CHAPTER - I
INTRODUCTION TO SAP
INTRODUCTION TO SAP
(SYSTEM APPLICATION PRODUCTS)

1. System Application Product (SAP) was founded in 1972 in Walldorf, Germany. It stands for Systems, Applications and Products in data Processing. Over the years, it has grown and evolved to become the world premier provider of client/server business solutions for which it is so well known today. The SAP R/3 enterprise application suite for open client/server systems has established a new standard for providing business information management solutions.

SAP products are considered excellent but not perfect. The main problems with software product are that it can never be perfect.

The main advantage of SAP as the company ERP system is that SAP have a very high level of integration among its individual applications which guarantee consistency of data throughout the system and the company itself.

In a standard SAP project system, it is divided into three environments, Development, Quality Assurance and Production.

The development system is where most of the implementation work takes place. The quality assurance system is where all the final testing is conducted before moving the transports to the production environment. The production system is where all the daily business activities occur. It is also the client that all the end users use to perform their daily job functions.

To all company, the production system should only contain transports that have passed all the tests.

SAP is a table drive customization software. It allows businesses to make rapid changes in their business requirements with a common set of programs. User-exits are provided for business to add in additional source code. Tools such as screen variants are provided to set fields attributes whether to hide, display and make them mandatory fields.
This is what makes ERP system and SAP in particular so flexible. The table driven customization are driving the program functionality instead of those old fashioned hard-coded programs. Therefore, new and changed business requirements can be quickly implemented and tested in the system.

Many other business application software have driven customization advantage and are now changing their application software based on this table customizing concept.

In order to minimize the upgrading costs, the standard programs and tables should not be changed as far as possible. The main purpose of using standard business application software like SAP is to reduce the amount of time and money spends on developing and testing all the programs. Therefore, most companies will try to utilize the available tools provided by SAP.

1.2. Definition of client and Difference between Customization & Configuration

The difference between customizing\(^5\) and configuration is:

- **CONFIGURATION:** This will configure the system to meet the needs of business by using the existing data.
- **CUSTOMIZING:** This will customise or adapt the system to business requirements, which is the process of mapping SAP to business process.
- **CLIENT:** A client is a unique one in organizational structure, can have one or more company codes. Each company code is its own legal entity in finance.

1.2.1. Configuration vs. Customization

When considering enterprise software of any type, it is important to understand the difference between configuration and customization. The vital of the difference is complexity. Configuration uses the inherent flexibility of the enterprise software to add fields, change field names, modify drop-down lists, or add buttons. Configurations are made using powerful built-in tool sets. Customization involves code changes to create functionality that is not available through configuration. Customization can be costly and can complicate future upgrades to the software because the code changes may not easily migrate to the new
version. Wherever possible, governments should avoid customization by using configuration to meet their goals. Governments also should understand their vendor’s particular terminology with regard to this issue since words like "modifications" or "extensions" often mean different things to different vendors.

1.3. Meaning of SAP R3

We know that SAP R/3 is software, it particular it is client-server software. This means that the groups/layers that make up a R/3 System are designed to run simultaneously across several separate computer systems.

When installing Microsoft Excel on the PC, each component of Excel (printing components, graphing components, word processing components, and etc.) is stored, managed, and processed via the hardware of PC. When a company installs SAP’s software each component (or "layer" in R/3’s case) is stored, managed, and processed via the hardware of separate and specialized computer systems. Each of the various layers is capable of calling upon the specialty of any of the other installed layers in order to complete a given task.

Those components/layers that are requesting services are called “clients”, those components/layers that are providing services are called “servers”. Thus the term - “client/server”.

1.4. Meaning of SAP ECC

SAP is an Enterprise Resource Planning module (ERP). Central Component is the version of SAP, like 4.6, 4.6c and 4.7 in that series new version is ECC-6. Its known as Enterprise core component.
1.5. Advantages of SAP Enterprise Resource Packaging

SAP (system applications and products in data processing), is a package which allows more:

1. Flexibility.

2. Customized solutions to suit business.

3. Highly integrated with other modules.

4. Industry specific modules with a deep insight.

5. Continuous support.

The major advantages of SAP ERP, is the Highly integration with other modules of, which is not there in other SOFTWARES like Oracle, Unix etc..

In other software, there is need to have different software's for different module. e.g. BAAN, ORACLE MANUFACTURING, etc.

There, integration becomes the issue, not all software support some integration's except for SAP, so SAP is clear WINNER.

1.5.1. Further Advantages of SAP ERP

1. Reduction in sales order processing costs.

2. Reduced time to calculate selling price.

3. Increased Cash Flow (one-time event).

a. Savings result due to access to real-time transaction information by all authorized users (visibility),
b. Reduced request-to-quote time.

c. Reduced order-to-delivery time.

d. Reduced delivery-to-invoice time.

