

INFORMATION SYSTEM CONTROL AND AUDIT

CHAPTER 7: ERP [ENTERPRISE RESOURCE PLANNING]

Notes of CA Final

CA. AKHIL MITTAL

YOU CAN

DO

ANYTHING

2012

MY WORDS:

"I PREPARED THIS NOTES IN ORDER TO PROVIDE CONVIENCE TO THOSE STUDENTS WHO ARE NOT ABLE TO CRACK THIS PAPER. IT'S MY HUMLE REQUEST TO YOU THAT KEEP THIS NOTES WITH YOU AS REFERENCE & IF IT PROVIDES YOU A SYSTEMATIC APPROACH TO THIS SUBJECT, THEN YOU CAN REFER IT AS A COMPLETE MANUAL."

YOUR VALUABLE SUGGESTIONS ARE WARMLY WELCOMED.

REACH ME AT :caakhil24.srcc@gmail.com

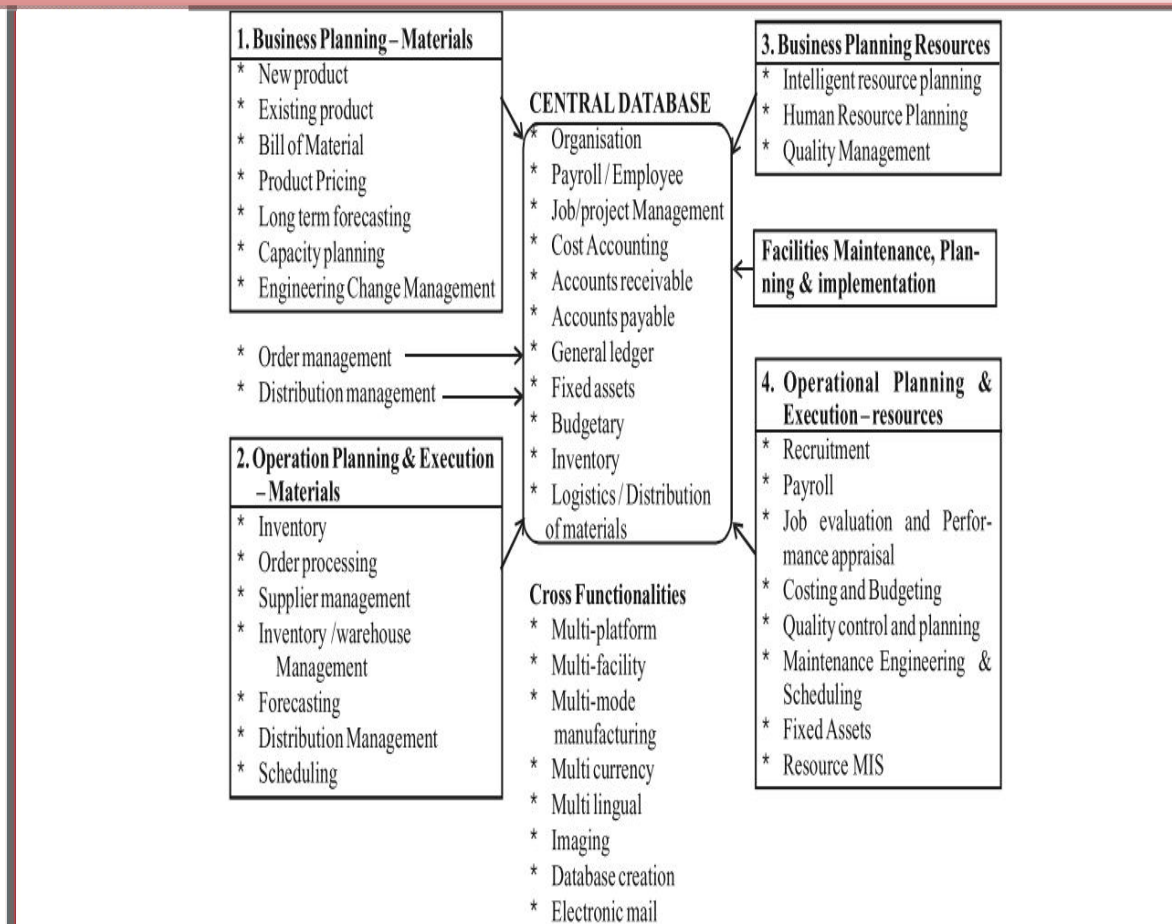
CHAPTER 7

ENTERPRISE RESOURCE PLANNING [ERP]

