

1

Introduction to SAP Implementation Planning

Welcome to SAP Planning!

The core of the material you are about to read stems from seven years of SAP implementation experience across more than a hundred mid-size and global SAP customers. My goal is to bridge the gap between making the decision to purchase a mySAP software solution, and actually pulling the lever for “Go-Live,” which, in essence, makes the new system available to your end users on the Production system. It is my hope that you will use this text as both a reference tool and an informed guide, steering clear of the hazards common to so many SAP implementations.

The rapid changes in information technology hardware, software, and in particular SAP AG’s umbrella of ever-growing solutions, have had a profound influence on the way companies today access and manage their data. The role SAP has played in this regard, especially in the last few years, has been pivotal to say the least. When faced with dot-com’s to the left of them, and hot best-of-breed applications to the right, SAP sought to embrace the best of all worlds and evolved so as to continue to meet its customers’ and stakeholders’ needs.

In wishing to share my own experiences in this regard, I asked myself “What is the number one reason for putting together this book?” The simple answer was: *one-stop shopping for “SAP Planning and Best Practices.”*

IN THIS CHAPTER

- Welcome to SAP Planning!
- My Audience and Approach
- Addressing the Real Challenges of SAP Implementations
- What Exactly Is SAP?
- SAP Infrastructure Planning—What It’s All About
- Special Materials Provided by the Book

I have put most everything a company needs to know or address in terms of planning/organizing for an SAP implementation from a Basis and Operations perspective into one book. Without this book, you would have to hunt through a hodgepodge of white papers, Web content, miscellaneous documents and articles, and a chapter here and there in the few really good texts that exist today. Instead of starting from ground zero, as so many SAP customers do, you will be able to put together custom project plans, implementation schedules, management justification, and more in just a few days. This is the book my colleagues and I were looking for five years ago, but no one had created it.

In addition, my experience is real-world and my perspective is fairly unbiased. That is, I am relatively unencumbered by my own personal database preferences, operating-system likes and dislikes, competing applications, and so on. As one of SAP's premier partner organizations, my team at HP claims a huge number of successful SAP installations to our credit, including some of the largest Microsoft and Oracle-based SAP installations in existence. So I understand the real gut issue that my readers face: The decision has been made to go with a mySAP solution, knowing full well that the risk on the business side is so high that there is little room for risk in the technical implementation. In different chapters of the book, then, I am quick to address challenges relevant to the following:

- Organizational changes that accompany an SAP implementation will drive sweeping changes across much of the company.
- Meeting the project's ROI goals in a timely fashion will impact everything from planning to developing the solution, to testing it, to implementation, and more.
- The Information Technology group (IT) will tend to think of this as an IT project, initially unaware of the integrated nature of SAP and how it will necessitate a tight partnership between the business and IT.
- At the end of the day, the IT department will be faced with implementing a technology solution before the scope of the business solution has crystallized for everyone, and despite the fact that the mySAP solution itself is unfamiliar.

Thus, IT will benefit from all of the help they can get out of people like myself who have already made the journey, know the issues, and have dealt successfully with an SAP project's uncertainties. This book will go a long way toward providing the processes, insights, and wisdom that will enable a company to get the job done right, and on time, the first time.

As SAP Basis consultants and SAP Infrastructure Project Managers, my team established years ago that a solution-agnostic approach to SAP consulting kept all of us working. We let the marketing, technology, and engineering guys do their thing,

while we focused our own efforts on implementation and otherwise taking care of our customers. This meant configuring our customers' various new, redeployed, or best-of-breed hardware and software components into a *solution*, regardless of the different technology vendors and partners involved. Indeed, we considered ourselves actually quite fortunate when we got involved early enough in a project to allow us to have a hand in the project's architecture design and selection. In light of this, I have worked with all of the major hardware, operating system, and database vendors upon which an SAP solution relies, growing and changing with the times as hot technologies replaced what so quickly became legacy.

Finally, I understand that the only reason a company would implement or upgrade SAP in the first place is for business reasons—to increase your competitiveness, reduce costs, make information more widely available across your company, enable better service to customers, improve decision-making capabilities, enhance resource planning, and ultimately improve the execution of so many different business processes. In summation, the technology required to support SAP is simply a means to an end, and not the end itself.

My Audience and Approach

So, you're ready to plunge into the world of SAP! Or, maybe you're in too deep already, perhaps even past that critical point of Go-Live, and need to step back and review where you are and how you got there. Perhaps you're soon going to be involved in a mySAP implementation, or are considering a support or management role at an existing SAP site. On the other hand, you may just be curious about what SAP infrastructure and implementation best practices and approaches are all about. In any case, you have come to the right place.