4. Reducing the number of days sales outstanding (DSO) by freeing-up capital (i.e., reduced working capital; free cash flow).

a. Reduce the amount of borrowed funds required.

b. Increase investment potential.

c. Reduction (of DSO) achieved through faster order-to-cash time.

d. Accurate & timely information leads to reduced reconciliation's and better management of the billing process leading to quicker payment and a reduction in accounts receivable (DSO), number of disputes per order.

5. Increased revenues due to less stock outages (reduction in lost sales).

a. Reduced loss of revenue due to items being out-of-stock.

b. Fewer stock outages occur because there are more reliable materials buying processes/procedures in place.

c. Increases customer satisfaction due to the higher availability of products.

6. Reduction in distribution costs.

7. Reduction in freight costs.
1.5.2. Additional Advantages of SAP- ERP

1. Vast array of modules, with huge spectrum of functionalities which are not provided by other ERP applications.

2. Specific functionalities which are core competencies of SAP while they are not available in other ERP applications, makes it an obvious choice for some specific industries. E.g. Variant configuration and Automobile industry.

3. SAP knowing the demand for special processes for each industry has come up with industry specific solutions which are unheard of from other applications.

4. Not only on the functionality side, but also on the system architecture and landscape SAP is innovating day by day from R2 to R3 to ECC to SOA, to adopt to the business needs, thus adding immense value to the customers.

5. SAP also gets complimented by most ubiquitous office applications of MS namely MSWord.

6. Also SAP's market share gives some certainty of business and hence it is much better than any other smaller ERP applications in terms of career prospects.

Owing to all these advantages of SAP ERP which are not prevalent in other applications, SAP will obviously become the hot choice for every client who is willing to have a robust and efficient system.

1.5.3. Successfull Implementation of SAP

Implementing a package can be a traumatic affair for both the customer and the vendor. Get
it wrong and the vendor may get paid late or have to resort to lawyers to get paid and tarnish their reputation. For the company the new package may not work the way they expected, be late or cost a more than budgeted for and take management will take their eye off running their business.

Recently a client asked me what I would consider to be the five most important things one should consider before embarking on an implementation. This isn't a simple question, although there are many factors to think about after some consideration for me the top five are way ahead of the others.

My top five factors to consider would be:

1. Set up a Project Board,
2. Secure the resources,
3. Complete the GAP Analysis,
4. Have detailed Cut Over Plans,
5. Train the users.

Taking each one in turn:

**1.6. The Project Board**

The correct set up and operation of the Project Board in my view is major factor in the success failure of the project. The Project Board will consist of the stakeholders, key users and the vendor. The Project Board is part of the governance of the project. The Project Board will meet regularly to ensure that the project plans are created and being executed as planned, moves from stage to stage with all the deliverables being signed off is resourced properly.
1.7. The Resources

Three types of resources are absolutely necessary -- end users, change team and technicians. Early involvement by the end users is absolutely necessary, as they will be the ones living with the system for hopefully many years to come. They will want to feel involved in its implementation. Buy in from the end users of the system is absolutely essential if the system is to have a long and stable life in any organisation.

The Change Team will identify the gaps between the package and the business requirements, re-engineer some of the businesses process to cope with the package, train the users to ensure implementations is smooth as possible into the business.

The Technical Team will prepare the systems environment for the package, apply any software fixes from the vendor, implement the software in the best way possible for the organisation set up and tune the software for the particular technical environment.

1.8. GAP Analysis

A thorough gap analysis will identify the gaps between how the business operates ad its needs against what the package can can't do. For each gap there will be one of three outcomes which must be recorded and actioned, GAP must be closed and customised software can be developed close the gap, GAP must be closed but software cannot be written therefore a workaround is required, GAP does not need to be closed.

In simple terms: Gap means small cracks. In SAP world. In information technology, gap analysis is the study of the differences between two different information systems or applications (ex: existing system or legacy system with Client and new is SAP), often for the purpose of determining how to get from one state to a new state. A gap is sometimes spoken
of as "the space between where we are and where we want to be." Gap analysis is undertaken as a means of bridging that space. Actual gap analysis is time consuming and it plays vital role in blue print stage.

1.9. Cut Over Plans

Detailed plans need to be developed for cutting over from the old system(s) to the new. Parallel runs of what will happen over the conversion period using test data, convert and watch for a period afterwards to ensure nothing unexpected happens.

1.10. Train Users

Well trained users will support and defend the system on site. Unsupportive users will continually undermine the system and eventually it will be replaced. Therefore the more effort put into helping the users master the system early the better.

