LSPU Self-Paced Learning Module (SLM)

Course	System Integration and Architecture 1
Sem/AY	First Semester/2020-2021
Module No.	4
Lesson Title	**Business Management using Enterprise Resource Planning Systems**
Week Duration	**5**
Date	**November 2 – November 6**
Description of the Lesson	This module explains the purposes for, and ERP system and Business Management implementation most management did not understand the greatness key to success is implementation to use ERP life Cycle.

Learning Outcomes

Intended Learning Outcomes	Students should be able to meet the following intended learning outcomes: Describe how implementing ERP systems in one business or organization and also ERP into Business Management systems.
Targets/ Objectives	At the end of the lesson, students should be able to: 1. determine the implementation process (e.g., the ERP life cycle, business process reengineering project management, and change management); 2. identify the role of people, vendors, consultants, and the organization in making the ERP implementation process successful; 3. comprehend the ethical, global, and security challenges while implementing an ERP system, and look at the ERP vendors and industry trends.

Student Learning Strategies

Online Activities (Synchronous/ Asynchronous)	A. Online Discussion via Google Meet For this module you will be directed to engage in a one-hour synchronous discussion and two hour asynchronous activities. To access to the online course materials please check your Google Meet Account. These are the list of course materials provided on the LMS ✓ **01 Module 4** Business Functions and Business Process - SLM ✓ **02 Module 1** Business Functions and Business Process – Presentation ✓ 03 **Module 1** Business Functions and Business Process – Video Lecture

	The one-hour synchronous discussion will be on the schedule reflected on your certificate of registration and will be done in Google Meet. Please be reminded to prepare and be ready 15 minutes prior to the said schedule to lessen connection issues. For those who cannot attend the session recordings will be available after and will be posted with 24 hours. In case you may not be able to attend the session, ensure to notify your instructor. Please be reminded of the web conference etiquettes and reminders uploaded on you LMS. You will be given time to complete all performance tasks and activity provided on the LMS as listed below: 1. Watch the video lecture 2. Read the SLM 3. For further study: - Watch this video with this url: **https://youtu.be/hKX7MnOljOc** 4. For the Lecture Activities: Accomplish performance tasks using work sheet provided and online task for **Module 4 Performance Task No 4 Short Answer Essay [PT4]** 5. For the Laboratory Activities - Please refer to **Laboratory Activity No. 3** (For further instructions, refer to your Google Classroom and see the schedule of activities for this module) *Note: The insight that you will post on online discussion forum using Learning Management System (LMS) will receive additional scores in class participation.*
Offline Activities (e-Learning/Self-Paced)	For offline classes, please refer to the following learning guide questions: •
Module Content	Topics Covered for Module 4: **Business Management using ERP System** 4.1 Enterprise systems in Organizations 4.2 Enterprise Resource Planning Systems 4.3 ERP Implementation 4.4 People and Organization 4.5 ERP Vendors This module provides a background for learning about ERP and system integration. Adopted from the 1st chapter of the book entitled Enterprise System for management by Luvai F. Motiwalla.

Review of the Evolution of Enterprise Systems
- **Silos:** Companies had unintegrated information systems that supported only the activities of individual business functional areas
- Current ERP systems evolved as a result of:
    - Advancement of hardware and software technology (computing power, memory, and communications)
    - Development of a vision of integrated information systems
    - Reengineering of companies to shift from a functional focus to a business process focus

- By the mid-1980s, telecommunications developments allowed users to share data and peripherals on local networks
    - Client-server architecture
        - Scalability is a characteristic of client-server networks
        - Scalability means that the capacity of a piece of equipment can be increased by adding new hardware
- By the end of the 1980s, the hardware and software needed to support development of ERP systems was in place
    - fast computers, networked access, and advanced database technology
    - Database management system (DBMS) required to manage development of complex ERP software existed
- By the mid-1980s, Early Attempts to Share Resources
    - telecommunications developments allowed users to share data and peripherals on local networks

4.1 Enterprise systems in Organizations

Over time, Information Systems create a hodgepodge of independent nonintegrated systems ultimately creating bottlenecks and interfering with productivity. Organizations need to be agile and flexible and will require their information systems to have integrated data, applications, and resources from across the organization. To compete effectively, organizations have to be customer focused. This requires cross-functional integration among the accounting, marketing and other departments of the organization.

The evolution of Information System has led to the development and advancement in enterprise systems. Enterprise systems, therefore, are a crucial component of any successful organization today. They are an integral part of the organization and provide computer automation support for most business functions such as accounting, finance, marketing, customer service, human resource management, operations, and more.
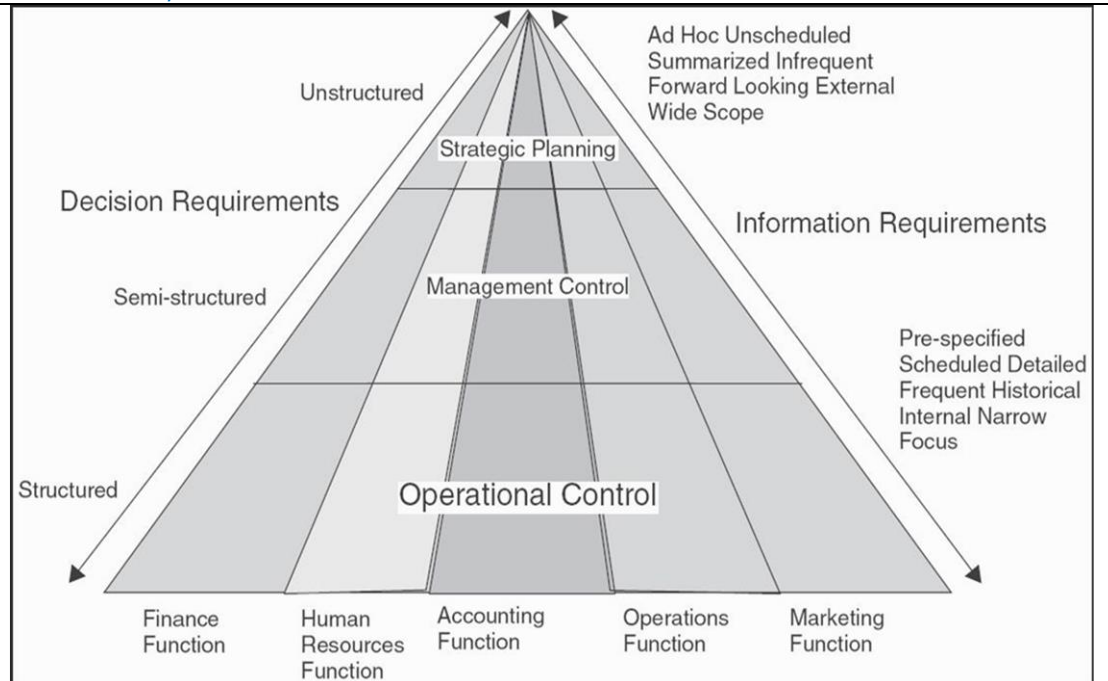
Figure 4.1 Management Pyramid with Information Requirements