I suspect that many readers will use this text as a baseline of sorts, comparing their own SAP plans and implementations to what I have provided, looking for new ideas, or alternatives for approaching problems that are common to all system implementations. In lieu of this, I believe my readers fall into a number of categories, as my real-world subject matter appeals to many, including:

- Executive C-level managers and directors tasked with implementing or maintaining SAP environments
- SAP project managers and various SAP team leaders tasked with discrete subprojects related to implementing, supporting, testing, tuning, or training
- SAP Basis and Web Application Server consultants, engineers, and technicians, asked to size, configure, and implement mySAP solutions
- Database administrators (DBAs) and Storage Area Network (SAN) consultants with a need to maintain their piece of the SAP enterprise pie, or simply expand their knowledge

- Traditional data center operations and infrastructure management folks asked to step up and assist in developing or maintaining an SAP IT shop
- Network administrators, systems administrators, data center power/utility technicians, and others with similar roles supporting the very groundwork upon which the SAP solution lies
- Others internal to (or seeking employment with) an organization, interested in learning the process a company should follow in selecting, designing, and deploying SAP
- Technical individuals who are new to (or want to be a part of) the world of SAP—individuals who may be supporting similar enterprise applications or mission-critical environments (mainframes/mid-frames, more) and who want to make a career move into learning and supporting SAP
- Finally, non-technical business managers/supervisors who are soon to be thrust into an SAP project or environment

The book has been crafted along the lines of a project plan. In fact, on the CD enclosed with this book, I have actually included a comprehensive sample project plan, along with PowerPoint presentations, Excel sizing worksheets, various Word documents, scripts from a number of tools, each figure in the book, and much, much more. All of this is designed to get you quickly up to speed, while guiding you through your own SAP infrastructure implementation.

The core value that I provide to you is the chance to benefit from the work of others—namely, my own work and that of my team. With thousands of SAP installations out in the world today, there is little value in reinventing the wheel. Frankly, most everything you need or want in regards to a mySAP implementation has already been done, and done well, by someone else inside another company. So why not read on, and take full advantage of that?

Regardless of whether you are implementing or updating your mySAP.com enterprise, and whether it consists of SAP R/3, Business Information Warehouse (BW), Advanced Planner and Optimizer (APO), Product Lifecycle Management (PLM), Customer Relationship Management (CRM), Enterprise Buyer Pro (EBP), Enterprise Portal, or any other number of SAP enterprise components, there are certain tasks that must be planned for and executed across the board. And if you're interested in minimizing costs and managing your critical path to a successful outcome, these tasks must occur in a certain logical order or sequence. With all of this in mind, it seemed rather obvious that a "project plan" approach made the most sense for the book.

For new implementations, I suggest that you read the book sequentially, from the first to the last chapter. If you find yourself in the middle of a project, though, feel

free to jump to the chapters that best fit your project or timeline status. Of course, in doing so you might well “skip” over knowledge that could very well prove useful, too. I suggest quickly reviewing the Table of Contents, therefore, to determine if it makes sense in your particular case to go back and review any passed-over content.

What Exactly Are “Best Practices and Approaches”?

For every thousand implementations, there are a thousand ways to implement SAP. In the course of consulting, however, I have determined that there tends to be one or two “best” or “preferred” methods of doing a particular task, or addressing a particular problem. It is these nuggets of insight and knowledge that I hope to pass on to you, my reader, within the larger scope of covering an SAP infrastructure implementation end-to-end. Most of the concepts, practices, and approaches outlined in this book are the result of years of experience designing, deploying, and supporting SAP implementations enabled by Compaq’s, Digital Equipment Corp’s, and Hewlett Packard’s technology platforms. Like SAP AG, we too have endured many changes over the last few years, and have grown both stronger and wiser in doing so. We boast some of the largest implementations in the world, and some of the most complex in terms of enterprise integration requirements. And we boast some of the most cost-effective SAP solutions as well, pushing the envelope when it comes to embracing new computing paradigms and solutions approaches.

Given the many possibilities I just described, in my experience best practices and approaches related to SAP projects can be grouped into four general areas:

- People
- Processes
- Technology
- Return on Investment (ROI)

I will do my best to ensure that all four of these areas are covered in each chapter, as appropriate, along with relevant best practices and approaches. It is my intent to build an understanding of the problems and pitfalls you will encounter, and how these might best be rectified or avoided altogether as we march down the roadmap of an SAP implementation. As such, I view this book as simply an extension of my own SAP consulting work, a conglomeration of insight and experience melded together in one place. You are now my customer, and I am your (very inexpensive!) consultant. Given that the efficient and proper use of external consultants is one of many keys to a successful SAP implementation, you’re well on your way to success by just leveraging this book, the foundation of my “customer deliverable” to you!

Addressing the Real Challenges of SAP Implementations

In a world filled with books on SAP (those of us who work with SAP for a living like to hear it pronounced “ess-aye-pea,” by the way), this book is unique. In my review of numerous “how to” and other SAP planning guides over the years, I continually noticed how little attention was given to addressing the *real* challenges related to deploying an SAP solution. For example, little attention was ever given to:

- How to structure an SAP technical support organization
- How to encourage apples-to-apples SAP sizing exercises, and then evaluate each vendor’s solution approach on a level playing field
- How to determine realistic high-availability and performance requirements
- How to plan for and develop an SAP Data Center
- What to include in an SAP Operations Manual
- How to plan for and execute both functional and load/stress tests
- How to really leverage your SAP system landscape for training and testing
- What training is really required across user and technical boundaries, and when it should be delivered
- What role the help desk and SAP Operations teams must be both staffed for and prepared to play
- The infrastructure or basis tasks that need to be addressed, and when, to actually make it to Go-Live
- How to build “buy in” with the business folks—the owners and end users of the system.

