
UNIT 8: INTEGRATED APPLICATIONS

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8.1 INTRODUCTION

Integrated application software systems have become necessary for organizations to compete and do the business in controlled and profitable manner. They need to choose a system that suits their business processes. Integrated systems are the systems that help in integrating business processes and management functions. They provide a transparent and integrated view of all the activities that are going on in the business. Unlike earlier days, when data used to be collected from different service divisions/nodes and then compiled in the form of a summary report, presently the software does the compilation and the integration work. This facilitate in maintaining consistency of data by making same data available to all concerned in the organization. It also minimizes the time taken in accomplishing the work. There are many software packages that integrate the activities of different service divisions and respective processes. This way they facilitate businesses to devote more time on productivity. However there are different needs of different business and one should be careful in deciding about a software system that would be useful to the organisation. Any company looks for these packages to integrate its corporate functions like finance, manufacturing, customer relations, human resources and so on. This is a critical activity for organisations. As a successful manager you should be able to understand the system requirement of your company. You should be able to define the information flow, information requirements and information usage so that you gain competitive edge. This unit is thus an attempt to keep you updated on the latest in the business solutions area.

8.2 OBJECTIVES

After reading this unit you should be able to

- Explain the concept of integrated software applications;

- Describe their advantages, business utility, and implementation issues; and
- Discuss the business solutions offered by market leaders.

8.3 INTEGRATED SOFTWARE APPLICATIONS

Literal meaning of “Integration” is combination or amalgamation. In terms of computer terminology, “Integration” is a broad term for any software that serves to join together separate and usually already existing applications. Integrated software applications for business give you the ability to integrate the diverse information sources pertaining to your business holistically into a single framework. This integrated information can then be shared by applications such as Customer Relationship Management (CRM), Supply Chain Management (SCM), Business Process Re-engineering (BPR) systems as so on. The amalgamation of integrated software applications is called Enterprise Resource Planning, widely known as ERP.

Now, let us see these terms with regard to their respective definitions with little more about them:

ERP: Short for *Enterprise Resource Planning* is a business process management system that integrates all facets of the business, including planning, manufacturing, sales, marketing, and front-end services like human resource management and finance management covering accounting, budgeting, deposits etc. The term ERP was coined by the research firm Gartner around 1990. As the ERP methodology has become more popular, software applications have emerged to help business managers implement ERP in business activities such as inventory control, order tracking, customer service, finance and human resources. Integrated software applications are available now for almost all business houses automating many back office functions related to technology, services and human resources. They can also be widely seen today in use for various services in Hospitals, Banking, Education and many more. ERP systems are now vast repositories of information helping organizations to generate reports that can spotlight the performance of every aspect of the business. There are countless applications available, designed for different industries, business models and challenges, and ERP acts as command central for a vast network of application software.

CRM: Short for *Customer Relationship Management* entails all aspects of interaction a company has with its customer, whether it is sales or service related. Computerization has changed the way companies are approaching their CRM strategies because it has also changed consumer-buying behavior. With each new advance in technology, especially the proliferation of self-service channels like the Web, Bluetooth and WAP (Wireless Application Protocol) phones, more of the relationship is being managed electronically. Organizations are therefore looking for ways to personalize online experiences (a process also referred to as mass customization) through tools such as help-desk software, e-mail organizers and Web development applications. Today we find sales and customer services related communications very actively and promptly disseminated through emails, messaging services, social media giving the comfort to consumers

of getting updated in no time. Once we place an order for purchase of some items through online we get instantly updated about status of order and other related business activities such as payments confirmation etc.

SCM: Short for *Supply Chain Management*, the control of the supply chain as a process from supplier to manufacturer to wholesaler to retailer to consumer. Supply chain management does not involve only the movement of a physical product (such as a microchip) through the chain but also, like CRM, any data that goes along with the product (such as order status information, payment schedules, and ownership titles) and the actual entities that handle the product from stage to stage of the supply chain.

There are essentially three goals of SCM: to reduce inventory, to increase the speed of transactions with real-time data exchange, and to increase revenue by satisfying customer demands more efficiently maintaining unified communications at all levels giving the present status to the customers. It is used in reference to software applications that enable more efficient management of the supply chain.