1.11. Explain Cutover Activities/Strategies in SAP FI.

Cutover Activities or Master Data Uploading Strategies Depending upon the when we are going live. As per that, this has to give the information to core team. If it going to live at the middle it has to upload the all P&L Account items and B/S Items. If it going live at the financial year start, it has to only Upload the B/S Items. Activities for Go live:

1. G/L Master Upload Thru BDC or LSMW (TC-Fs00 and extended one co code to another company code Fs01)
2. Vendor Master Upload Thru BDC Or LSMW (Will be Taken Care By MM)
3. Customer Master Upload Thru BDC or LSMW (Will be Taken Care By SD)
4. Asset Master Upload(Thru As90)
5. Cost Element Master Upload
6. Cost Center Master Upload
7. Profit Center Master Upload
8. G/L Balances Thru F-02
10. Vendor Balances thru F-43
11. Customer Balances thru F-22
12. Customer Advances thru F-29
13. Vendor Advances thru F-48

1.11.1. Difference between the User Exit & Gap analysis.

Both are quite a different and have a small relation.

User exits are standard gate ways provided by SAP to exit the standard code and we can write our own code with the help of Advanced Business application Programming (ABAP)\textsuperscript{14} workbench. It’s not new functionality which are trying to build in sap but its slight enhancement within the same code.

Gap analysis is start point of realization and once blue print is finished we have to find the realization of sap system for client requirement and there will be certain gaps when compared to system fit. Those gaps can be closed either by re-engineering of business process to fit with SAP or we have to use USER\textsuperscript{15} exits in case of small deviations or complete enhancements with the help of ABAP to fit with the SAP system.

1.11.2. Roll out of SAP Project

As per dictionary, Rollout means “Inauguration or initial exhibition of a new product”.

As per SAP specific definition, rollout is the strategy for international SAP implementation. Rollout strategy normally include the following

- Whether to implement SAP simultaneously (also known as big-bang) in all the countries, or
- Go live in sequence of phased manner
- Or to go for the combination of both (phased manner implementation for some of the countries and big-bang for others).

Rollout strategy is the most important decision that a client can make during SAP implementation. Normally, steering committee decides the rollout strategy.

1.12. Purpose of SAP R/3

The sole purpose of an R/3 system is to provide a suite of tightly integrated, large-scale business applications.

The standard set of applications delivered with each R/3 system is the following:

- Production Planning (PP)
- Materials Management (MM)
- Sales and Distribution (SD)
- Financial Accounting (FI)
- Controlling (CO)
- Fixed Assets Management (AM)
- Project System (PS)
- Workflow (WF)
- Industry Solutions (IS)
- Human Resources (HR)
- Plant Maintenance (PM)
- Quality Management (QM)
- Customer Relationship Management (CRM)
These applications are called the functional areas, or application areas, or at times the functional modules of R/3. All of these terms are synonymous with each other.

Traditionally, businesses assemble a suite of data processing applications by evaluating individual products and buying these separate products from multiple software vendors. Interfaces are then needed between them. For example, the materials management system will need links to the sales and distribution and to the financial systems, and the workflow system will need a feed from the HR system. A significant amount of IS time and money is spent in the implementation and maintenance of these interfaces.

R/3 comes pre-packaged with the core business applications needed by most large corporations. These applications coexist in one homogenous environment. They are designed from the ground up to run using a single database and one (very large) set of tables. Current production database sizes range from 12 gigabytes to near 3 terabytes. Around 8,000 database tables are shipped with the standard delivery R/3 product.

1.13. Difference between SAP, MySAP and ASAP

1.13.1. SAP R/3:

SAP R/3 is SAP's integrated software solution for client/server and distributed open systems. SAP's R/3 is the world's most-used standard business software for client/server computing.

R/3 stands for Real Time and 3-tier architecture.

1.13.2. mySAP:

In SAP's words "mySAP.com is an open collaborative business environment of personalized solutions on demand."

In our words, mySAP.com is actually a collection of three things.
a) The Marketplace is a website where buyers and sellers can register themselves, and then buy and sell from each other.

b) The Workplace is a piece of software which sits on desktop, and allows (after it is setup correctly) to gain access to all of the systems to use in the company. It is, naturally, tightly integrated with both SAP and the Marketplace.

c) mySAP.com is also the umbrella name for all of SAP's internet-enabled applications.

1.13.3. ASAP:
AcceleratedSAP\(^{20}\) (ASAP) is a step-by-step methodology for speeding up the implementation of an SAP R/3 system. The components of ASAP, which can be used together or individually, are called accelerators.

Accelerators are based on the best practices of SAP customers from around the world and consist of a number of templates, questions, and scenarios that require user input to help the user determine the best way to implement their R/3 system. According to SAP literature, ASAP can reduce the time required to implement an R/3 system by as much as 50%.

1.14. Login to SAP
As per the guidelines NAU-CBA tutorial. This guide will take through some of the basic SAP user functions including:

- System Logon
- Common controls
- Navigation
- Favorites
- Transaction codes
- Graphical user interface (GUI) customization
1.14.1. System Log on :

To access the SAP system start Citrix and logon (if using a computer in a CBA lab, start SAP by going to Start, Programs, SAP Front End, SAP Logon). There is a folder labelled SAP. Open the SAP folder and double click on SAP logon. After a few moments, there is a logon screen similar to the one below. The server names in the description column in the list will be different than those below.