Enterprise Resource Planning (ERP) programs: Core software used by companies to coordinate information in every area of business. Help manage companywide business processes and use common database and shared management reporting tools.

Enterprise Resource Planning (ERP) Systems: are the first generation of enterprise systems meant to integrate data and support all the major functions of organizations. ERP systems integrate various functional aspects of the organization as well as systems within the organization of its partners and suppliers.

The goal of an ERP system is to make the information flow dynamic and immediate, therefore, increasing its usefulness and value. Another goal of ERP is to integrate departments and functions across an organization into a single infrastructure that serves the needs of each department. ERP systems replace an assortment of systems that typically existed in organizations. (Accounting, HR, Materials Planning, Transaction Processing, etc.) ERP solves the critical problem of integrating information from different sources and makes it available in real-time.
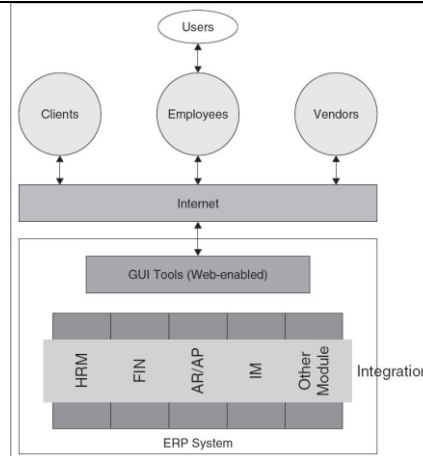
Figure 4.2 Integrated Systems – ERP

In summary, ERP systems are the mission-critical information systems in today's business organization. They replace an assortment of systems that typically existed in those organizations (e.g., accounting, finance, HR, transaction processing systems, materials planning systems, and management information systems). In addition, they solve the critical problem of integrating information from various sources inside and outside the organization's environment and make it available, in real time, to all employees and partners of the organization.

4.2   Business Processes and ERP

A crucial role of ERP in business is to better position the organization to change its business processes. ERP software have hundreds of business processes built into the logic of the system which may or may not agree with current processes of an organization. When implementing an ERP system, organizations have two choices:

- Change business processes to match the software functionality.
- Modify the ERP software to match the business processes.

ERP Systems Components
The key components for an ERP implementation are hardware, software, database, processes, and people. These components must work together seamlessly for the implementation to be successful. The implementation team must carefully evaluate each component in relation to the others while developing an implementation plan. Hardware, software, and data play a significant role in an ERP system implementation. Failures are often caused by a lack of attention to the business processes and people components.

The following figures illustrates the difference between system component, ERP Components and ERP components integration.

Republic of the Philippines
Laguna State Polytechnic University
Province of Laguna

ISO 9001:2015 Certified
Level I Institutionally Accredited

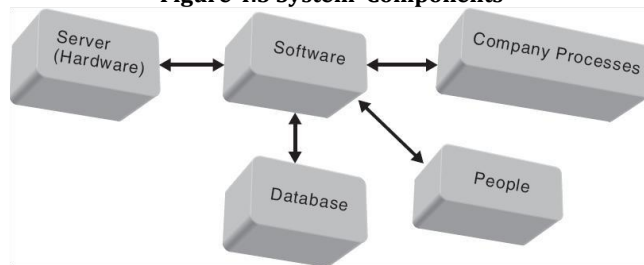| Hardware	Servers and peripherals
Software Process	Operating systems and database
Information	Organizational data from internal and external sources
Process	Business processes, procedures, and policies
People	End users and IT staff

Figure 4.3 System Components
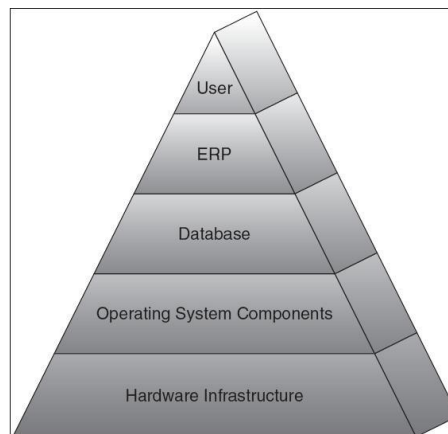

Figure 4.4 ERP Components

Figure 4.5 ERP Components Integration

Both people involvement and process integration will need to be addressed from the very early stages in the implementation plan. Staff must be allowed to play a key role in the project from the beginning. As shown in Figure 4.5 each component must be layered appropriately and each layer must support the efficiency of the other layers. The layered approach also provides the ability to change layers without significantly affecting the other layers. This can help organizations lower the long-term maintenance of the ERP application because changes in one layer do not necessarily require changes in other layers.