1. DEFINITION OF ERP:

- ∞ It is fully integrated business management system.
- ∞ It covers various functional areas of enterprise.
- ∞ It organizes & integrates operation processes & information.
- ∞ It is complete business solution package.

GENERAL MODEL OF ERP



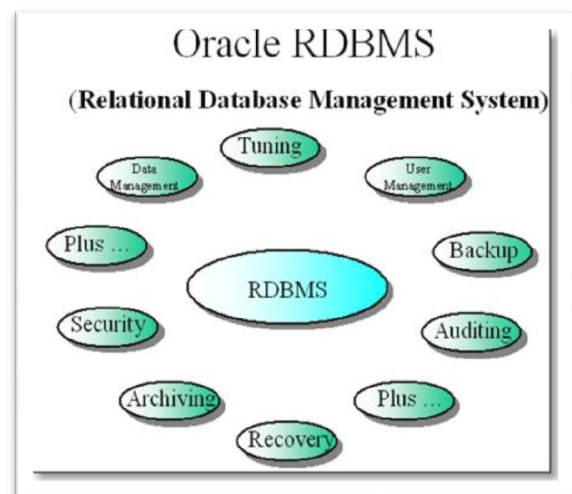
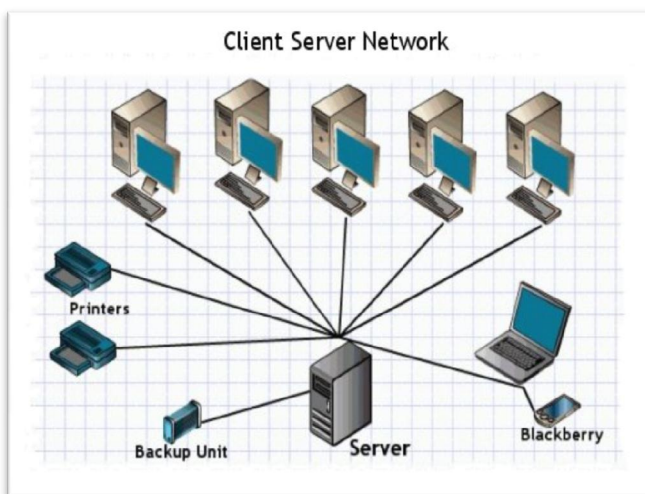
2. NEED OF ERP:

CODE TO REMEMBER: C.A. - F.D.

- A. Cost controlling
- B. Analysis (better) of cost/revenues of a product.
- C. Flexibility to respond to changing business environment.
- D. Decision making is improved as management has all information.

3. ENABLING TECHNOLOGIES:

ERP cannot work in isolation. It requires the support of other technologies too. Other technologies are:



OTHERS ENABLING TECHNOLOGIES:

1. Workflow
2. Work group
3. Group Ware
4. Electronic Data Interchange
5. Internet
6. Intranet
7. Data Warehousing

4. CHARACTERISTIC OF ERP:

CODE TO REMEMBER: CPT-FCA

- A. **Comprehensive:** ERP must support variety of organisational functions.
- B. **Pactices & processes of business:** ERP should have a collection of best practice & processes of business. ERP package imposes its own logics
- C. **Technology:** ERP should incorporate use of latest technologies.
- D. **Flexibility:** ERP must respond to changing needs of an enterprise.
- E. **Connectivity with other database:** ERP should have capability to connect with the external databases of other organisation. This connectivity may imply ONLINE connectivity.
- F. **Architecture:** ERP should have open system architecture i.e. any module can be attached/detached without affecting other modules.