The first task will be to add the server for this class.
Click on the New button on the right side of the SAP Logon box. It should now see the New Entry box shown below.

Fill in the New Entry box exactly as shown below.

Click the OK button after finished entering the information. Now see the SAP server listed in the SAP Logon box.

* only need to add the SAP server one time. The next time of logon, it should already be there.

Double click on the SAP server just created. This will be taken to the SAP Welcome screen below.
Enter the client number for the class (401), and username. Enter the letters INIT as password. Click the green check mark near the upper left of the screen. It will be prompted to enter and confirm a new password choosing. Please make sure remember the password. When the copyright screen appears, click the green checkmark. This should now be at the SAP Easy Access start screen shown below (The actual menu may look slightly different).

The SAP Easy Access screen is where it will start every session, and is the primary user navigation area. To logoff after finish working with SAP, click the cancel box at the top right of the screen

1.14.2. Common controls:

Before beginning the navigation tutorial, let’s look at a few of the common buttons and controls in the SAP system:
On any screen in SAP, the green checkmark means enter. If prefer, this can also use the enter key on keyboard.

The green arrow (back) button will take back one screen in the application in which currently working. If it is at the initial application screen, the green arrow will return to the SAP Easy Access menu.

The yellow up arrow (exit) button will take back to the SAP Easy Access screen. Occasionally, if the application using has more than one level, the yellow exit arrow will only exit from the applications are currently in, and place the higher level application. This might seem confusing, but easy to understand as soon as encounter such an occurrence.

The red X button (cancel) will cancel the application that are currently using, and return to the SAP Easy Access menu with a single click.

The create session button will open a new SAP session in addition to the one currently in use. While it is not necessary to have more than one session open, it can be very helpful. Many users will have at least two sessions open at a time, one to change or create system data, and another to look at other areas for reference.
The help button can be very, well, helpful. When used properly it can give fast, relatively easy to understand, definitions of user actions. To use the button, position the cursor on the object that wish to know about, and click the help button. An information screen will be displayed describing the object.

The local layout customization button is used to change individual user display. The last section in this guide will cover these functions.

This is the dropdown menu button. It will encounter this button connected to any textbox which has pre-populated values to choose from.

The session information button is the small triangle located at the bottom right of the screen. Clicking on the button displays the following information (information will be different):

Session number (1), Client number (801), and server (Normandy).

Clicking on the small text page provides even greater detail:
It is usually a good idea to have session information displayed whenever more than one session is in use, this will help to remember which session is being used to input data, and which is being used to reference other system areas.

There are many other buttons located in different SAP areas, far too many to list. Sometimes the design of a button will make sense, other times a button may be a complete mystery. To access information about almost any button in the system, hold the mouse pointer over the button without clicking, and the button’s name will be displayed.

1.14.3. Navigation:

For the most part, the action of navigating the SAP system is an easy point and click procedure. However, one must keep in mind that SAP is very large, and it is not difficult to get lost. To make it easier to see, SAP uses what is referred to as a drilldown navigation method. If turn the attention to the SAP Easy Access screen, it will see a navigation pane on the left side of the screen.
Each time it is observed that a small triangle facing to the right next to a title, the menu is telling that there is more to see under that title. Click on the triangle next to Logistics. All the sub-titles under Logistics are now displayed.
Continue drilling down through the menu as shown below.

At this point we should notice a menu selection which has a small white box next to it instead of a triangle. This is an application at the end of that particular drill down route. The applications are what we will actually be using to complete the work in SAP. Now double click on material. The initial screen for the material analysis report application will be displayed.
Click the green back button to return to the SAP Easy Access screen.

From now on in any instructions, drilldown navigation will be given in a line structure. For example, the navigation path we just followed to get to the material report screen would look as follows.

From the SAP Easy Access menu: Logistics ➔ Logistics Controlling ➔ Logistics Information System ➔ Standard Analysis ➔ Sales and Distribution ➔ Material

1.14.4. Favorites:

As it is probably noticed in the previous section, navigating through the SAP system is easy to understand, but can be quite time consuming. One way to get to an application to know this will be using often is to add it to the favourites list.

If not already there, return to the SAP easy access screen. Right click on Favourites, and select insert folder from the pop-up menu. This should see the new folder naming screen at this point.
Replace “New Folder” with “Reporting”, and click the green checkmark (enter). This should now see the Reporting folder listed under favourites’. If it make a mistake, or if wish to remove a favourite from the list, right click on the new folder, and select delete favourite from the menu.

