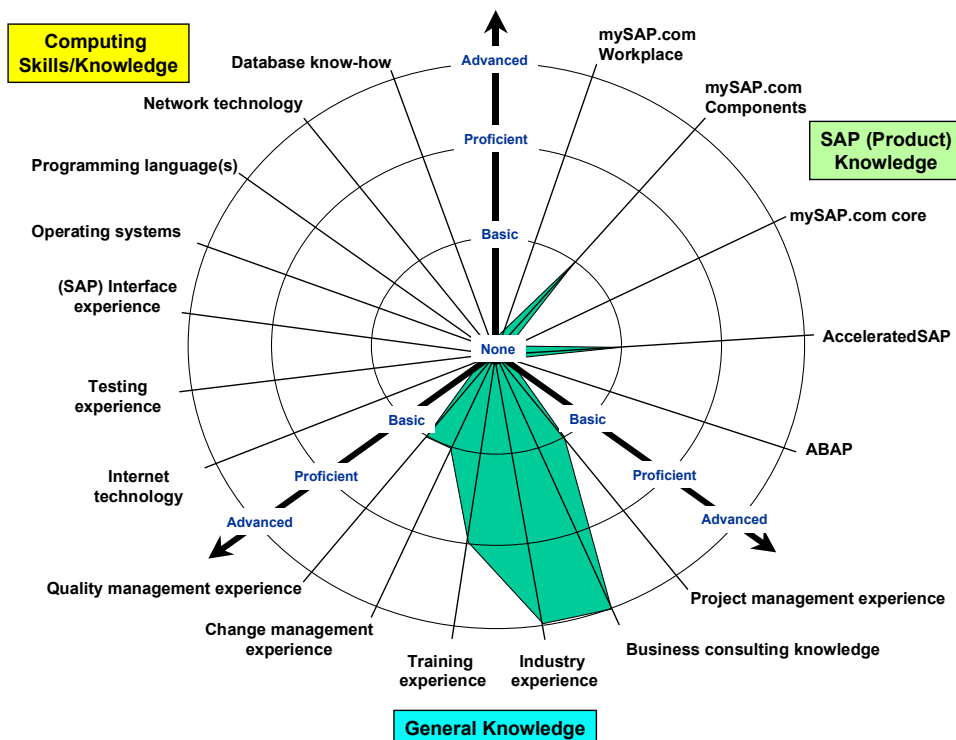
The Business Process Team Member (PTM) is responsible for the execution of the detailed design and configuration of the company's business processes with the system.

The PTM is an essential liaison between the project and the users and should be a champion of the solution within the business.

The PTM is responsible for working together with the end user documentation developers and trainers to identify business processes and technical system tasks to be documented. The PTM is also responsible for providing training and business process input to the end user training team.

A team lead should be appointed to ensure that all tasks are well-coordinated.