5. FEATURES OF ERP:

CODE TO REMEMBER: ME (I)-B-PIC [My (ME & I) Best PIC]

- A. **Management of project gets better.**
- B. **ERP eliminates**
 - a. Material shortage.
 - b. Decrease in productivity
 - c. Inventory problems
- C. **Integration of all system is ensured by ERP.**
- D. **Bridges the gap of information across organisation.**
- E. **Planning is supported by ERP. It means ERP supports **strategic & business planning, activities, operational planning & executive activities.****
- F. **Integrated information system is being ensured by the ERP.**
- G. **Core activities are performed by ERP which keep the customer intact by providing timely & quality services.**

6. WHY COMPANY NEEDS ERP:

CODE TO REMEMBER:O.F., H.M.I.

Means ERP has excellent features for usage just OF HMI watches

1. Order (customer) integration:
 - a. ERP must provide a single platform for executing customer order.
 - b. ERP must be a single place from where customer order is executed & services are received by customer.
 - c. Company can keep records of orders of a customer since information is not scattered at many places.
2. Financial Information integration:
 - a. ERP creates a single version of facts of revenue of the organisation.
 - b. It is easy to evaluate that what each business unit contributes to revenue.
3. HR information :
 - a. ERP provides easy access to HR related information,
 - b. In case of business having multiple units.
4. Manufacturing processes standardisation:
 - a. Manufacturing companies having multiple location of office, manufacturing units uses different computer systems of recording, reporting & transaction.
 - b. ERP provides standardise these processes & use a single software to save time, money & cost and hence increasing the efficiency.
5. Inventory reduction:
 - a. ERP helps in making the manufacturing processes smoothly.
 - b. As such there is easy visibility of the orders made, fulfilled & pending.
 - c. So it is easy to plan for the inventory thereby avoiding the unnecessary piling up of finished goods inventory & reducing inventory cost.

7. BENEFITS OF ERP:

I am here by dividing the benefits of ERP into 2 categories:

TANGIBLE BENEFITS	INTANGIBLE BENEFITS
CODE TO REMEMBER: C-C.A.P. 1. <u>C</u> ash Collection becomes efficient since it is easy to find out the amount receivable from the customers. 2. <u>C</u> ost control is improved. 3. <u>A</u> ccounts payable personnel are able to keep a better control on the payments processing. 4. <u>P</u> aper documentation is reduced since all the information is available online & can be retrieve easily.	CODE TO REMEMBER: D-R.I.L. 1. <u>D</u> atabase of customer is prepared which is usable by all application. 2. <u>R</u> esolution of the queries is fastened & can be monitored easily. 3. <u>I</u> nformation is timely available since posting is done at same time rather than posting at the end of the period. 4. <u>L</u> inkage of supply & demand between various locations whether in or outside India.

8. WHAT IS BPR(Business Processes Re-engineering):

HAMMER AND CHAMPHY said:

" BPR is fundamental rethinking & radical redesigning of business processes to achieve dramatic improvements in the business processes".

Here the business objectives of the organisation are achieved by "transformation" of the business processes

9. WHAT IS BE (Business Engineering):



BUSINESS ENGINEERING: It means rethinking of the business processes to improve the **speed, quality & output** of material/services.

IMPORTANT POINTS TO BE CONSIDERED:

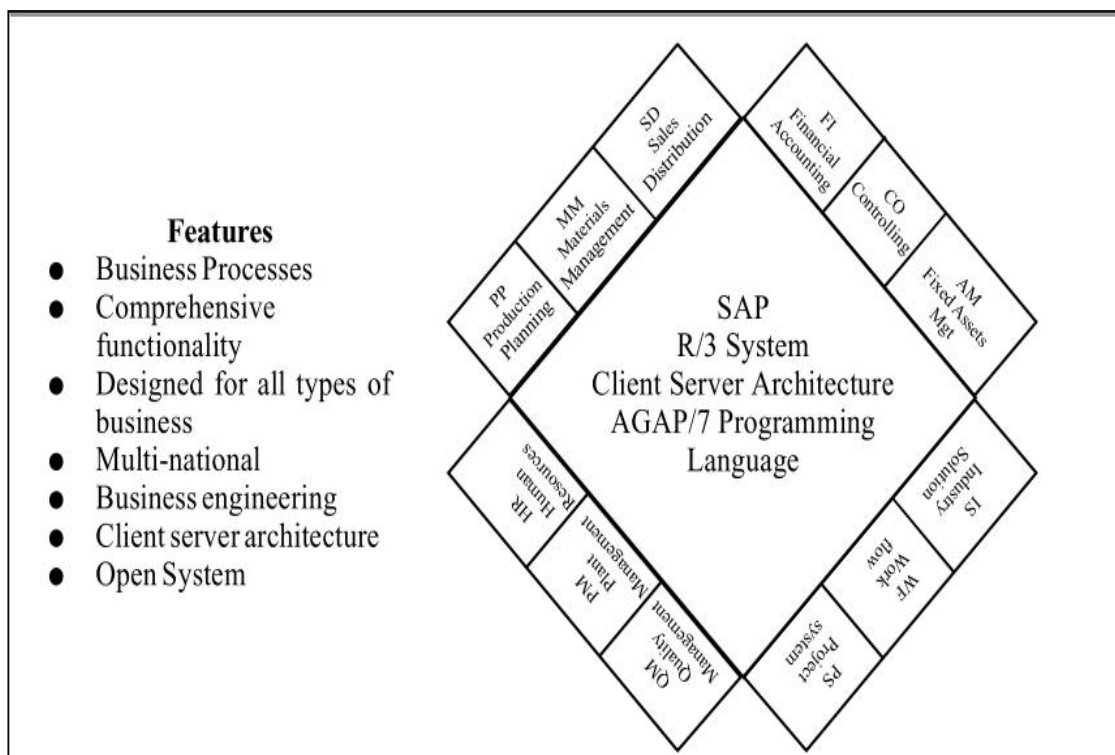
1. It emphasis on the concept of Process Oriented Business Solution enhanced by the client server technology.
2. The main point considered here is the **efficient redesigning of company's value added chain**, which is a series of connected steps running though a business.

10. BUSINESS MANAGEMENT:

ERP merges well with common business management issues such as **TQM, mass customisation etc.** The 1st step in **implementation of ERP** is development of business process model.

11. BUSINESS MODELLING:

1. Model consisting of the core business processes is to be developed.



2. Data model consists of 2 elements:

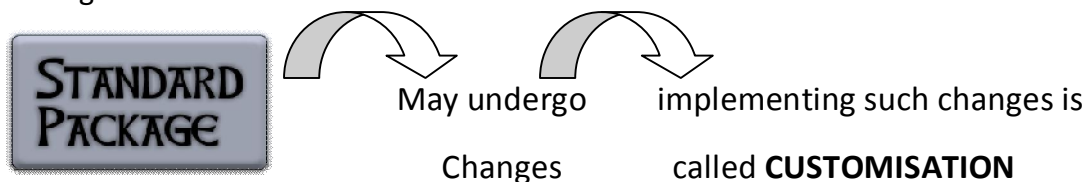
- Diagram describing business processes & their interaction.
- An underlying DATA MODEL.

Table 2 : List of some of the entities forming a data model

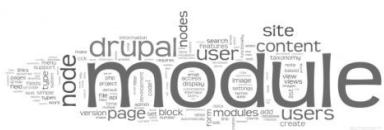
Entity	Description
External Data	Entities outside the firm that interact with it such as customers, suppliers, competitors and distributors. Also includes predictive data regarding economy and future events in external environment.
Internal Data	Data generated from the firm's transaction processing system, internal forecasts or parameters monitored .
Funding Data	Includes information on specific sources of funds as well as availability terms and conditions etc.
Marketing Research Data	Mainly consumer related data that can be used to support marketing decisions and result of surveys.
Production Data	Shop floor data on production processes including standards and actual of time and material resources concerned.
Inventory data	Includes inventories of raw materials goods in progress and finished goods.

