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Chapter

ERP Life Cycle

HIGHLIGHTS

- **ERP Life cycle**
 - ERP Life cycle, as suggested by Markus & Tanis
 - ERP Life cycle Framework by Esteves and Pastor

ERP systems are complex systems and require proper planning and total support (support from management, employees and end-users) for its successful implementation. A successful ERP implementation raises the productivity of the enterprise and results in increased customer satisfaction. A company is likely to benefit more if it is able to fully integrate ERP into day-to-day business operations of the company. An effective ERP system will be able to accommodate rapidly changing business conditions.

2.1 ERP LIFE CYCLE

An ERP system goes through several phases during its whole life within the hosting enterprise. These phases constitute the life cycle of ERP.

2.1.1 ERP Life Cycle, as Suggested by Markus & Tanis

According to Markus & Tanis, an ERP life cycle has four phases.

1. Chartering

This phase involves making decisions that will affect the business positively and analyze the impact of ERP on the business. The decision to adopt ERP is made only after a great deal of careful planning.

3. In chartering phase, crucial decisions are taken in an attempt to have a positive impact of ERP system on the business.
4. Project phase involves customization of ERP software package, testing, troubleshooting as well as changing the management programs and culture.
5. In shakedown phase the system is monitored and evaluated for performance.
6. System maintenance and up-gradation of ERP is carried out in onward and upward phase of ERP Lifecycle.

2.1.2 ERP Lifecycle Framework by Esteves and Pastor

The ERP Lifecycle Framework given by Esteves and Pastor include the following phases as shown in Figure 2.2.

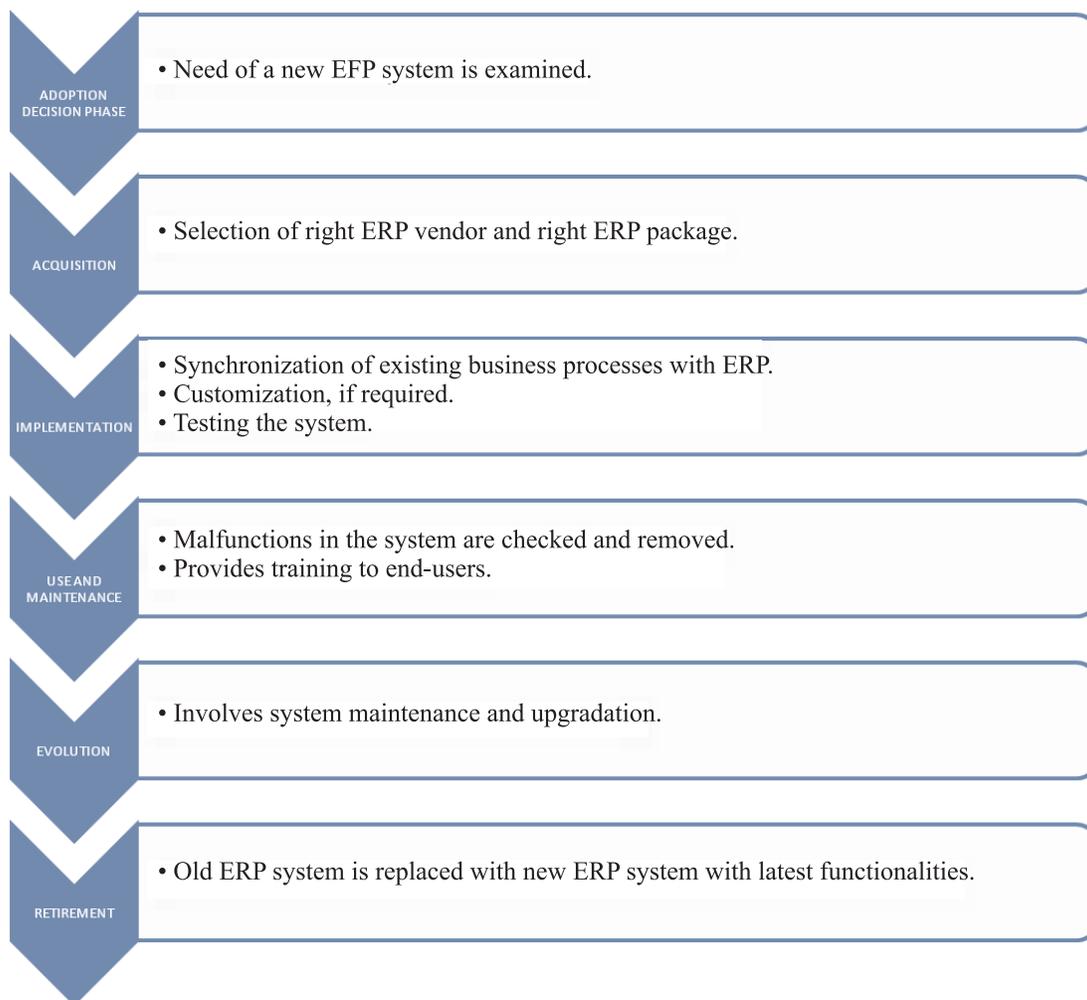


Fig. 2.2. ERP Life cycle Framework as proposed by Esteves and Pastor

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1. Adoption Decision Phase

In this phase, the need of a new ERP system is examined for the organization. The business requirements, the nature of the operations and the goals and objectives of the company are carefully studied. What impact the ERP system will have on the company is also determined before deciding to go for ERP adoption. It is necessary to assess the organization's readiness, management's support and IT skills required before the ERP adoption decision is taken.