I address all of these, and much more, from an SAP infrastructure perspective. And by following the project-plan approach outlined earlier, I promote a timeline that coincides nicely with SAP’s ASAP and newer roadmaps, which enables the functional development and related infrastructure deployment requirements to be mapped out in lockstep. Finally, to assist my readers with jumping into action (or simply avoiding re-creating the wheel), I include various tools and techniques that may be leveraged throughout your own SAP implementation. These are identified and discussed at the end of each chapter, and included on the CD that ships with this book.

What Is Covered

Each chapter covers the tasks and subsequent problems and solution approaches typically encountered when planning for, testing, or implementing SAP. My focus is

centered on all of the SAP infrastructure requirements necessary to provide the groundwork for the actual software functional configuration and deployment. Some people label this groundwork *SAP Basis*, which is SAP's own word for the foundation upon which the SAP solution resides. I prefer the terms "SAP Infrastructure" or "SAP Solution Stack," though, as Basis limits us in so many ways to a smaller set of discrete tasks or scope of responsibility. Besides, with the term "Basis" making way for newer terms associated with SAP's Web Application Server (and the newest 6.30 technology foundation for SAP components), my preferred terms allow us to cover both the older and newest worlds of SAP.

- ▶ To learn more about what the SAP Solution Stack entails at a high level, see "In the Beginning," p. 23 in Chapter 2. For detailed SAP Solution Stack information, refer to "A Closer Look at the SAP Solutions Stack," p. 51 also in Chapter 2.

What Is Not Covered

Although the functional programming, configuration, and work required to make SAP actually *useful* after it is installed is paramount to the overall success of any SAP implementation, I do not go into this detail here. Rather, I leave the topic of SAP's programming language, ABAP (Advanced Business Application Programming), and its more recently supported development option, Java, to the many books, articles, and other documents out there aimed squarely at this kind of activity. When appropriate, I discuss functional development, testing, and other related tasks as they impact our discussions from an SAP infrastructure perspective, however.

In addition, I assume that you have already selected SAP (or it has been selected for you!) as your enterprise solution package of choice. Certainly, there are a number of choices in the enterprise solutions arena—including products from PeopleSoft, Oracle, JD Edwards, Microsoft, Baan, and more. However, SAP continues to command the lion's share of enterprise implementations, even recently surpassing a number of "best of breed" specialty applications in terms of popularity. Some of these will be discussed later, but if you are looking for a book that will help you determine *which* enterprise application is right for you, you need to keep looking. Of course, you could decide to go with the market leader, a company positioned to remain successful (even in these times of tightened IT budgets), and end your search right here.

What Exactly Is SAP?

SAP AG (AG is the German equivalent of the term "incorporated") refers to the name of one of the largest software companies in the world, often referred to simply as SAP. The company, consisting originally of ex-IBM folks with a vision of creating an integrated enterprise software solution, is based out of Germany and has been in business since 1972.

SAP is also the tag given generically to software created and marketed by SAP AG. Their most popular application package by far is called SAP R/3, which competes in the *Collaborative Business Solutions* category of software, designed to facilitate business operations such as: order entry, materials and warehouse management, logistics, sales and distribution, financial and asset accounting, human resource management, and more.

Other applications created and marketed by SAP have become quite popular as well. We will cover many of these in detail later, but suffice it to say that SAP has offerings in data warehousing (mySAP Business Intelligence, which includes Business Information Warehouse, or SAP BW), supply chain management (Advanced Planner and Optimizer, or SAP APO), customer relationship management (mySAP CRM), product lifecycle management (mySAP PLM), business-to-business procurement (mySAP Supplier Relationship Management, which consists of Enterprise Buyer Pro, or EBP, and predecessors BBP and B2B), and much more. Today, it can be safely said that if there is any system or software need in the enterprise, SAP probably offers a product to fill that need. This is a much different scenario than three or four years ago, when SAP was a synonym for simply R/3.

How Do mySAP.com and mySAP Fit into the Big Picture?

Way back in the heady days of 1999 or so, when everything was “dot-com this” and “dot-com that,” SAP was already years ahead of the game. R/3 had been Internet-enabled since the introduction of version 3.1G, and the timing was right for SAP AG to introduce a new e-enabled vision of their growing product line. Out of this vision came “mySAP.com,” an umbrella term used to refer to the entire breadth and depth of SAP’s e-business solutions and products. Recently renamed to mySAP Business Suite, SAP defines mySAP.com as:

“A family of software and services that empowers customers, partners, and employees to collaborate successfully—anywhere, anytime.”

Thus, we can combine everything that SAP sells today under the term mySAP.com, and feel pretty comfortable about it, as illustrated in Figure 1.1.

However, the situation becomes a bit more complicated as we introduce the term *mySAP*. Without the .com suffix, mySAP refers to SAP *Solutions*. Thus, we wind up with various “mini-umbrellas” underneath mySAP.com, such as solutions like mySAP Business Intelligence (mySAP BI) or mySAP Supply Chain Management (mySAP SCM). Underneath these mini-umbrellas lie the actual software products, however, which SAP labels generically as *components*. For example, underneath the umbrella of mySAP BI reside SAP Business Information Warehouse, SAP Knowledge Management, and SAP Strategic Enterprise Management.