ERP Architecture

The architecture of an ERP system influences the cost, maintenance, and the use of the system. A flexible architecture is best – it allows for scalability as needs change and grow. A system's architecture is a blueprint of the actual ERP system and helps the implementation team build the ERP system. If purchased, ERP architecture is often driven by the vendor but other IT architectures are driven by organizational strategy and business processes.
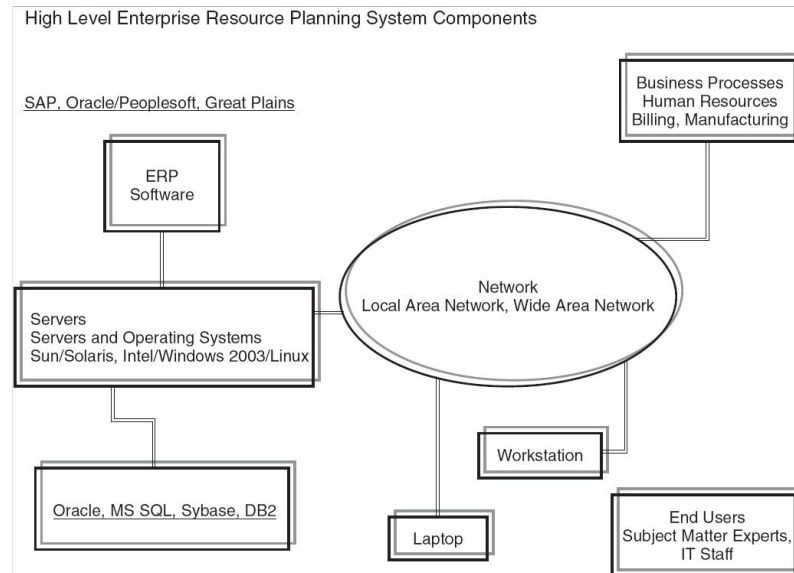
High Level Enterprise Resource Planning System Components

SAP, Oracle/Peoplesoft, Great Plains

ERP Software

Business Processes
Human Resources
Billing, Manufacturing

Servers
Servers and Operating Systems
Sun/Solaris, Intel/Windows 2003/Linux

Network
Local Area Network, Wide Area Network

Oracle, MS SQL, Sybase, DB2

Workstation

Laptop

End Users
Subject Matter Experts,
IT Staff

Figure 4.6 Example of Architecture of ERP at Large University

The architecture sets the stage for modifications or customizations to support an organization's policies and procedures, data conversion, system maintenance, upgrades, backups, security, access, and controls. Many organizations often make the mistake of ignoring the system architecture stage and jumping directly into ERP implementation because they have planned a "vanilla" or "as-is" implementation. This can be disastrous because the organization will not be prepared for long-term maintenance and upkeep of the system
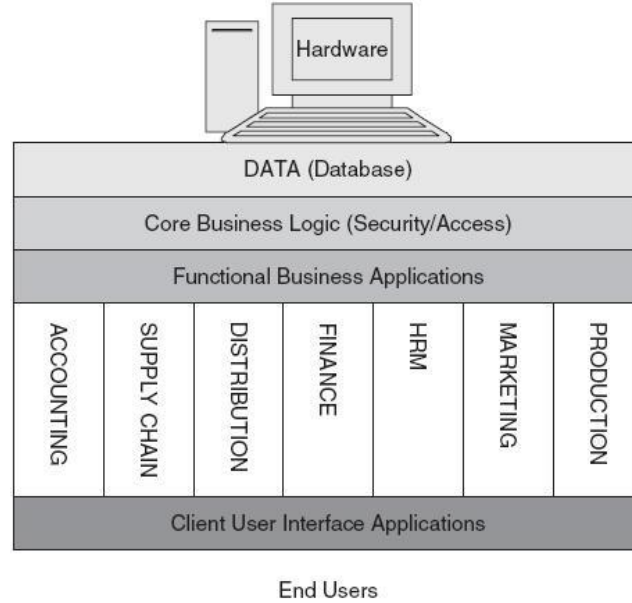
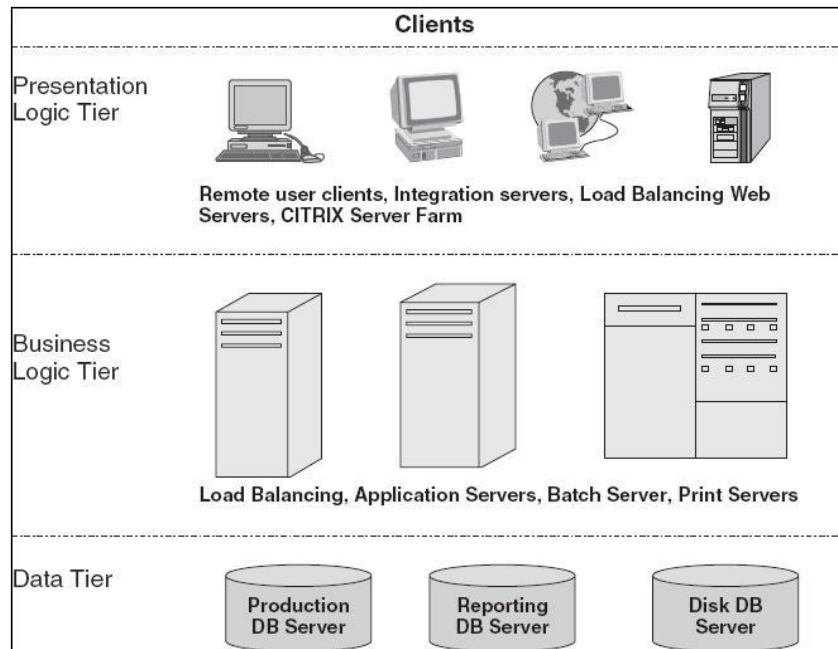**Figure 4.7 Logical Architecture of an ERP System**

Figure 4.8 Tiered Architecture Example of ERP System

The two types of architectures for an ERP system are logical (see Figure 4.7) and physical or tiered (see Figure 4.8). The logical architecture, shown in Figure 4.7, focuses on supporting the requirements of the end users, whereas the physical architecture focuses on the efficiency (cost, response time, etc.) of the system. The logical architecture provides the database schemas of entities and relationships at the lowest tier, followed by the core business processes and business logic handled by the system

at the second tier. The third tier provides details on the applications that support the various business functions built in to the ERP system.
This will be further discuss in the Module 5.