12. ERP IMPLEMENTATION:

- ❖ It brings together all the functional areas of the organisation.
- ❖ It involves high cost, considerable time& resources.
- ❖ ERP can be successful only if the developers, users & vendors work for the purpose of the organisation.
- ❖ ERP after implementation is expected to improve the flow of information.
- ❖ Diagrammatic PRESENTATION:



CONTENTS of package: **MODULES**



Modules are further divided into **COMPONENTS**

13. ERP IMPLEMENTATION METHODOLOGY:

Following steps are involved:

CODE TO REMEMBER: ICB/EF/HIP

All are somewhat in the alphabetical order

1. **I**dentifying the need of implementation of the ERP
2. **C**ondition evaluation:
Evaluating "AS IS" situation i.e. existing situation.
Deciding "WOULD BE" situation i.e. changes after ERP implementation.
3. **B**PR conduction.
4. **E**valuation of ERP packages.
5. **F**inalising the most suitable ERP package.
6. **H**ardware installation & network for the selected ERP package.
7. **I**mplementation consultant is finalised who will assist in implementation.
8. **P**ackage is implemented.

I am not explaining the above mentioned points in detail. If it requires please intimate me through mail at my email id mentioned on first page.

14. GUIDELINES FOR ERP IMPLEMENTATION:

CODE TO REMEMBER: C³ -- TTAL

Cube(C³) means TALL (TTAL)

1. Corporate needs:

ERP should be implemented by considering the need & profile of the corporate(s).

2. Conduct BPR:

Do the **business process redesign** before implementing the ERP.

3. Communication network:

Establishing a good communication network across the organisation.

4. Team creation:

ERP must consist of those people who has the ability to learn new system & who can work efficiently in a team.

5. Training :

Training to the end users.

6. Adapting the new system :

Adapting new system & making required changes in working environment to bring out high efficiency.

7. Leadership :

Providing a strong & effective leadership so that people down the line are motivated to give their best.

15. POST-IMPLEMENTATION ERA:

EXPECTATION	FEARS
1. Improvement in the processes	1. Job redundancy
2. Increase productivity.	2. Loss of important information
3. Elimination of manual record keeping.	3. Fear of loss of proper control and authorisation.
4. Real time information system available to the concerned person on need basis.	4. Change in job profile.

16. RISK & GOVERNANCE IN AN **ERP** :

CODE TO REMEMBER: DJ---MODES²

1. Data exposure :

- ❖ Extensive interface & data conversion led to exposure of data integrity.
- ❖ Data conversion from legacy system also led to high exposure of data.

2. Job Role changes:

- ❖ Role of the personnel has been changed. Since all information is available online.

3. Management changes:

- ❖ User must understand that any action of them will have direct/indirect impact on the day to day working.
- ❖ Level of user acceptance of system has significant influence on the success of **ERP**.
- ❖ Training is required for large number of users.

4. Online, real time:

- ❖ Online system requires continuous business environment capable of utilising ERP features effectively.
- ❖ If the system is unable to respond **quickly** to the problems, then it will not be beneficial for the organisation.

5. Dependency on external assistance:

- ❖ Organisation which is following in-house developed system may find it difficult to rely on external help.
- ❖ There is excess dependency on the external assistance that may possibly lead to compromise with the data security.

6. Experience unavailability:

- ❖ Inexperience with implementing & managing ,
- ❖ Distributed technology may pose significant challenges to organisation.

7. System Access:

- ❖ Increased system access by users & outsiders,
- ❖ Allows excess access to application and data.

8. Structural changes:

- ❖ Since ERP involves Business processes engineering,
- ❖ It may lead to personnel & organisational structure changes.