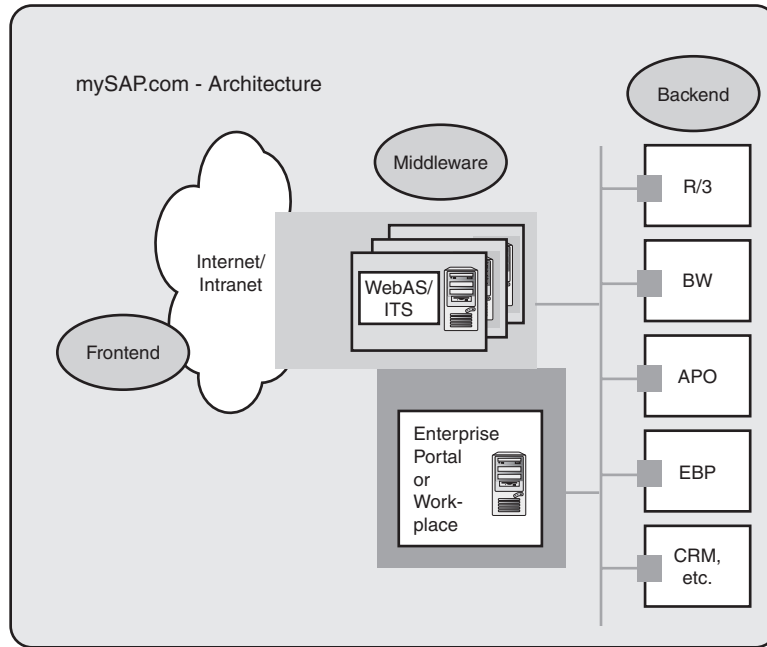


FIGURE 1.1 The SAP family of software and services.

Many other mySAP solutions exist as well, as illustrated in Figure 1.2. For example, cross-industry solutions include mySAP Marketplace, mySAP HR, mySAP Mobile Business, mySAP Financials, and quite a few others. And there are SAP's Industry Solutions to consider, too. These industry verticals are targeted at specific lines of business, and include solutions such as: mySAP Automotive, mySAP Healthcare, mySAP Oil & Gas, mySAP Retail, and over a dozen more.

The underlying software components of any given solution are neatly prefaced with the simple term "SAP." This is appealing to those of us who have been working with these products since day one, when they were introduced under the old umbrella of New Dimensions Products, because that's how they were labeled back then as well. So, R/3 has always been and continues to be called SAP R/3. Similarly, Advanced Planner and Optimizer (under the mini-umbrella of mySAP SCM) is still simply called SAP APO.

The term SAP, then, typically refers to the technical components used to implement a mySAP solution, under the overall umbrella of mySAP.com. For the remainder of this book, however, I will continue to use the term "SAP" to refer generically to any SAP product or component, or to the company itself.

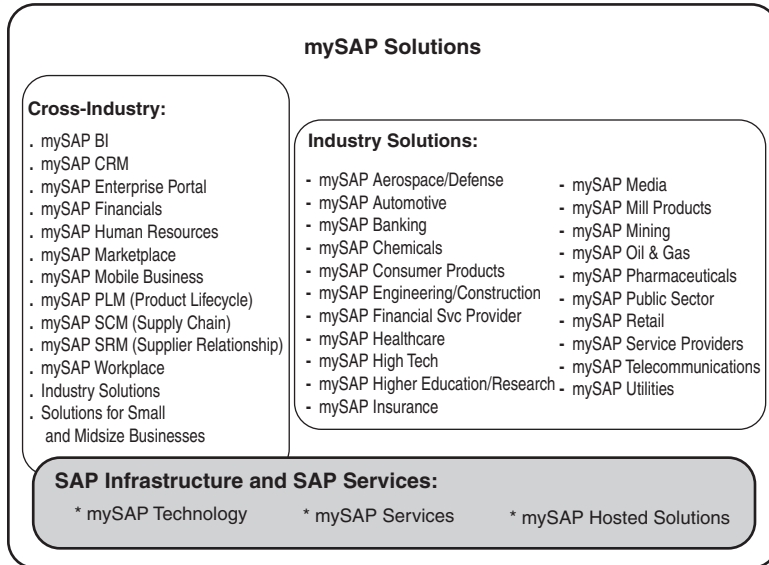


FIGURE 1.2 SAP’s Solutions represent both cross-industry capabilities and targeted point solutions for industry verticals.

SAP Infrastructure Planning—What It’s All About

As indicated earlier, SAP Infrastructure or SAP Basis refers to both the technical foundation and the actual SAP installation upon which all development activity and productive operations rely. Note that I will also use the term *SAP Solution Stack* interchangeably with SAP Infrastructure and SAP Basis.