Now let’s place an application in the Reporting folder. Follow the navigation to the material analysis report:

From the SAP Easy Access menu: Logistics ➔ Logistics Controlling ➔ Logistics Information System ➔ Standard Analysis ➔ Sales and Distribution ➔ Material

Click and hold on the material application title, and drag the icon up to Reporting folder and release. Click on the triangle next to Reporting folder, and it should see the material application. Now double click on the Material application in the Reporting Folder. This should be taken directly to the initial material report screen. This allows bypassing all the hassle of drilldown navigation whenever wants to look at a material analysis report in the future. Return to the SAP Easy Access menu using the green back button.

Now let’s change the name of the material report to something more meaningful than “Material”. Right click on the “Material” application title inside favourites folder, and select Change Favourite. Change the name from “Material” to “Material Analysis Report”, and click the enter button. Now it can tell what the application actually does with one quick look.
This can use the same methods to create favourites for any application using often. Just remember to group the applications into folders for easy navigation, and keep in mind that too many favourites could mean increased navigation time.

1.15. Transaction codes:
Although a well-designed favorites\textsuperscript{26} list can save navigation time, the fastest way to navigate to a specific application is by using transaction codes. At the top of the SAP Easy Access screen, it will see a small white text box.

Transaction codes can be entered into this box to call a specific application. Every application has its own transaction code. To navigate directly to the material analysis report screen from the previous example, enter MCTC (capitals are not necessary in SAP, the system will convert lowercase letters on its own) into the transaction code box and click the enter button. It should be taken directly to the material analysis report screen. Although it might be too much trouble to try and memorize many different transaction codes, SAP keeps track of the ones it has used. Return to the SAP Easy Access screen using the green back button. Now click on the small dropdown icon inside the transaction code text box. It should see the transaction code that just entered for the material analysis report screen. Click on the transaction code in the dropdown to enter it in the transaction text box and click enter. Now that’s fast!

It can display all the transaction codes as part of the SAP navigation drilldown. From the SAP Easy Access screen, click on Extras and select settings. In the settings menu, click the
box next to Display technical names, and click enter. This will be returned to the SAP Easy Access screen. Expand Report folder, and it will see the transaction code MCTC next to the material Analysis Report application. The transaction codes will now be displayed for every application available through the SAP Easy Access menu.

Even though this will now have access to all transaction codes, this does not always mean that can jump from one application to another. The entry box will only accept transaction codes available for applications originating from the screen in which currently occupy. For instance, all initial application screens are available from the SAP Easy Access screen. However, if it is currently located inside an application, this would only be able to use the transaction code box to navigate within that particular application. This is a bit confusing for users not well versed in file system structures. The important thing to remember is to be at the SAP Easy Access screen if wish to navigate to the initial screen of an application.

1.16. Graphical user interface (GUI) customization:

As is the case with many software applications today, the SAP graphical user interface\textsuperscript{27} (GUI, pronounced “gooey”) allows for some user customization. If it can change background and foreground colours, along with several other user defined settings.

To access the customization screens, click on the button. Select options to display/modify input device behaviours. This recommends that to leave the settings as is unless have a specific reason for changing them. Now click on the customizing button and select new visual design. Click on the colour settings tab to change the GUI display colours. There are many options (some not very pretty). Feel free to change GUI colours. To return to the original SAP default colour settings, just click the restore button on the colour settings screen.
The phenomenon of globalization has been analyzed under the most different perspectives, but the consensus among all the opportunities created by technological advances in communications and information technology are the key factors that allow the occurrence of a breakthrough as significant as the interaction between individual and organizations around the world.

The remarkable technical progress in memory capacity of computers, softwares user friendly language to a huge numbers of users, and the development of the Internet and other media between computers, paved the way for the role of computers that is growing irreversibly within organizations, and even inside our homes.

The governments of various countries understand the irreversibility of this process and the importance of its impact on their economies and seek to discuss the rules of inclusion and control. In India this is initiating discussion and there are difficulties in its development, probably due to the complexity of the subject and the dynamic nature of computing itself and its multiple uses by society.

Company leaders, influenced by the effects of globalization, began to give special attention to the creation of more complete information systems that integrate the best internal operational areas between themselves and with their external audiences such as customers, shareholders, suppliers, financial institutions and government agencies. It would also need to rethink and reorganize the company for the new times, to review all procedures and the way they conduct business at the same time go by introducing new information systems that respond quickly to new market demands.

One example is in the area of fund raising. With the growing need for companies to seek funds in capital markets in the country and abroad to facilitate their growth plans, they began
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to live with shareholders and professional and sophisticated investors that demand continuously detailed information on their performance over time. This is forcing companies, in general, to adopt a new attitude of “disclosure” of information and develop new systems that allow them to have the information requested in this new process of investor relations.

Globalization\(^{30}\), in short, created the need for systemic integration of the organizations that are responding with the development and adoption of “enterprise system”, dedicated to integrating operational areas among themselves and with the external environment and to incorporate knowledge and modern practices in the conduct of business. These systems are essential for companies to develop their competitive capabilities and can operate efficiently with the agents of the global market.