Skills Profile



Key Tasks

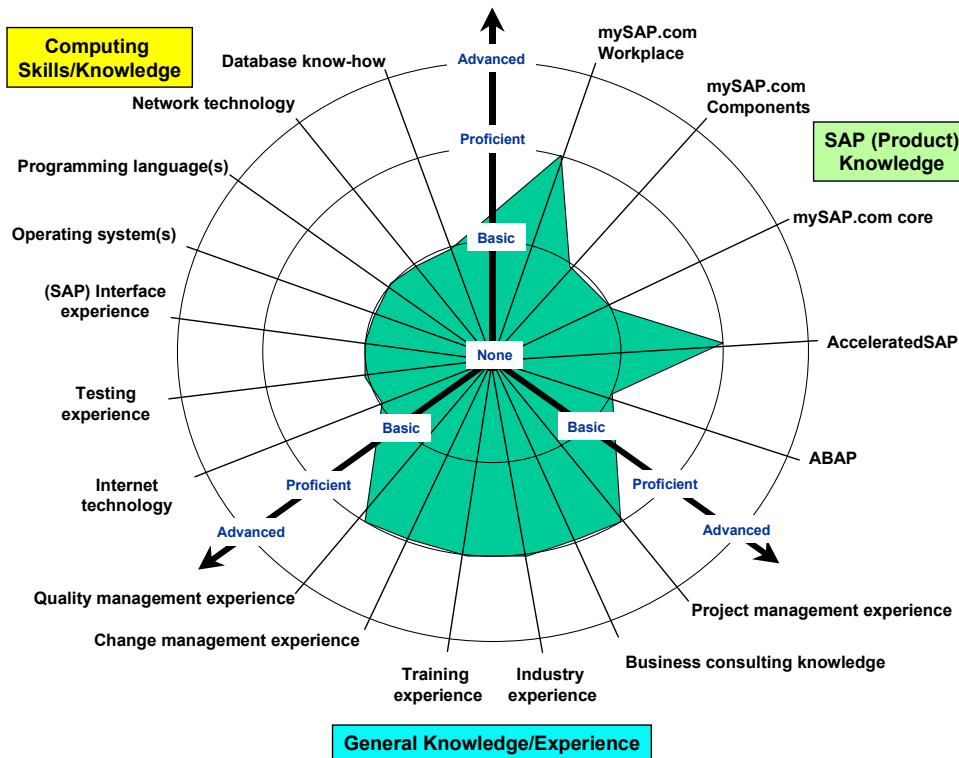
- Analyze and decompose the business processes
- Develop business process documentation
- Design the process of turning blueprints into realization and system solutions
- Ensure that business processes are effectively mapped in the software configuration
- Identify the global and standardization requirements versus the local requirements
- Design and configure the system to support the organization's To-Be process vision, together with the technical team and the Business Process Owner
- Aid in the design of reports, forms, interfaces, and conversions
- Test, modify, and document the system configuration
- Resolve issues
- Ensure that business expertise is available to the project team
- Provide post-implementation support
- Conduct workshops and presentations to validate business processes and solutions with the end user community

Help Desk Provider and Manager

Description

The Help Desk Manager establishes the procedures and organizes a team to support the end users during production operation. He or she also organizes the exchange of problems with SAP or a partner. Usually business process team members and technical team members fulfill this role for the initial Go Live and production support. Help Desk Providers are the first contact for all questions or problems during the company's daily business. Individual questions and issues need to be analyzed and classified. If the help desk cannot resolve the problem, it must either be sent to the SAP Hotline, or continue to be analyzed. For application configuration issues, the help desk should contact the designated company representative for assistance.

Skills Profile



Key Tasks

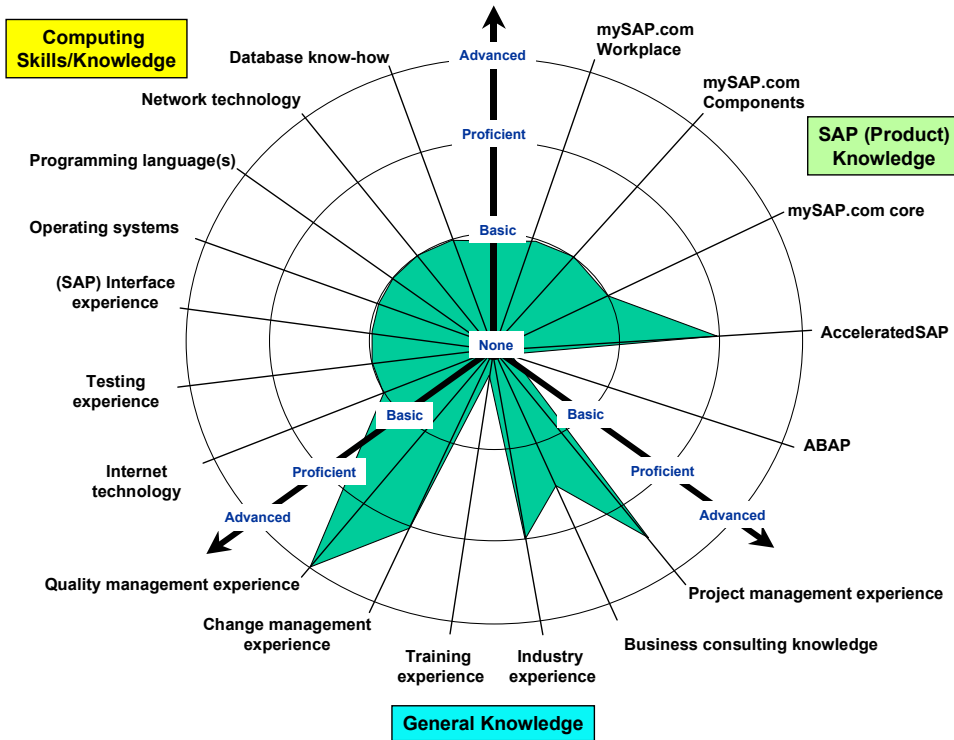
- Define the help desk strategy for Go Live support as well as a long-term help desk strategy
- Define and set up a help desk logging database
- Work with project management to assign resources to the help desk
- Provide application support to power users and end users
- Provide technical support to power users and end users
- Provide business process support
- Manage day-to-day help desk activities
- Monitor response and problems logged
- Escalate issues, if necessary