The solution stack references the “layers” of infrastructure and technology that sit one on top of the other in support of an SAP solution, like the layers in a three-layer cake. Generally speaking, this might include the following:

- Physical space, like a computer room or other data center facility
- Power, cooling, and other utility-based infrastructure layers
- Physical mounting and racking layer
- Server and disk subsystem hardware layer
- Firmware layers associated with specific hardware
- Operating System (OS) layer
- OS drivers, service packs, updates, patches/fixes

- Database layer
- Database drivers, service packs, updates, patches/fixes
- SAP application layer, which in and of itself consists of multiple layers
- Internet-enabling layer
- SAP accessibility layer, including desktops, laptops, and other devices used to access a mySAP solution

Of course, each of these layers can be further broken down into more detailed layers. For example, server hardware covers the individual servers supporting an SAP solution. Drilling down deeper, we find the specific memory, CPU, I/O, and other server hardware subsystems or layers, too.

Further, multiple solution stacks typically exist in any given solution. For example, the general SAP desktop GUI solution stack might consist of an HP desktop running Microsoft Windows XP, HP's OS client drivers version 4.4, Internet Explorer 6.x, and so on. The general SAP BW server solution stack, on the other hand, might consist of an HP Proliant DL760 server with firmware and OS drivers from SmartStart 5.3, running Windows 2000 Advanced Server with Service Pack 2, and loaded with SAP BW 3.0B.

One of the keys to a sound technology solution is assembling a solution stack that is supported by all of the various technology vendors involved in the solution. Assembling such a supported configuration is by no means trivial! This is one of the reasons why so much time is put into vendor and overall solution selection—minimizing the number of technology players while bringing together a supportable end-to-end solution is the ultimate goal.

Obviously we are interested here in SAP's technology solution stack, but you can apply this same approach to any technology or solution. That is, Exchange 2000 has its own unique solution stack, as does an Oracle iProcurement solution or a PeopleSoft HR/Microsoft SQL Server 2000 solution. The enterprise product/system might differ, and the solution stack will certainly differ, but the approach to building a supported and well-performing solution remains constant.

How to Speak SAP—Terms and Terminology

We have already covered quite a few terms and acronyms. However, especially if you are new to or a bit rusty in using SAP's general terminology, you should understand the following list:

Don't worry about memorizing all of this right away—to keep the book useful to all levels of readers, I will continue to spell out acronyms and explain key terms throughout the book.

- SAP Component—Any number of SAP’s products, like R/3, Business Information Warehouse (BW), Advanced Planner and Optimizer (APO), Customer Relationship Management (CRM), Enterprise Buyer Pro (EBP), Product Lifecycle Management (PLM), Strategic Enterprise Management (SEM), and so on.
- Instance—An “installation” of an SAP product, which ultimately equates to an SAP component with its own set of work processes.
- SAP R/3—The most popular and prevalent SAP component, R/3 is simply a client-server-based online transaction processing system. It includes functionality like Asset Management, Financial Accounting, Human Resource Management, Plant Maintenance, Production Planning, Quality Management, Sales and Distribution, Materials Management, Business Work Flow, and more.
- Landscape—The collection of systems supporting a single solution (SAP component) like R/3, BW, CRM, and so on. Note that each solution requires its own SAP system landscape.
- 3-System Landscape—Typically, each SAP Solution requires a Development environment, a Quality Assurance/Test environment, and a Productive environment.
- Central Instance (CI)—The main “SAP” installation in a system (as opposed to the “Database Server” installation or dedicated application server instances, and so on). The CI is responsible for managing locks, inter-server messaging, and queuing.
- System—Typically consists of multiple instances. For example, your SAP R/3 system may consist of a database instance, a CI instance, two batch server instances, and five application server instances.
- Client—A legal entity or “business” within an instance—this is what end-users actually log in to with their unique user IDs and passwords.
- SAPGUI (pronounced sap goo-ee)—SAP’s “classic” Graphical User Interface, which provides a Windows-like look and feel. Other accessibility options exist as well, including a number of Web-based user interfaces.

Organizing the Book—Parts and Chapters

This book is organized into four high-level sections, or *parts*. Chapter 1 precedes these parts, laying the groundwork for the rest of the book. Part One, “Preparing for Your mySAP Business Suite Implementation,” consists of the next three chapters. These chapters commence in Chapter 2 with addressing planning, business requirements, uptime, and service level requirements and considerations. Here, I also take a

close look at the SAP Solution Stack, tactical and strategic reasons for implementing mySAP solutions, and the critical roles that both executive buy-in and business unit buy-in play in ensuring a successful implementation. Discussions on measuring success, measuring actual return-on-investment, assembling a real-world SAP project steering committee, drafting a customized high-level project plan, and the critical role of change control are also incorporated in Chapter 2.