E-Business and ERP

Both e-Business and ERP technologies have pretty much evolved simultaneously, since the 1990s. Hence, during the early days, many people thought only one would survive for the long term. With the initial enthusiasm and support for e-Business, many analysts predicted the doom of ERP. Instead, both have flourished beyond everyone's expectation from those early days. One reason for their success is this simultaneous growth. The early predictions were based on the assumptions that these two technologies were competing for the same market.

Table 4.2 eBusiness versus ERP

E-Business	ERP
Focuses on linking a business with its external partners and stakeholders	Focuses on integrating the internal functional silos of the organization into an enterprise application
Disruptive technology—Totally transformed the way a business operates in terms of buying and selling, customer service, and relationships with suppliers	Adaptive technology—Merged the early data processing and integration efforts within an organization
Early focus of e-Business was on communication (e-mail), collaboration (calendaring, scheduling, group support), marketing and promotion (Web sites), and E-commerce (*Front office functions*)	Focus of ERP systems was mainly on data sharing, systems integration, business process change, and improving decision making through the access of data from a single source (*Back office functions*)

There are some similarities between the two, namely, both provide platform for systems integration or data sharing. While e-Business systems are better for sharing unstructured data and collaboration, ERP are better for sharing structured or transaction data; also, e-Business focus was on external integration (inter-organizational), while ERP systems' initial focus was on internal data integration. Therefore, e-Business and ERP are more of complementary technologies.
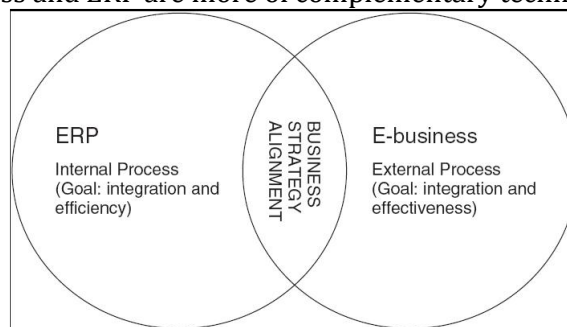

Figure 4.9 e-Business and ERP

The above reasons show why these two technologies have successfully cohabitated in organizations for the last decade, thereby refuting the earlier claims that one will replace the other. Even in intranet applications, the functionality is one of ERP applications only, and it is delivered via Internet-based protocols. Today, both technologies are evolving toward a single model in which ERP vendors provide e-

commerce and e-Business modules as part of the system. In future, e-business Web site implementation will become a part of ERP implementation.

System Benefits of an ERP System

Integration of data and applications across functional areas (i.e., data can be entered once and used by all applications; thus improving accuracy and quality of the data). Improvements in maintenance and support as IT staff is centralized.

Consistency of the user interface across various applications means less employee training, better productivity, and cross-functional job movements.

Security of data and applications is enhanced due to better controls and centralization of hardware.

System Limitations of an ERP System

Complexity of installing, configuring, and maintaining the system increases, thus requiring specialized IT staff, hardware, and network facilities. Consolidation of IT hardware, software, and people resources can be cumbersome and difficult to attain. Data conversion and transformation from an old system to a new one can be a tedious and complex process. Retraining of IT staff and end users of the new system can produce resistance and reduce productivity.

Business Benefits of an ERP System

Increasing agility of the organization in terms of responding to changes in environment for growth and maintaining market share. Information sharing helps collaboration between units. Linking and exchanging information in real-time with supply-chain partners improves efficiency. Better customer service due to quicker information flow across departments. Efficiency of business processes are enhanced due to the re-engineering of business processes.

Business Limitations of an ERP System

Retraining of all employees with the new system can be costly and time consuming. Change of business roles and department boundaries can create upheaval and resistance to the new system

Business Process Management

Business process management is the understanding, visibility, and control of business processes. A business process represents a discrete series of activities or tasks that can span people, applications, business activities, and organizations.

4.3 ERP Implementation - Life Cycle

The key to a successful implementation is to use a proven methodology, take it one step at a time, and begin with the planning and understanding the ERP life cycle. ERP system implementations are very risky, and using a well-defined project plan with a proven methodology will assist in managing those risks. There must be a strong well-communicated need to make the change from the existing information systems/applications to an ERP system.

Figure 4.10 ERP Life Cycle

ERP system implementations are very risky, and using a well-defined project plan with a proven methodology will assist in managing those risks. There must be a strong well-communicated need to make the change from th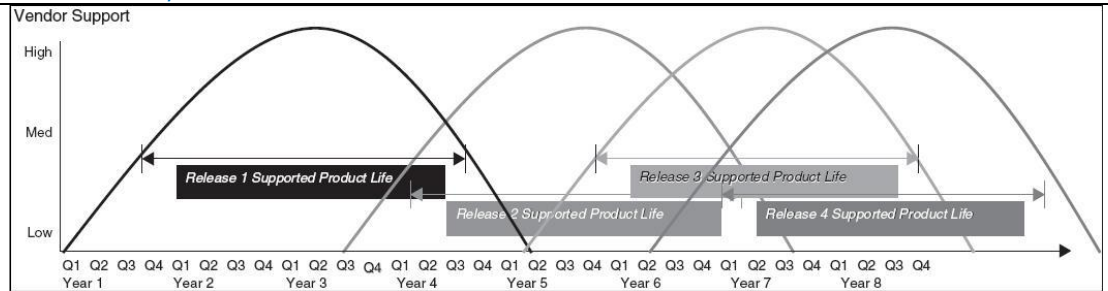e existing information systems/applications to an ERP system before starting any ERP development or implementation. There should also be clear and well-defined business objectives written and communicated to the organization. The project methodology needs to be documented, reviewed, and fully understood by everyone involved in the project once objectives are outlined.
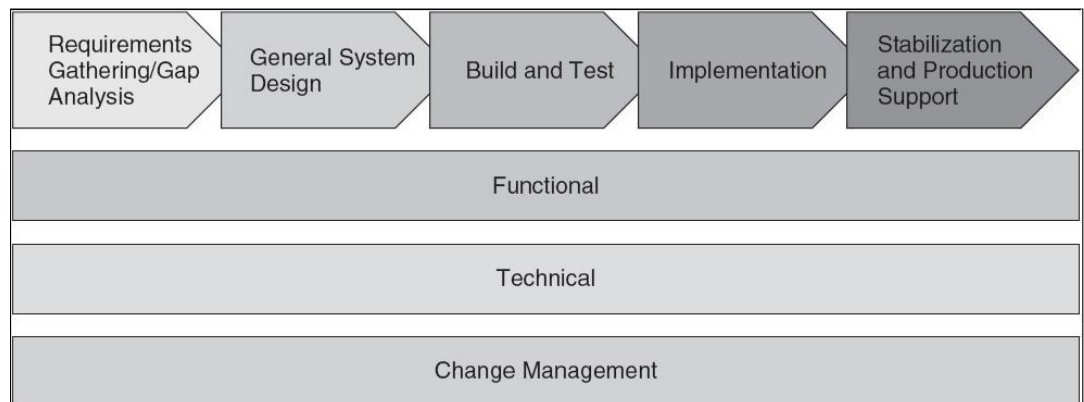