BPR: Short for *Business Process Re-engineering* is aimed to make radical changes in an organization from the ground up in an aim to improve performance and make more efficient use of resources. It focuses on the analysis and design of workflows and business processes which are nothing but the steps and procedures that govern how resources are used in the organization to meet the needs of customers or markets. It helps organizations to fundamentally rethink how they do their work in order to improve customer service, cut operational costs, and compete globally. During the process of re-engineering it uses IT to organize data, doing data analysis, and maintain project trends etc. for success of the business. Using the technological innovations organizations going for re-engineering replace old methods of business operations with cost-saving innovative technologies by using integrated software applications to radically transform business operations. Re-engineering focuses on re-designing the process as a whole in order to achieve the greatest possible benefits to the organization and their customers.

Importance and use of software applications for various services in organizations is well known today. We hardly find any sector today untouched by computers. Be it education, factory, agriculture, banking, hospitals, Research & Developments, Government offices everywhere we find use of computers for the daily business and various services. Now companies are giving high importance to software integration without which it is almost impossible to compete in the market. Today nobody wants to access data stored in multiple systems. They want to build strong links between business systems and make information flow better. Let us take an example, suppose you want to place an order online using your smart phone or laptop or desktop computer. For connectivity you have to have, of course, the internet. An integrated software solution, on one hand, takes that order, shifts it and allocates them to the manufacturing plant and on the other hand places order for the raw materials on the basis of the stock, updates the financial position of the company with respect to suppliers and the inventory and so on. Many people have given different names to the

integration of ERP, SCM, BPR and CRM. These names include online business or e-business, c-business (collaborative e-business), m-business or mobile business etc.

There are many software that do these integration activities. At present, in the year 2021, the top ten software systems for the business process integration are SAP Business One, NetSuite, SAP, Sage Intacct, SAP S/4HANA, Acumatica, Tally, Odoo ERP, SAP ByD, and Oracle EBS (Source: <https://www.g2.com/categories/erp-systems>, 9th August 2021). Rating is based on survey taken by the company primarily with the user satisfaction level and the popularity. Microsoft Dynamics NAV is another such system by Microsoft for process integration. It is worth mentioning here that Odoo ERP is Open Source Software meaning thereby that software codes are available to users for using almost free. Users have to further modify them as per the specific requirements. Unlike Proprietary software, it does not require user licenses to use the software. But it does require in depth knowledge of software coding to understand and modify to suit the user requirements. There are many such open source software in the market. To name few of them Adaxa Suite, ERP5, ERPNext, inoERP, LedgerSMB, SQL-Ledger, WebVella etc are available globally. With the advancements in IT, all these services are also available with just a click on web link with computer servers and storage systems. Users do not have to worry about space, neither for electricity or air-conditioning for physically keeping servers and storage systems at their premises. All are available in Cloud i.e. physically at other IT service provider location.

8.4 ADVANTAGES AND BUSINESS UTILITY

Integrated software packages help in real business growth. Seeing the wide spread availability of such solutions from IT solution providers, companies today put on priority to integrate their diverse business processes to simplify operations for faster decision-making. Companies realise that if they have to survive and grow, they have to use tools that can provide quicker and useful information and cut costs to increase efficiency. IT has given businesses a chance to generate information in real-time and thus grab opportunities that were non-existent or unseen earlier. With the development of cutting-edge technology, we have seen evolution of many systems that has adapted market demands. IT is readily providing business solutions now. Even complete project undertaken by a company can be very well managed and monitored today using Project Management Systems (PMS). They are designed to assist project managers and their teams organize the step-by-step process of a project, identify priorities, and monitor project tasks, costs, contacts, deadlines and staff. Complex projects that require staff, team coordination, budgets and so on can be difficult to manage without the use of project management software. Similarly, Business Intelligence (BI) tools are also available for analytical study for making the business more and more successful.

The integrated software solutions provide a platform to integrate all processes in an organization enabling it to plan, trace and see its 4-m resources (materials, machines, men and money) in the best possible ways to service customers and reduce costs. If you want that your Business should

survive with low overheads and still run efficiently then you have no choice but to opt for IT solutions.

Today, a typical business solution is an integration of ERP, BPR, SCM, CRM, BI, and PMS. While ERP can take care of functions like accounts production planning, payroll and marketing etc., BPR can be used simultaneously to cut-down on all non-value added business processes and paperwork. These systems are the enablers of change in the business for better. With the help of these systems your business can compete better. These systems, combined with the web, help you to reach your customers most cost-effectively. There would be no cost incurred on travel and communication and no cost incurred on setting up offices and employees. The Cloud services available with almost all big players in the market have made the task of maintaining integrated system much more simpler as compared to yesteryears.