2. Acquisition Phase

This phase involves selecting the vendor and the ERP software that best addresses the needs of the business. The pricing models offered by different vendors, the functionality of different ERP products, training required are some of the factors that are considered for selecting an ERP package from a vendor.

The selection of a right ERP package for the organization will minimize the risk often associated with ERP implementation and increase the likelihood of success.

3. Implementation Phase

In this phase, efforts are made to synchronize existing business process with the ERP software package. Customization of the acquired ERP software may be required to meet the specific needs of the business. This phase also involves testing the ERP system and providing training on the new system. It is necessary to test data, procedures and processes before launch of ERP system in order to minimize errors after deployment.

4. Use and Maintenance Phase

In this phase, the ERP system is up and running. The system needs to be corrected in case of any malfunctions in the system. End-users are trained to use ERP system efficiently so that benefits from the system are obtained.

5. Evolution Phase

Upgradation and changes in ERP system is important and essential to improve the performance of business. Here, additional capabilities are integrated into the company's ERP system to obtain additional advantages. In "upwards" evolution, functionality in the ERP system is provided in such a way that it enables decision making with applications such as advanced planning and schedule, data warehouses and business intelligence systems. In "outward" evolution, ERP system is integrated with web and E-Commerce. It delivers added value to the traditional business ERP system.

6. Retirement Phase

An ERP system may become vulnerable to legacy system problems in the long run as technologies and the business state of art change with time. It is advisable to retire the ERP system when the ERP system begins to provide difficulty in modifying and evolving itself to meet new and constantly changing business requirements. The manager may decide to replace ERP system with another newer ERP system with latest functionalities required.

LEARNING POINTS

1. Esteves & Pastor's ERP life cycle framework includes the following phases: adoption decision, acquisition, implementation, use and maintenance, evolution and retirement.

2. In adoption decision phase, the need of a new ERP system is examined for the organization.
3. Acquisition phase involves evaluation of ERP vendor and ERP software. Selection of right ERP package and right ERP vendor will reduce the risk associated with ERP implementation to a great extent.
4. In implementation phase, efforts are made to synchronize existing business processes with ERP software package. Customization is done, if required.
5. In use and maintenance phase, any malfunctions in the system are corrected. End-users are given training to work efficiently on the ERP systems.
6. In evolution phase, attempts are made to evolve ERP systems both “upwards” and “onwards”. ERP system is integrated with web and e-commerce.
7. In retirement phase, old ERP system is replaced with the new ERP system with latest functionalities required.

SUMMARY

The different phases that an ERP system goes through within the organization constitute the life cycle of ERP. According to Markus and Tanis, an ERP life cycle consists of chartering, project, shakedown and onward & upward. In chartering phase, ERP adoption decision is taken. Project phase involves activities such as customization, testing etc. Monitoring and performance evaluation activities are carried out during the shakedown phase of ERP life cycle. The last phase-“onward and upward” involves maintenance and upgradation activities to be carried out.

According to Esteves and Pastor, ERP life cycle consists of the following phases: Adoption Decision, Acquisition, Implementation, Use & Maintenance, Evolution and Retirement phase. In adoption decision, the first phase of ERP life cycle, a careful examination of the business needs of organization is done before deciding to adopt ERP system. Acquisition phase involves the selection of the right ERP vendor and right ERP package to meet business requirements.

Implementation phase involves customization of ERP software and testing data as well as the processes and procedures to ensure correctness of ERP system. Use and maintenance phase deals with the corrections of any malfunctions that may occur in the working of the ERP system. It also involves training the end-users to ensure the effective use of ERP systems. Evolution phase is concerned with performing upgradations in ERP systems. The ERP system is integrated with web and e-commerce technologies to deliver more benefits to their customers.

POINTS TO REMEMBER

1. An ERP system life cycle consists of several phases through which the system goes during its whole life within an enterprise.
2. According to Markus and Tanis, an ERP life cycle has four phases: chartering, project, shakedown and onward & upward.
3. In chartering phase, decisions are made that affect business favourably.
4. Project phase involves changing culture of organization, customization and testing.
5. In shakedown phase, ERP system is monitored and evaluated for performance.
6. In “onwards and upwards”, system is upgraded and end-user training is provided.