Figure 4.11 ERP Implementation Methodology

Implementing an ERP system is problematic without first considering current business processes and changes to those processes based on the functionality of the new system. If business processes are not analyzed and compared with what the new system can do, it is very likely the implementation will require significant system modifications after implementation. In developing the business case for an ERP implementation one must make a decision on the number of modifications to be made to address business requirements.
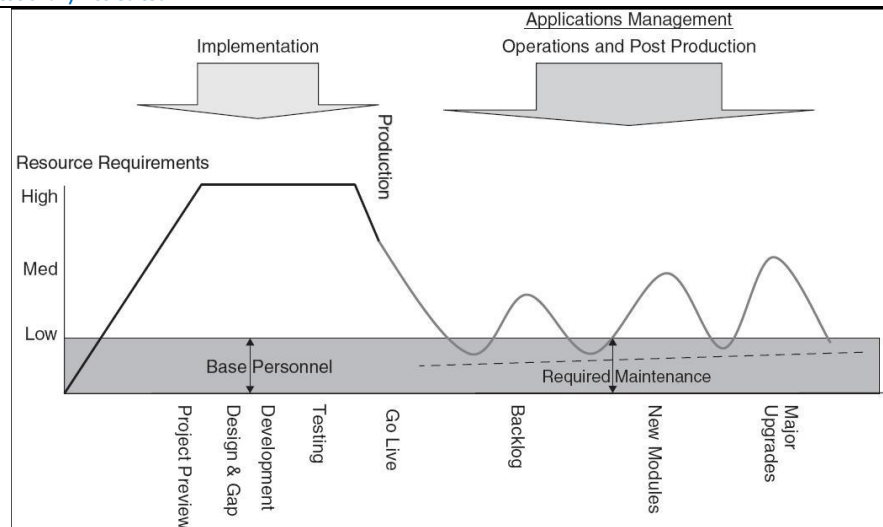
Figure 4.12 Product Life Cycle

The number of organizations using the Internet has increased dramatically since the early 1990s. The Internet and Web browsers have created an environment that allows for information systems to move out of the back room and onto desktops everywhere. Information systems have grown in functionality and availability. They have also become increasingly complex and difficult to develop.

Software and Vendor Selection

It is best for an organization that does not have the experience in developing ERP systems to purchase one on the market. Before selecting a vendor, the organization must carefully evaluate its current and future needs in enterprise management systems. Review the organization's existing hardware, network, and software infrastructure, and the resources available for the implementation.

During this phase, vendors should be asked to install their application (sandbox) on the company's IT infrastructure and to have it made available to potential users for testing. In addition, the vendor needs to be evaluated on the following:

- Business functions or modules supported by their software
- Features and integration capabilities of the software
- Financial viability of the vendor as well as length of time they have been in business
- Licensing and upgrade policies
- Customer service and help desk support
- Total cost of ownership
- IT infrastructure requirements
- Third-party software integration
- Legacy systems support and integration
- Consulting and training services
- Future goals and plans for the short and long term

Operations and Post-Implementation

Going live ("Go-live") is one of the most critical points in a project's success. It is vital to focus the efforts of all project teams to ensure that task and activities are completed before going live.

- This allows project management to address any outstanding issues that may jeopardize the Go-live date.
- his involves a readiness process that needs to include as many team members and appropriate users and managers as possible.

Five Areas of Stabilization are Important:

- Training for end-users.
- Reactive support (i.e., help desk for troubleshooting).
- Auditing support to make sure data quality is not compromised by new system.
- Data fix to resolve data migration and errors revealed by audits.
- New features and functionalities to support the evolving needs of the organization.
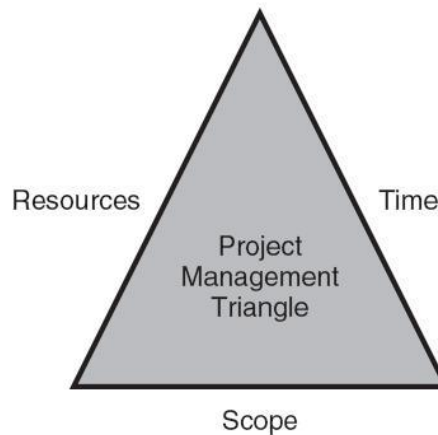