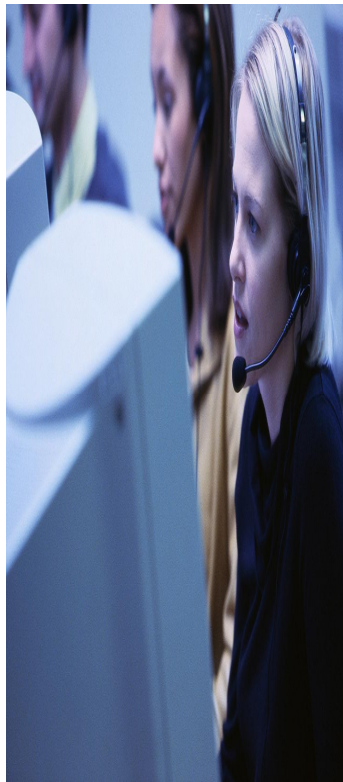
17. WHY **ERP** FAILS :

Following are the reasons of failure of ERP in an organisation:

- A.** Resistance by the people of organisation to use the software.
- B.** Fight over the installation of software in regard to time & cost.
- C.** More customisation may result in instability of software.
- D.** IF PEOPLE ARE RESISTANT TO CHANGE, THEN **ERP** IS MORE LIKELY TO FAIL.

18. LIFE AFTER **ERP** IMPLEMENTATION:

Here are tasks that are to be performed by the organisation in the post implementation period:



- ➡ Developing new job description & organisation structure matching the ERP scenario.
- ➡ Determine skill gap between existing & envisioned job.
- ➡ Asses training requirements & create training plan.
- ➡ Develop & amend policy to suit ERP environment.
- ➡ Developing plan for workforce logistics.

19. ERP VENDORS:



----- > BAAN



----- > Business planning & control system



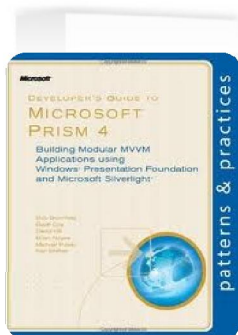
----- > MAPICS XA



----- > MFG/PRO (QAD)



----- > ORACLE APPLICATION



----- > PRISM



----- > R/3 (SAP)

20. ERP SOFTWARE PACKAGES:

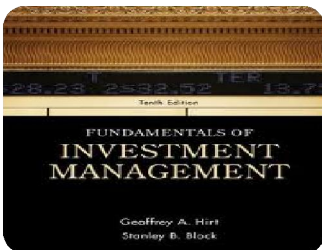
SAP has a number of application modules in the package. Some of these are:



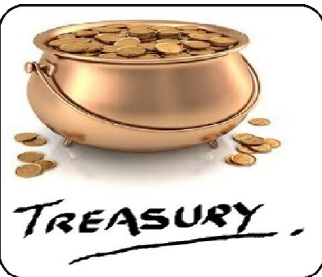
FINANCIALS



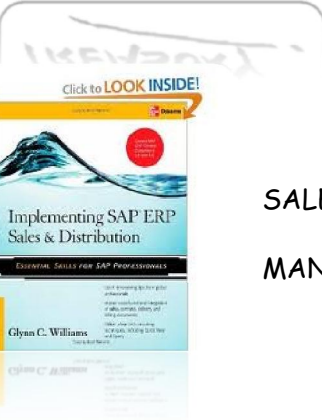
CONTROL



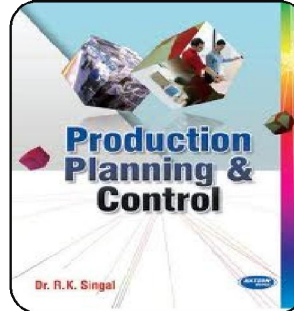
INVESTMENT
MANAGEMENT



TREASURY



SALES & DISTRIBUTION
MANAGEMENT



PPC



MATERIAL
MANAGEMENT



INTRANET &
INTERNET



HUMAN
RESOURCE
MANAGEMENT