Then in Chapter 3, “Crafting Your mySAP Solution Vision,” we move into refining and communicating a vision of the “to-be” or “future-state” of the SAP system, including the impact that the new enterprise solution will have on the business from the perspective of change. The importance of solidifying and capturing this solution vision is presented, along with a discussion of the different technology perspectives that a company might have, and how each perspective impacts the project. Other things come into play too, all of which drive building a “Request For Information,” or RFI, that will assist you in sharing your detailed SAP component requirements and infrastructure biases with various SAP technology partners. This includes how the SAP system landscape for each component should take into consideration or address the following factors:

- Simplification
- High Availability
- Disaster Recovery
- Training
- Performance
- Scalability
- Total Cost of Ownership
- Security Requirements
- Manageability
- Accessibility

Next, I consider outsourcing as an alternative to hosting SAP infrastructure in-house, and then I begin Chapter 4, “Designing and Initially Staffing the SAP Technical Support Organization (TSO),” with discussions of designing a support structure and organizing the folks required to implement and manage SAP. The critical roles of Project Manager and SAP Solutions Architect are covered here, and I take a closer look at recruiting other key positions as well. Real-world organization approaches and best practices are then followed by a comprehensive study in the value of training internal folks versus bringing in consultants. I include case studies where different and sometimes extreme approaches were met with mixed success. I end the

chapter, and Part One, with the task of revising budgets in preparation for the next part of the book.

Part Two, “Getting Started—Sizing and Blueprinting,” revolves around sizing and architecture activities, including preparations required beforehand. These activities are approached landscape-wide, and start off with a discussion in Chapter 5, “Total Cost of Ownership Analysis in Preparation for Sizing,” on identifying drivers and characteristics of an SAP solution that impact total cost of ownership. The SAP Solution Stack is examined with a critical eye toward how each layer contributes to costing, as well as how each layer contributes to solution requirements like high availability, performance, and scalability. Discussion on people and process costs are covered here as well. Chapter 6, “Identifying High Availability and Disaster Recovery Requirements,” introduces us to the general term “availability” and how high availability and disaster recovery must be tackled early in the sizing process. Each layer in the SAP Solution Stack is analyzed in detail, and real-world approaches to increasing system availability are identified and discussed. I conclude this chapter with availability best practices, including the role of the Disaster Recovery Organization.

With our budget, business, and availability requirements in hand, we then move into Chapter 7, “Sizing: Engaging the SAP Solution Stack Vendors,” and begin working with the various hardware and software partners capable of assisting us with sizing an SAP enterprise solution. Configuration rules and approaches to sizing SAP’s discrete components are presented, and I share methods and approaches for effectively comparing each vendor’s solutions, beginning with building a team responsible for evaluating sizings. I next cover how to plan for and conduct the “Planning and Scheduling” meeting with the selected short list of vendors, ensuring that all involved are on the same page before moving forward. Chapter 7 concludes with information on how to structure the first few days of “pre-planning” meetings with your selected solution stack vendors, setting the stage for implementation and critical path scheduling.

Chapters 8, 9, and 10 cover staffing, training, and developing the SAP Data Center, respectively. Chapter 8, “Staffing the Technical Support Organization,” opens with key interview techniques and actual questions, which are designed to help you staff your project with the best people. And then I cover the often overlooked topic of how to actually retain these key project assets throughout your SAP undertaking, including addressing compensation, incentive/training programs, compensation alternatives, and something I like to call “the most important thing.”

Chapter 9, “Critical SAP Training Requirements,” drills down into training—who needs it, when they need it, why the topic rates its own chapter, and how such training may be delivered and administered. The role of your SAP system landscape and how it may be leveraged to facilitate training is sorted out here, too. Finally, in Chapter 10, “Developing the SAP Data Center,” we dive into the details surrounding

planning for and developing the data center ultimately responsible for ongoing SAP operations and day-to-day support—a very critical task indeed! In reality, this chapter can only be described as both comprehensive and unique in the world of SAP books and articles. I actually walk you through the same steps that I take with my own SAP customers, including: power and cooling requirements, network infrastructure planning, optimizing data center real estate through rack planning and management, designing and implementing basic Storage Area Networks (SANs) and other common disk subsystems, addressing various operating system installation approaches, and much, much more.

Chapter 11, “Performing mySAP.com Component Installations,” is geared toward actually installing specific SAP components, and filling in any voids in your SAP system landscape. A quick discussion of realistic implementation techniques is then followed up with actual working checklists and approaches for the basic SAP Solution Stack layers, covering SAP R/3, APO, EBP, Web Application Server 6.20, and other popular SAP solution components. SAP client strategies, post-installation checklists, and more real-world observations and challenges wrap up Chapter 11, and Part Two as well.

Chapter 12, “Rounding Out Support for SAP,” starts Part Three of this book, “Moving into SAP Functional Development.” I detail how to fill in the holes in your SAP Technical Support Organization, which at this point in the project requires specific product specialists and technical skills specialists required to meet near-term goals or support SAP on a long-term basis. Broader support functions, like the role of the SAP Help Desk and SAP Operations teams, are also addressed here. I finish this chapter by taking a look at how other customer organizations, both large and small, attend to their own unique SAP TSO, help desk, and operations functions. Next, in Chapter 13, “Gaining Control of Change Control,” I focus on the importance of managing change, including planning for change, organizing the change control function, and the ramifications of ignoring or side-stepping change control. Change control best practices, worst practices, and *lessons learned* close this chapter.