Figure 4.13 Project Management

One of the foundations in an implementation is communication of the different project life cycle phases to senior management and staff. All decisions made during an implementation phase will have an effect (i.e., cost and staffing) on the application management phase. The product life cycle application management phase is by far the more costly phase.
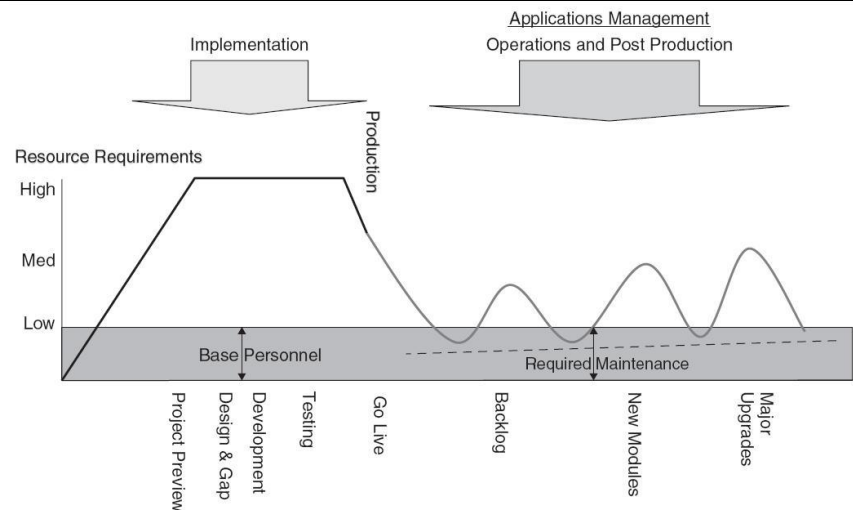
Figure 4.14 Project Life Cycle

As stated, it is often the case for organizations without much ERP implementation experience to use implementation partners. The use of consultants may appear to increase the project cost, but in most cases it does not. In the case where an organization does have the experience, the need for consulting should only be considered to address gaps in skills.

4.4 People and Organization

Project Management: For an ERP system to be implemented successfully, project management must provide strong leadership, a clear and understood implementation plan, and close monitoring of the budget.

Consultants: It is often the case for organizations without much ERP implementation experience to use implementation partners such as consultants.

Change Management: This helps prepare for changes to how business is done. In implementing new systems, communicating, preparing, and setting expectations is as important as providing training and support.

Business Process Re-engineering: Business processes will need to be changed, adjusted, or adapted to the new system to use the functionality of an ERP system fully.

Global, Ethical and Security Management: Outsourcing overseas, ethical issues, and problems with system security have also attracted a lot of attention in ERP implementation.

Tier I, Tier II, and Tier III ERP Software Vendors

Sample Vendors

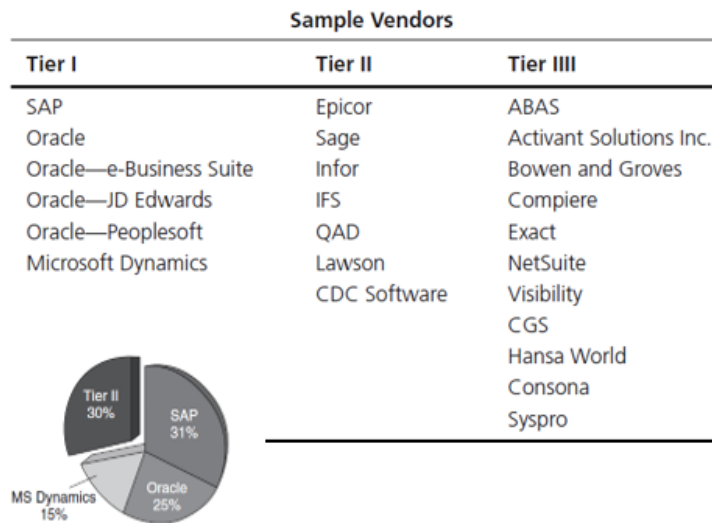| Tier I	Tier II	Tier IIII
SAP	Epicor	ABAS
Oracle	Sage	Activant Solutions Inc.
Oracle—e-Business Suite	Infor	Bowen and Groves
Oracle—JD Edwards	IFS	Compiere
Oracle—Peoplesoft	QAD	Exact
Microsoft Dynamics	Lawson	NetSuite
	CDC Software	Visibility
		CGS
		Hansa World
		Consona
		Syspro

Figure 4.14 ERP Market Tiers

- Key players dominating the global ERP software market include ABAS Software AG, CDC Software Inc., Consona Corporation, Epicor Software Corporation, Industrial and Financial Systems AB, Microsoft, NetSuite Inc., Oracle Corporation, Plex Systems, Inc., QAD Inc., Ramco Systems, The Sage Group plc, SAP AG, Unit 4 Agresso NV, and Visma AS, among others.
- Tier I includes large vendors like SAP, Oracle, and Microsoft, who provide support for large companies; Tier II includes vendors supporting the midsize companies; and Tier III vendors support small companies.
- The Global Industry Analysts, Inc.,7 analyzed ERP software market worldwide (North America, Europe, Latin America, Asia, and rest of world) by revenue and application type.

4.3 ERP Vendors

SAP: SAP is the recognized global leader among ERP vendors with over 12 million users. Its solutions are for all types of industries and for every major market. www.sap.com

Oracle/Peoplesoft: As the second largest ERP vendor, Oracle provides solutions divided by industry category and promises long-term support for customers of PeopleSoft- (acquired in 2004). www.oracle.com

Infor: The world's third largest provider of enterprise software. It delivers integrated enterprise solutions in supply chain, customer relationship and suppliers management.
Microsoft Dynamics: Formerly Microsoft Business Solutions or Great Plains, Microsoft Dynamics is a comprehensive business- management solution built on the Microsoft platform. Microsoft Dynamics integrates finances, e- commerce, supply chain,

manufacturing, project accounting, field service, customer relationships, and human resources.

Lawson: Industry-tailored software solutions that include enterprise performance management, distribution, financials, human resources, procurement, and retail operations. www.Lawson.com

SSA Global: Acquired Baan in 2004. They claim to offer solutions that accomplish specific goals in shorter time frames and are more efficient with time.

Epicor: This company provides enterprise software solutions for midmarket companies around the world. Claims to have solutions to a variety of needs, whether a customer is looking for a complete end-to-end enterprise software solution or a specific application.

Software Extensions and Trends

As e-Business firms started growing bigger with advanced needs in HR, accounting, and warehousing, non-ERP vendors were unable to support their requirements. ERP vendors were starting to expand their functionality to the Internet and *e-Business.* Intense competition and fluctuating sales have forced the ERP vendors to expand functionality to add value. The saturation of the demand in big business and the lucrative nature of the small and midsized business markets have led vendors like SAP and Oracle to enter the small business market.