1.16.1. SAP Hosting:

SAP hosting is a system developed in order to support all business activities of an enterprise in an integrated and efficient way. The solution for Enterprise to coordinate and execute their activities in a fast, safe and reliable way.

1.16.2. SAP is not hosting the following tasks

1 – The answer to all problems

2 – The strategic vision and operational business

3 – A substitute for good planning

4 – Going to be successful without the involvement of users

Do not expect that after the implementation of SAP all the problems we face today will disappear completely, since all work tools has advantages and disadvantages.

Emphasize the importance of commitment from users to the successful implementation of the system and its effective use.
The involvement of users is reflected by the active participation in training, the acceptance and clear understanding of the changes wrought in their way of working and the benefits for the company as a whole associated with implementation of the new integrated system.

1.17. Benefits brought by the SAP

Information Integrity

- Single entry point for information
- Simultaneous processing of inputs from various users
- Automatic updating of the database
- Common Data Base
- Operational aspects, financial and management are satisfied simultaneously

The use of common database involves the integrity of data and the lack of activities for maintenance of data consistency. The whole company will talk the same language. The update online information promotes greater agility and flexibility in the work.

- Faster time to serve customers, external and internal.
- Smaller rework - integration between people and information.
- Point of contact for customers
- Easier to measure results
- Optimization of costs.

1.18. Some examples of MODULES:

1.18.1. Controlling: Represents the flow of costs and revenues of the company and is a management tool for decision making.

1.18.2. Finance: Supports the Company’s financial activities: accounts payable, accounts receivable, taxation, taxes, among others.
1.18.3. Material Management: This module supports the activities of supplies and inventory.

1.18.4. Sales & Distribution: This module helps the company optimize all activities related to sales, deliveries and collections.

1.18.5. Production Planning: This module is used to plan and control the activities and manufacturing company.

Activities necessary to maximize the performance of products / parts and services (marketing, planning, engineering, manufacturing, quality, etc..)

1.19.1. Generate Demand
Activities needed to capture the request, commit to care and subsequent recovery (marketing, promotions, planning, sales, sales management, credit, accounts receivable, etc …)

1.19.2. Meet Demand
Activities necessary to ensure the attendance of applications (sales, purchasing, accounts payable, manufacturing, quality, physical distribution, fiscal, etc.)

1.19.3. Consumer Watch
Activities necessary to extend the final consumer satisfaction with the product delivered (warranties, service and parts, etc.)

1.19.4. Manage the Business
Activities necessary for planning, control and general maintenance of business processes (strategic planning, controlling, finance, HR, quality, information technology, etc.)
1.20. Integration & Behaviour

SAP works in an integrated manner, which facilitates the activities of various areas in an integrated and independent way.

Emphasize that SAP integrates the activities performed by each department, requiring the user to have a different mentality it has today.

His actions have, since the implementation of the new system, impact on the activities of other areas of the company.

Show that today, the focus is still in activity and that with SAP, the focus will be in the process. With the integration between different areas, the Company will be able to work efficiently, serving its customers properly and supporting their activities more simply, through an integrated resource planning, saving waste of time with redundant activities.

This new view implies visible results internally and externally to the company, such as better management of resources (costs, needs and timelines), satisfied customers with an efficient and accurate service (no mistakes and false promises), product development in an integrated way and so fast.

1.21. INTRODUCTION TO SAP IMPLEMENTATION PLANNING

The core of the material is about to read stems from seven years of SAP implementation experience across more than a hundred mid-size and global SAP customers. The 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 the end users on the Production system. It is hope that it 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 company’s 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.

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, this 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, will be able to put together custom project plans, implementation schedules, management justification, 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 this can 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, 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 develop 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.

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, it has 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, it understand that the only reason a company would implement or upgrade SAP in the first place is for business reasons—to increase the competitiveness, reduce costs, make information more widely available across the 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.
1.21.1. Customers Approach:

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

Alternatives for approaching problems that is common to all system implementations. In lieu of this, readers fall into a number of categories, as a 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 centre operations and infrastructure management folks asked to step up and assist in developing or maintaining an SAP IT shop
- Network administrators, systems administrators, data centre 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
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- 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 core value that provide to the chance to benefit from the work of others—namely, own work and that of team. With thousands of SAP installations out in the world today, there is little value in reinventing the wheel. Frankly, most everything need or want in regards to a mySAP implementation has already been done, and done well, by someone else inside another company. 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 interested in minimizing costs and managing the 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, this can suggest that to read the book sequentially, from the first to the last chapter. If find in the middle of a project, though, feel free to jump to the chapters that best fit project or timeline status. Of course, in doing so there might well “skip” over knowledge that could very well prove useful, too. This suggests quickly reviewing the table of contents, therefore, to determine if it makes sense in in particular case to go back and review any passed-over content. That is exactly “Best Practices and Approaches”. For every thousand implementations, there are a thousand ways to implement SAP. In the course of consulting, however, 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 hope to pass on to others, readers, 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 just described, in experience best practices and approaches related to SAP projects can be grouped into four general areas:

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

It will do the 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 intent to build an understanding of the problems and pitfalls that will encounter, and how these might best be rectified or avoided altogether as we march down the roadmap of an SAP implementation.