Chapter 14, “SAP Systems and Operations Management,” brings us to SAP systems management and other critical operations-derived functions. I include a comprehensive recap of the most popular SAP management toolsets and approaches available today—including what many SAP customers *actually* do in terms of day-to-day SAP systems management. I also drill down into best practices when it comes to operations, documentation standards and approaches, and other management tasks and tactics, much of which may be immediately leveraged by my readers.

Part Three, “Moving into SAP Functional Development” concludes with Chapter 15, titled appropriately, “Functional, Integration, and Regression Testing.” In this chapter I contrast business process testing with other forms of testing, such as “load/stress” testing, and offer a number of tried-and-true tools and approaches.

Although my focus is often on SAP's eCATT (Extended Computer Aided Test Tool), I also address people and process considerations before wrapping up with a discussion on the weakest link in an SAP implementation—coding.

The final section in the book, Part Four, "Planning for Production Go-Live," walks you through setting up your production system and then stress-testing it to ensure that your mySAP solution performs as expected. To that end, I leverage my deep experience in customer-specific SAP stress testing in Chapter 16, "Systems and Stress Testing," contending with tasks like:

- Testing discrete solution stack layers and components before performing solution-wide testing
- Identifying the mix of SAP business transactions to test
- Determining how to best generate a representative load on the system, including the ratio of online users to batch processes
- Identifying stress testing success criteria
- Developing and testing scripts
- Identifying methods of obtaining enough data to truly "pull off" a stress test
- Determining the need for "real users" versus the value in virtual client driver methods
- Monitoring the SAP stress test up and down the SAP Solution Stack

Much more is covered as well, including the value derived in testing failover scenarios, verifying that systems management processes work as expected, ensuring that tape backup/restore procedures are successful, and so on. And I look at a huge variety of testing tools and approaches, ranging from freeware scripting utilities to fully-functioned "SAP-aware" testing suites costing thousands of dollars but capable of delivering that much more value.

Finally, in Chapter 17, "Preparing for SAP Go-Live," I culminate all of our work in designing, implementing, staffing, and testing with one final set of exercises—planning for Go-Live. The value of dry runs, locking down the system in terms of change management, verifying data integrity, and performing various SAP Solution Stack final reviews are all explained in detail. I also look at the evolving role of the SAP Technical Support Organization at this stage in the project, discuss various service and support options, and develop a "post-implementation" evaluation useful in documenting what the SAP implementation team did right and where improvement is possible. I conclude the book with high fives, congratulations, and toasts all around, as we walk through the non-event we call "Go-Live," and then spend a few

more pages on the value that Book Two—the next book in this series—will provide in terms of achieving SAP operational excellence after Go-Live.

Special Materials Provided by the Book

Let's face it, if I wrote this book like everyone else, it would simply be an update to a amalgamation of documents you could have picked up a few years ago. Hey, it might even put some of you to sleep! Instead, what I have decided is to wrap up my materials with real-world insights and observations, leveraging a few different approaches:

- You will notice chapter sections containing the words “In the Real World.” This is one way that I apply what has been discussed in the chapter and relate it back to what I have observed first-hand in the real world. Doing this lets me inject my own experiences and stories into the dialog. You will find these personal accounts interesting, I'm sure. You might even laugh out loud on occasion—it's cool, I won't tell anyone.
- Each chapter (except this one) contains a “Tools and Techniques” section. As my youngest child, Ashley, likes to add when ordering a complex meal at her favorite fast-food franchise, I like to think that the “Tools and Techniques” section contains “all the stuff”—Checklists, Microsoft Project Plans, Microsoft PowerPoint presentations and Excel Spreadsheets, various tools and utilities, scripts, document templates saved in Microsoft Word format, best practices, approaches, alternatives, and more.
- The *Planning CD* enclosed with every copy of the book is the home of all of these tools and techniques, as well as some other pretty valuable utilities and documents. Enjoy. This represents the work of thousands of hours of consulting. And the best thing is that someone else footed the bill for you!
- Another reference made throughout the book involves the MCL, or *Master Check-Off List*. This is a simple document in design and appearance, but will prove invaluable in tracking progress, planning for meetings, and as a pointer or reference to tools and utilities that may prove useful on the Planning CD.
- Finally, the *SAP Infrastructure Project Plan*, or SIPP, is a comprehensive project plan that may be leveraged in support of the bulk of your SAP Implementation Project or SAP Infrastructure Upgrade.

Figure 1.3 illustrates my approach. In this way, the book not only serves as a reference to guide you through planning for and implementing SAP, but it also makes the book a lot more fun to read. Entertaining, even!