SOA implementation will continue to grow as a factor in ERP purchase decisions because vendors are using creative marketing around product strategies versus buying what is currently available. Another shift is toward recurring and variable revenue models - Maintenance charges driving industry growth. The other major revenue shift is toward software as a service or hosted subscription-based applications. Social networking and open-source software solutions are also poised for significant growth.

To sum it up this module has presented highlight significant highlights such as:

- ERP systems implementation is a complex organizational activity.
- Important to evaluate and learn from the successes and failures.
- Managing risk is all about keeping project focus and clear communications throughout the organization.
- ERP systems implementation requires strong project management oversight.
- ERP systems provide improved and added functionality for an organization.
- ERP systems are set to proliferate globally.
- To be successful in implementing an ERP system, an organization and its management must clearly understand the implementation process.
- The key to this is the application of an ERP life cycle and methodology throughout an implementation.
- People and organizations are an important part of the implementation process. Without in-house experts, either the software vendor or a third party should be hired and used to assist or lead the project.
- Whereas ERP implementations are costly in time and resources, the greater costs are in process change, system maintenance, and remaining current.

TERMS TO REMEMBER

SAP
Infor
Epicor
SSA Global
Lawson
Microsoft Dynamics
Enterprise

Performance Task

Do This!	**For the lecture activities:**

For the lecture activities:

1. Watch the video lecture
2. Read the SLM
3. For further study: - Watch this video with this url: https://youtu.be/hKX7MnOljOc
4. For the Lecture Activities: Accomplish performance tasks using work sheet provided and online task for Module 4 Performance Task No 4 Short Answer Essay [PT4]
5. For the Laboratory Activities - Please refer to Laboratory Activity No. 3
6. For online classes, participate in the discussion forum and for offline e-learning always consult your instructor once a week through text or messenger.

Activity Information			
Topic:	Module 4: Enterprise Resource Planning Systems and Business Management	**Week No.**	
Course Code:	ITEP 308	**Term:**	1st Semester
Course Title:	**Business Management using ERP System**	**Academic Year:**	2020-2021
Activity Name	Activity No. 4: Short Answer Essay	**Number of items**	5
Due date		**Overall Points**	20

use the worksheet provided, for online classes please see visit the LMS for online discussion instructions

For the Laboratory:

Direction:

1. Watch the video, follow and perform the instructions on this particular week we have laboratory exercises: **Laboratory Exercise 18** and **Laboratory Exercise 22.**

2. Watch the video, follow and perform the instructions on this particular week we have 7 Machine Problems: **Machine Problem 12 – Machine Problem 18** and upload the file on the submission link.

Week 5-6: Excel Basic

Laboratory Exercise 17: Excel Basics 17

Video to watch: **Excel Basics 17: Style Formatting: By Hand, Cell, Table & Conditional Formatting (18:02 min)**

Start file for Video/Class Project to download: EB17StyleFormatting.xlsm

Handout to download (pdf notes): Office2016Class29-ExcelBasics17-StyleFormatting.pdf

Machine Problem 12: HW # 1 - 2 at the end of the Excel workbook for this video.

Laboratory Exercise 18: Excel Basics 18

Video to watch: **Excel Basics 18: Defined Names in Excel Formulas & Functions & For Jump Go To! (10:44 min)**

Start file for Video/Class Project to download: EB18-DefinedNamesStartFile.xlsm

Handout to download (pdf notes): Office2016Class30-ExcelBasics18-DefinedNames.pdf

No machine problem

Laboratory Exercise 19: Excel Basics 19

Video to watch: **Excel Basics 19: SUMIFS, COUNTIFS, AVERAGEIFS, functions calculations w 1 or more Criteria (35:15 min)**

Start file for Video/Class Project to download: EB19-SUMIFSandSimilarFunctions.xlsm

Handout to download (pdf notes):   Office2016Class31-ExcelBasics19-SUMIFSandSimilarFunctions.pdf

Machine Problem 13: HW # 1 - 3 at the end of the Excel workbook for this video.

Laboratory Exercise 20: Excel Basics 20

Video to watch: **Excel Basics 20: PivotTable Power: 14 Amazing PivotTable Reporting Tricks: Slicers to Show Values As (39:49 min)**

Start file for Video/Class Project to download: EB20-PivotTablesStart.xlsm

Handout to download (pdf notes): Office2016Class32-ExcelBasics20PivotTables.pdf

Machine Problem 14: HW # 1 - 3 at the end of the Excel workbook for this video.

Laboratory Exercise 21: Excel Basics 21

Video to watch: **Excel Basics 21: Relationships Rather than VLOOKUP for PivotTable Reports (Excel 2016 Data Model) (21:34 min)**

Start file for Video/Class Project to download: EB21-PivotTablesRelationshipsStart.xlsm

Handout to download (pdf notes): Office2016Class33-ExcelBasics21PivotTablesRelationships.pdf

Machine Problem 15: HW # 1 at the end of the Excel workbook for this video.

Laboratory Exercise 22: Excel Basics 22

Video to watch: Excel Basics 22: Set Default PivotTable Layout & Options in Excel 2016 Office 365 or Later (04:25 min)

Start & Finished file for Video/Class Project to download: EB22-DefaultPivotTableLayoutExcel2016.xlsx

Handout to download (pdf notes): Office2016Class34-ExcelBasics22DefaultPivotTableLayoutExcel2016.pdf

No machine problem

Laboratory Exercise 23:Excel Basics 23

Video to watch: Excel Basics 23: Data Analysis Features: Sort, Filter, Flash Fill to Organize & Clean Data (30:07 min)

Start file for Video/Class Project to download: EB23-SortFilterFlashFillStart.xlsx

Handout to download (pdf notes): Office2016Class35-ExcelBasics23SortFilterFlashFill.pdf

Machine Problem 16: HW # 1 - 4 at the end of the Excel workbook for this video.