1.21.2. 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, 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 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.

This address all of these, and much more, from an SAP infrastructure perspective. And by following the project-plan approach outlined earlier, This 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),
1.21.3. SAP Covered:

Each chapter covers the tasks and subsequent problems and solution approaches typically encountered when planning for, testing, or implementing SAP. The main focus is centered on all of the SAP infrastructure requirements necessary to provide the ground work for the actual software functional configuration and deployment. Some people label this ground work SAP Basis, which is SAP’s own word for the foundation upon which the SAP solution resides. This 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).

1.21.4. SAP 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, do not go into this detail here. Rather, it has 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, discuss functional development, testing, and other related tasks as they impact our discussions from an SAP infrastructure perspective, however. In addition, assume that has already selected SAP (or it has been selected) as 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 it is looking for a book that will help to determine which enterprise application is right, need to keep
looking. Of course, this could decide to go with the market leader, a company positioned to remain successful (even in these times of tightened IT budgets), and end search right here.

1.21.5. Exact meaning of SAP

*SAP AG*\(^{38}\) (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 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 ware house 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.
1.22. mySAP.com and my SAP 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.

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 (mySAPSCM). 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.

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 Health care, 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 labelled 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 mySAP solution, under the overall umbrella of mySAP.com. For the remainder of this book, however continue to use the term “SAP” to refer generically to any SAP product or component, or to the company itself.

1.23. 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 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 centre 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 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\(^58\) stack might consist of an HP desktop running Microsoft Windows XP, HP’s OS client driver’s 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 Smart Start 5.3, running Windows 2000 Advanced Server with Service Pack 2, and loaded with SAPBW 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 it is interested here in SAP’s technology solution stack\(^59\), but this 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\(^60\) 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.
1.24. How to Speak SAP—Terms and Terminology

It has already covered quite a few terms and acronyms. However, especially if we are new to or a bit rusty in using SAP’s general terminology, we should understand the following list:

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, 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.

1.25. SAP Materials Management (SAP MM)

The materials management module (SAP MM) consists of all master data, system configuration, and transactions to complete the procure to pay process. This process map spans from MRP generated procurement proposals through final invoice receipt and verification.
MM Integration

- Sales & Distribution
- Production Planning
- Quality Management
- Production Management
- Financial Accounting
- Asset Management
- Controls
- Project System

Material Management
1.25.1. SAP Materials Management Components or Sub-Components:

- Vendor master and material master data
- Consumption based planning
- Purchasing
- Inventory management
- Evaluation of materials
- Invoice verification

SAP Training

Basic and advanced expert led SAP training for project teams and super users, offered on the premises.
1.25.2. Procedure to pay business process associated with the SAP MM-Module:

*Key: Aqua boxes = Master Data | Orange boxes = Processes | Gray boxes = Transactions*
1.25.3 Subcomponents of the SAP Materials Management (SAP MM) Module:

- Purchasing
- Inventory Management
- Logistics Invoice Verification
- Physical Inventory

SAP Materials Management Course Overview SAP MM (Materials Management) is a module of the SAP Enterprise Resource Planning (ERP) package that is used for Procurement Handling and Inventory Management. The module has two important master data - material and vendor. Broadly, the various levels that can be defined for a SAP MM implementation are: Client, Company Code, Plant, Storage Location and Purchase Organization. This is the largest and most complex in all of SAP modules. It can be divided into five major components. There are: materials management, plant maintenance, quality management, production planning and control, and a project management system. Each is divided into number of subcomponents. SAP Materials Management covers all tasks within the supply chain, including consumption-based planning, planning, vendor evaluation and invoice verification. It also includes inventory and warehouse management to manage stock until usage dictates the cycle should begin again. Electronic Kanban/Just-in-Time delivery is supported.

1.25.4. The process Flow chart of inventory Management is as shown below.

- Material valuation
- Material requirement planning (MRP)
- External service management
1.26. SAP standard applications & Benchmarks

1.26.1. SAP Standard Application Benchmarks

SAP Standard application benchmarks help customers and partners find the appropriate hardware configuration for their IT solutions. Working in concert, SAP and hardware partners developed the SAP standard application benchmarks to test the hardware and database performance of SAP applications and components.