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7. According to Esteves and Pastor, an ERP life cycle framework consists of the following phases: adoption decision, acquisition, implementation, use & maintenance, evolution and retirement.
8. In adoption decision phase, a careful examination of the business needs of the organization is done before taking the decision of ERP adoption.
9. Acquisition phase involves selection of best ERP package and vendor for the business needs of the organization.
10. Implementation phase involves customization, testing and troubleshooting.
11. Use and maintenance phase deals with correcting any malfunctions in the system.
12. In evolution phase, upgradations such as integrating the system with e-commerce and web are performed.
13. Retirement phase involves the replacement of the old system with new ERP system.

REVIEW QUESTIONS

1. Explain the various stages of ERP life cycle.
2. Explain ERP life cycle as suggested by Esteves and Pastor.
3. Explain ERP life cycle as suggested by Markus and Tanis.

OBJECTIVE QUESTIONS

SECTION A

TICK THE CORRECT ANSWER

1. According to Markus & Tanis, an ERP life cycle has the following phases:
 - (a) Chartering.
 - (b) Project.
 - (c) Shakedown.
 - (d) Onward and outward.
 - (e) All of above.
2. _____ phase involves making decisions that will affect the business positively and analyze the impact of ERP on the business.
 - (a) Chartering.
 - (b) Project.
 - (c) Shakedown.
 - (d) Onward and outward.
3. Project phase involves:
 - (a) Making decisions that will affect the business positively.
 - (b) Changing management programs and culture.
 - (c) Monitoring ERP system.
 - (d) Providing support to users.

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- (b) Customization of the acquired ERP software to meet the specific needs of the business.
 - (c) Testing the ERP system in order to minimize errors after deployment.
 - (d) Providing training on the new system.
 - (e) All of above.
12. In _____ the ERP system is up and running.
- (a) Implementation Phase.
 - (b) Use and Maintenance Phase.
 - (c) Evolution Phase.
 - (d) Retirement Phase.
 - (e) None of above.
13. Additional capabilities are integrated into the company's ERP system to obtain additional advantages in _____ phase.
- (a) Implementation Phase.
 - (b) Use and Maintenance Phase.
 - (c) Evolution Phase.
 - (d) Retirement Phase.
 - (e) None of above.
14. In _____ evolution functionality in the ERP system is provided in such a way that it enables decision making with applications such as advanced planning and schedule, data warehouses and business intelligence systems.
- (a) Upwards
 - (b) Outwards
 - (c) Downwards
 - (d) None of above
15. In "outward" evolution:
- (a) ERP system is integrated with web and e-Commerce.
 - (b) Any malfunctions in the ERP system are corrected.
 - (c) ERP system is replaced with another newer ERP system with latest functionalities required.
 - (d) None of above.
16. It is advisable to retire the ERP system when the ERP system begins to provide difficulty in modifying and evolving itself to meet new and constantly changing business requirements. The phase is called _____.
- (a) Use and Maintenance Phase.
 - (b) Retirement Phase.
 - (c) Evolution Phase.
 - (d) Implementation Phase.

SECTION B

STATE TRUE OR FALSE

1. ERP systems are complex systems and require proper planning and total support (support from management, employees and end-users) for its successful implementation.

2. A company is likely to benefit more if it is able to fully integrate ERP into day-to-day business operations of the company.
3. An effective ERP system will be able to accommodate rapidly changing business conditions.
4. An ERP system goes through several phases during its whole life within the hosting enterprise. These phases constitute the life cycle of ERP.
5. According to Markus & Tanis, an ERP life cycle has four phases: Chartering, Project, Shakedown, Onward and Outward.
6. Project Phase involves making decisions that will affect the business positively and analyze the impact of ERP on the business.
7. Chartering Phase involves changing management programmes and culture.
8. ERP software is customized to suit the requirements of the business.
9. In Shakedown Phase, the ERP system is monitored and evaluated for performance.
10. Onward and Outward phase involves system maintenance, providing support to users, obtaining results and upgrading the systems.
11. The ERP Lifecycle Framework, given by Esteves and Pastor, consists of six phases.
12. The selection of a right ERP package for the organization will minimize the risk often associated with ERP implementation and increase the likelihood of success.
13. In Implementation Phase, efforts are made to synchronize existing business process with the ERP software package.
14. It is necessary to test data, procedures and processes before launch of ERP system in order to minimize errors after deployment.
15. Customization of the acquired ERP software may be required to meet the specific needs of the business.
16. Implementation phase does not involve testing the ERP system and providing training on the new system.
17. End-users are trained to use ERP system efficiently so that benefits from the system are obtained.
18. Upgradation and changes in ERP system is important and essential to improve the performance of business.
19. In “outward” evolution, functionality in the ERP system is provided in such a way that it enables decision making with applications such advanced planning and schedule, data warehouses and business intelligence systems.
20. In “upwards” evolution, ERP system is integrated with web and e-Commerce.
21. Integrating ERP system with web and e-Commerce delivers added value to the traditional business ERP system.
22. An ERP system may become vulnerable to legacy system problems in the long run as technologies and the business state of art change with time.
23. The manager may decide to replace ERP system with another newer ERP system with latest functionalities required.

SECTION C

FILL IN THE BLANKS

1. A successful ERP implementation raises the _____ of the enterprise and results in increased customer satisfaction.