Laboratory Exercise 24: Excel Basics 24

Video to watch: Excel Basics 24: Excel Charts & Graphs to Visualize Quantitative Data. No Chart Junk!!! (34:33 min)

Start & Finished file for Video/Class Project to download: EB24Charts.xlsm

Handout to download (pdf notes): Office2016Class36-ExcelBasics24Charts.pdf

Machine Problem 17: HW # 1 - 5 at the end of the Excel workbook for this video.

Laboratory Exercise 25: Excel Basics 25

Video to watch: Excel Basics 25: Power Query (Get & Transform) to Clean & Transform Data into Proper Data Set (0:53 min)

Start file for Video/Class Project to download: EB25GetAndTransformPowerQueryStart.xlsm

Zipped Folder with Text Files used for importing into Excel: EB25FileDownloads.zip

Handout to download (pdf notes): Office2016Class37-ExcelBasics25-PowerQueryGetAndTransform.pdf

Machine Problem 18: HW # 1 at the end of the Excel workbook for this video.

Important Video 01 - 25 Concept Summary: ExcelBasics01-25-KeyConcepts.pdf

Week 5- Week 6 Deliverables

MP #	Workbook	Sheet
Machine Problem 12	EB17StyleFormatting.xlsm	HW # 1 - 2
Machine Problem 13	EB19-SUMIFSandSimilarFunctions.xlsm	HW # 1 - 3
Machine Problem 14	EB20-PivotTablesStart.xlsm	HW # 1 - 3
Machine Problem 15	EB21-PivotTablesRelationshipsStart.xlsm	HW # 1
Machine Problem 16	EB23-SortFilterFlashFillStart.xlsx	HW # 1 - 4
Machine Problem 17	EB24Charts.xlsm	HW # 1 - 5
Machine Problem 18	EB25GetAndTransformPowerQueryStart.xlsm	HW # 1

Lecture Submission Instructions:

For online classes: Please use this: **ActivityCode-Section-LastNameFirstName:** eg. **PT2-BSIT3A-VILLARICA-MIA** and submit your output by uploading it on the submission link provided on the LMS.

For offline classes: Compile your work per week and follow the sample naming convention online. <u>Week 1 – Lecture Deliverables</u> please use this: **ActivityCode-Section-LastNameFirstName:** eg. **PT2-BSIT3A-VILLARICA-MIA**

Laboratory Submission Instructions:

For online classes: links are provided at the LMS for naming convention submission, please use this **SECTION-LASTNAME-FIRSTNAME- ActivityCode.xlsx** : eg. **BSIT3A-VILLARICA-MIA- MP4.xlsx**

For offline classes: Compile your work per week and follow the sample naming convention online. <u>Week 1 – Laboratory Deliverables</u> please use this **SECTION-LASTNAME-FIRSTNAME- ActivityCode.xlsx** : eg. **BSIT3A-VILLARICA-MIA- MP4.xlsx**

Understanding Directed Assessment

Performance Task Rubrics for rating per item:

Score	Content	Organization	Development	Use of Language
4	Answer is appropriate to the question. Content is factually correct.	Clear sense of order. Begins with a thesis or topic sentence. Supporting points are presented in a logical progression.	Develops each point with many specific details. Answers question completely.	Uses technical or scientific terminology appropriately and correctly. No major grammatical or spelling errors.
3	Answer is appropriate to the question. Content may have one or two factual errors.	May lack a thesis sentence, but points are presented in a logical progression.	Each point supported with some details and evidence. All important points included.	Accurate word choice. No more than 2 major errors and a few minor errors.
2	Content relates peripherally to the question; contains significant factual errors.	Logic of argument is minimally perceivable. Points presented in a seemingly random fashion, but all support argument.	Sparse details or evidence. Question only partially answered.	Ordinary word choice; use of scientific terminology avoided. Some serious errors (but they don't impair communication).
1	Content unrelated to question.	Lacks clear organizational plan. Reader is confused.	Statements are unsupported by any detail or explanation. Repetitious, incoherent, illogical development.	Limited vocabulary; errors impair communication.

Adapted from the Creator: Denise Lim, Biology, Cabrillo College

Assessment Task Rubrics for rating per item:

Criteria	Excellent 10 pts	Good 7 pts	Fair 4 pts	Poor 1 pts
Formulas	Excellent The formulas were used wherever appropriate. There were no numbers typed in to do any calculations.	Good Most of the numbers that needed to be calculated were done by formulas.	Fair Some of the numbers that needed to be calculated were done by formulas.	Poor Only 1 or 2 of the numbers that needed to be calculated were done by formulas.

Organization	Excellent	Good	Fair	Poor
	The spreadsheet is very organized and very easy to read.	The spreadsheet is a little difficult to read. Some of the data and the chart are scattered or cluttered.	The spreadsheet appears to have some order. It can be read, but is very difficult.	The spreadsheet is all over the place. The data is not organized and the graph does not accompany the data.
Required Data	Excellent	Good	Fair	Poor
	All the information is present and it good form.	The spreadsheet is missing 1 or 2 items.	The spreadsheet is missing 3 or 4 items.	The spreadsheet is missing 5 or more items.
Graph	Excellent	Good	Fair	Poor
	The graph is present and represents the data appropriately.	The graph is present and is in good form with data, but lacks a couple key figures.	The graph is present, but does not represent the data.	There is no graph.
Formatting Requirements	Excellent	Good	Fair	Poor
	The graph has all the headings, column labels, number labels, and is easy to read.	The graph is missing one of the requirements	The graph is missing 2 of the requirements.	The graph is missing all the formatting requirements.
Extra Formatting	Excellent	Good	Fair	Poor
	The graph has extra features that makes the graph more attractive and is still easy to read.	The graph has extra features, but it makes the graph more difficult to read.	The graph has a couple extra features, but it makes the graph difficult to read.	The graph has no extra formatting features.

📖 Learning Resources

1. Motiwalla L. F. Thompson J. (2012). Enterprise systems for management. MA: Pearson Boston.
2. Girvin, M. (2020). Excel is Fun!. Retrieved 15 September 2020, from https://people.highline.edu/mgirvin/excelisfun.htm