SAP standard application benchmarks test the hardware and database performance of SAP applications and components. Access the two-tier and three-tier results for the Sales and Distribution (SD) Benchmark.
1.26.2. Benefits of Benchmarking

SAP standard application benchmarks help customers and partners find the appropriate hardware configuration for their IT solutions. Working in concert, SAP and hardware partners developed SAP Standard Application Benchmarks to test the hardware and database performance of SAP applications and components.

Released for technology partners, benchmarks provide basic sizing recommendations to customers by placing a substantial load upon a system during the testing of new hardware, system software components, and relational database management systems (RDBMS). All performance data relevant to system, user, and business applications are monitored during a benchmark run and can be used to compare platforms.

1.26.3. Customer Benefits

Customers can benefit from the benchmark results in various ways. For example, benchmark results illuminate the scalability and manageability of large installations. The benchmark results:

- Allow users to compare different platforms
- Enable Proof-of-concepts scenarios
- Provide an outlook for future performance levels (new platforms, new servers, and so on)
- Provide basic information to configure and size SAP Business Suite

1.26.4. Partner Benefits

In general, SAP’s technology partners – particularly hardware vendors – run the benchmarks, testing different business application scenarios on a specific hardware. The primary objective is to use the results to determine an optimal hardware configuration for a
customer system. In addition, the marketing departments use benchmark results to support sales.

1.26.5. SAP Benefits

For SAP, benchmarks also represent an excellent opportunity for quality assurance. For example, benchmarks are run internally to monitor resource consumption when a new release is developed. Also, even though they cannot reflect customer environments, benchmarks analyze system configurations and parameter settings.

1.27. Measuring in SAPS

SAP application performance standard (SAPS) is a hardware-independent unit of measurement that describes the performance of a system configuration in the SAP environment. It is derived from the Sales and Distribution (SD) benchmark, where 100 SAPS is defined as 2,000 fully business processed order line items per hour.

In technical terms, this throughput is achieved by processing 6,000 dialog steps (screen changes), 2,000 postings per hour in the SD Benchmark, or 2,400 SAP transactions.

In the SD benchmark, fully business processed means the full business process of an order line item: creating the order, creating a delivery note for the order, displaying the order, changing the delivery, posting a goods issue, listing orders, and creating an invoice.

1.28. SAP for Manufacturing Industry

The industrial manufacturing industry confronts multiple challenges, from creating global growth models that will ensure differentiated products and services for its customers, to maintaining margins in the face of rapidly rising costs and pricing pressures. It is how they respond to these challenges that separate the high-performance businesses from their competitors in this market space. According to Accenture’s extensive research into the
constituents of high performance in industrial manufacturing, high-performance businesses derive over half their revenues outside their home countries and source up to 35% of production materials from low-cost regions. In addition, relative to their peers, high-performance businesses:

• Return twice as much to shareholders
• Manage their operations with half the working capital
• Earn nearly five points more margins
• Grow revenue six times faster
• Return six more points on invested capital
• Invest 13% more in R&D (as a percentage of revenue)
• Achieve double-digit growth in cash flow – which has been negative for peers maintaining high performance demands global flexibility, innovation and pricing power, productivity that goes beyond cost containment and a focus on the performance of people. A successful enterprise system can help enable all of these competencies

– from the common global operating model that provides quality, consistency and predictability across the global supply chain, to the financial and capital market efficiencies that boost productivity. Indeed, because they can so dramatically improve decision-making processes of all kinds, the enabling technologies that underpin Enterprise Resource Planning (ERP) system implementations can serve as the foundation of industrial high performance.

Yet a recent Accenture survey of 163 organizations worldwide found that more than half fail to achieve the targeted benefits due to improper implementation. And one-third simply do not actively track the benefits that they do achieve. High-performance businesses, by contrast, take a holistic approach from the start. By setting out with the end result in mind, they build a strong foundation and develop clear thinking about what actually delivers value and high performance. High performance is achieved by the consistent alignment of organization,
processes and IT applications with business strategy and vision. Typically, 80% of value potential resides in business process improvements through harmonization and integration, 20 percent in IT cost reduction. By leveraging industry-leading practices in combination with an SAP solution, Accenture can help clients successfully integrate the key capabilities of a high-performance business strategy.

Key components of the SAP for Industrial Manufacturing asset include:

• **Value targeting and business case materials** including modelling tools and templates

• **Industry-leading practices and process detail** including a repository with industrial-leading practices and a process model that encompasses make-to-stock to engineer-to-order industrial companies.

• **SAP solutions** including a comprehensive list of over 2000 industrial requirements along with corresponding SAP solutions

• A detailed **execution guide** providing step-by-step instructions for how to execute a blueprint and implementation phases.
• Pre-delivered content that represents all deliverables for a typical implementation, including designs and position papers on key business process decisions

• A working SAP system to demonstrate leading industrial manufacturing solutions and provide a template for client solutions.

The asset covers all critical functions within a typical industrial manufacturing company, from supply chain planning and execution through manufacturing and product management, sales and distribution to finance.