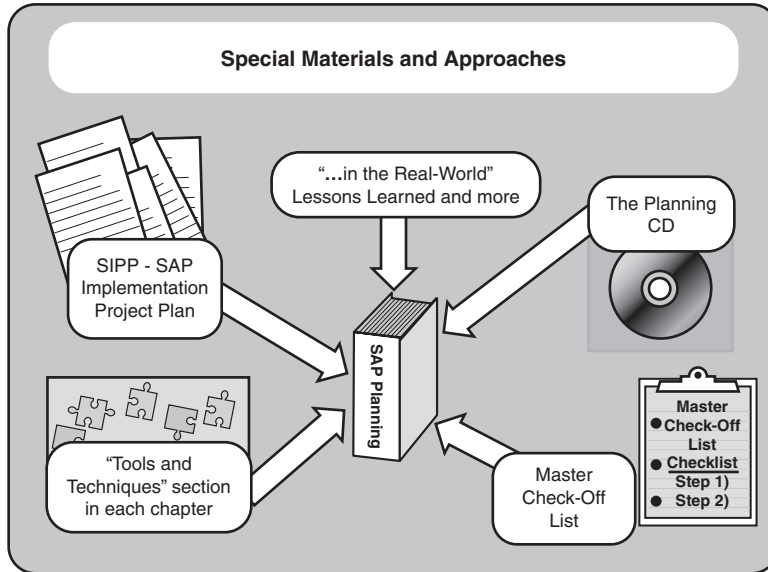


FIGURE 1.3 Special materials and approaches help make this book both valuable and entertaining.

More on Leveraging "Tools and Techniques"

I really liked the idea of sharing all of the "stuff" that I alluded to earlier in formats that you can actually take advantage of—that's why I included the Planning CD and the "Tools and Techniques" section at the end of each chapter. For example, many of the diagrams and all of my presentations are saved in Microsoft PowerPoint format. In this way, you can simply copy them to your own computer, modify them as you like, and present them as your own. Think of the time you'll save when asked by your Project Manager to justify, plan for, and present your SAP pre-Go-Live Stress Test approach. Or when you are asked to diagram and explain a number of SAP system landscape training alternatives and present them to your CIO. Or when you are requested to present the pros and cons of various SAP disaster-recovery options to the steering committee.

I also tried to stay away from inflexible file formats as much as possible too, in favor of more space-consuming but easily modified Microsoft Word documents. Again, the time you will save customizing things like my pre-made *SAP Daily Operations Checklist*, or tweaking a high-level *SAP R/3 Installation Guide*, or working through a *Sizing "Rules of Thumb"* document for Enterprise Buyer Professional might even put me on the top of your Christmas list.

To facilitate number crunching, or simply provide an easy-to-read side-by-side comparison document, I have also included various Microsoft Excel spreadsheets. A prime example includes my Sizing Evaluation document, where you can easily rank and stack multiple vendors against each other, thereby facilitating better apples-to-apples comparisons. I have also included a number of other simple sizing exercises, SAP candidate ranking forms, Disk Subsystem/SAN design documents, and more, all in Excel format to make your life easier when inevitable changes to your master plan force you to change, too.

Need a free utility to help you fine-tune or optimize your disk subsystem? Want to compare a RAID 5 configuration to a RAID 0+1 solution in terms of random writes? Curious about what a stress-test script for BW or an R/3 VA01 might look like? Here, too, I have just what you want at your fingertips—where allowed by law and the software vendor, I have included programs, utilities, scripts, documentation, and other such tools on the CD. Where not allowed, I have included Web site addresses, download instructions, or other instructions on how to obtain additional tools and utilities that could prove useful.

Finally, my *pièce de résistance* includes a number of Microsoft Project plans, designed to let you hit the ground running, not to mention keep you on track. My project plans are the results of years spent on actual SAP implementations and infrastructure-based engagements. They typically map directly to SAP's proven ASAP methodology, and can be easily adopted to the newer ValueSAP and Solution Manager approaches if need be.

The MCL and SIPP

Pay special attention to my *Master Check-Off List* (MCL), an easy-to-use Word document intended to keep my readers on track both while reading through this book and during an actual SAP project. The same can be said for the *SAP Infrastructure Project Plan* (SIPP). I recommend that you use the SIPP and my other plans as a starting point, customizing each as you require for your specific circumstances. And even if you already have plans of your own, use mine for comparison's sake, helping you determine whether you addressed all relevant tasks and milestones. The SIPP is comprehensive, it's real, and it includes detailed tasks like the following:

- Establishing the SAP Technical Support Organization (TSO) as part of the overall SAP Project Team
- Defining a system landscape strategy
- Identifying fourth-tier Internet/intranet requirements
- Architecting each environment in the SAP landscape
- Procuring and building out server and disk subsystem hardware
- Installing SAP instances (including multiple instance approaches)

- Addressing SAP Operations training and support requirements
- Identifying representative SAP load/stress test online and batch transactions
- Defining output requirements (including print, fax, email/workflow, and more)
- Addressing Central User administration
- Establishing transport processes, under the umbrella of Change Management
- Determining an SAP Support Package maintenance approach
- Preparing the Disaster Recovery site

And these are only the beginning! The usefulness of this single project plan alone is invaluable and should more than pay for the cost of this book a hundred times over.

Summary

This first chapter answered such questions as: who should be reading this book, why it will prove invaluable to them, how the book is structured, and how it can be leveraged in support of a successful SAP implementation—which will usher in for you a new age of enterprise integration and information sharing!

To this end, I have also touched upon the value provided through the “Tools and Techniques” section found at the end of each chapter, and the general contents of the enclosed CD. I expect that the checklists, templates, approaches, project plans, and more that I have provided will position you, my readers, to not only hit the ground running, but to do so with the confidence, knowing that thousands of installations before you have laid the groundwork—paving your road to SAP success.