Internal Auditor

Description

The Internal Auditor evaluates the audit tracking requirements that result from the implementation. He or she communicates those requirements to the Project Management Team and Business Process Team.

Skills Profile



The required computing skills and the SAP Product Knowledge may vary depending on the area of implementation.

Key Tasks

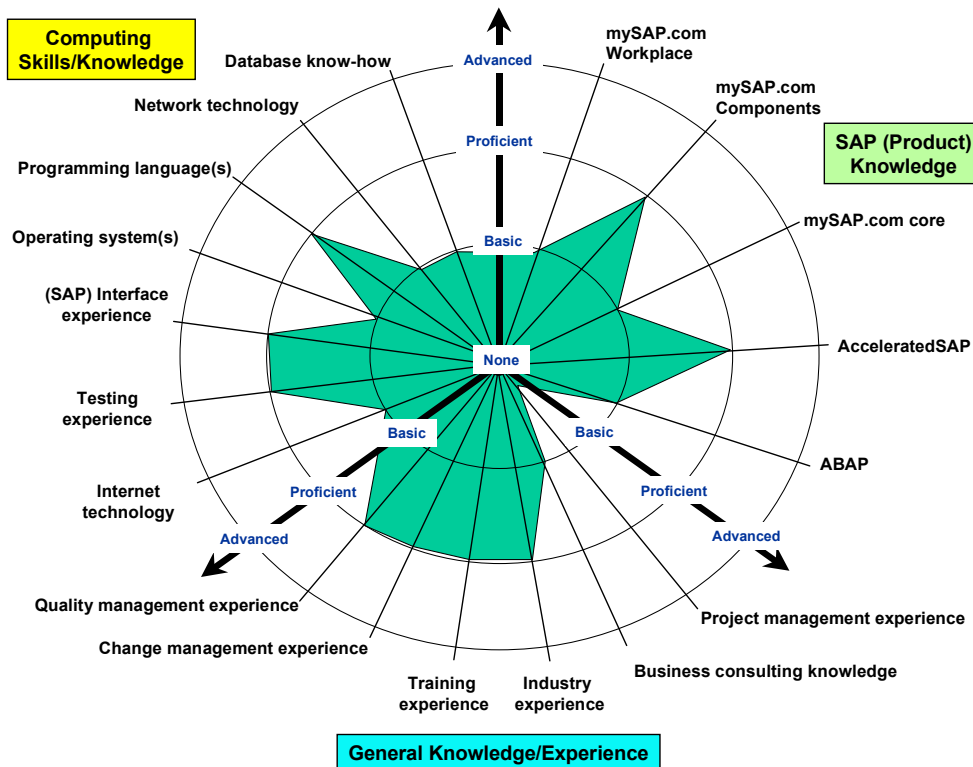
- Ensure that corporate internal control policies are satisfied by the implemented solution

Development Manager

Description

The requirement for this role depends on the degree of technical complexity in the project. A member of the technical team with the necessary skills and experience may fill this role. The Development Manager coordinates customizing and development activities within a subproject.

Skills Profile



Key Tasks

The primary responsibilities of the Development Manager include:

- Create and maintain technical development standards for the subproject as a whole
- Prioritize all requests concerning customization together with the Program/Project Manager and the Business Process Owner
- Determine the feasibility of the process and technical designs
- Write status reports
- Coordinate small customizing projects independently after going live (user interface modeling, radio buttons, and so on)
- Clarify which customizing steps need to be carried out by customer, partner, or SAP Labs

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