E-Business generations are well explained with a pictorial representation in the Figure 8.1 . By this you would be able to appreciate why we are talking about integrations and business solutions and what place it has in the present world. It can be seen that 4th generations business solutions are using web to integrate all systems. ERP is used in a broader term here. In fact the term ERP is the synonym for integration of all the software catering to various business processes in organizations. Worldwide this term i.e. ERP is used now for the total integration of business processes. The software modules, BPR for reengineering the business processes and PMS for project monitoring are used too for the respective tasks. Similarly BI is used as the analytical tool for estimating and forecasting supports for the business based on primary data (at the organization location) and secondary data available through web for the analysis and inferences.

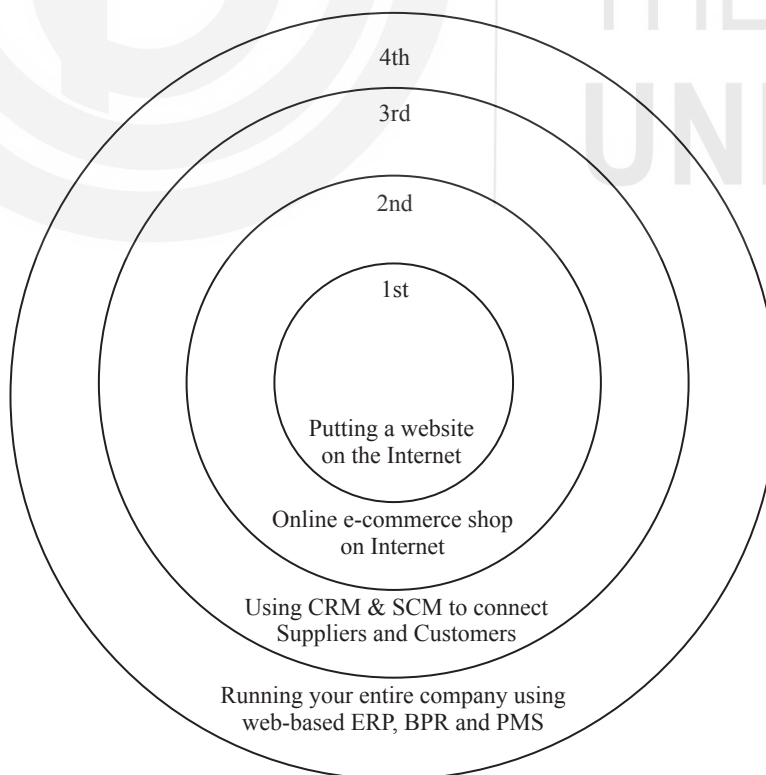


Figure 8.1: Generations of e-Business

Here you should be clear that e-business is similar to e-commerce but it is more than just a simple act of buying and selling services or goods online. In fact, it is the method of utilizing digital information and advanced communication technologies to streamline different business processes – from the initial to implementation phase. E-commerce is just a part of e-business.

8.5 ISSUES IN IMPLEMENTING INTEGRATED APPLICATIONS

The key to establishing a good IT system lies in the proper planning. Businesses should first specify their needs, processes and key data. They should clearly specify the kind of information and its flow. Once these specifications are done, it is the integration of information that is required. Once integration is done, information is accessible to every department around the company. Customers, suppliers and others may also be provided with the facilities to access relevant information with proper access rights, say, status of order, supply, delivery etc.

In most of the cases organizations hire the services of IT service providers. These facilities being from third party require comprehensive study and analysis of business requirements to have the integrated system in place. As-Is and To-Be processes must be well documented for reference now and then by both – the organization and the service provider. As-Is document contains all what is required to be automated and integrated. Process owners available in the various departments of the organizations are the key persons to put forth the existing processes which the organization has been using. This may also contain new requirements to be automated and made part of the new system. ERP and other software packages available for automation are required to be customized to suit the organization. The To-Be document must have mention of all automated and integrated processes which would be delivered to the organization by the IT service provider after completion of the project. As the end result will be the integrated system hence any small mistake at any stage may have great impact on the business and system may halt. Hence all process users must be involved right from giving the requirements and they must be available till the delivery and acceptance. Implementations of new system – automated and integrated applications will never be a success till above is done.

Selecting the right service provider is another issue. Selecting the best and most cost effective solution depends on developing the RFQ/RFP containing the ‘What’ part of the solution requirement comprehensively. RFQ (Request For Quotation) or RFP (Request For Proposal) must contain all requirements that each user department needs in terms of the various outputs/reports once the new integrated software is in place. You will study further about these terms in the Unit on Systems Analysis and Design.

ACTIVITY A

Take the case of your organization or any other organization of your choice. Classify the activities of the organization with respect to the generations of e-business. Mention all the features by virtue of which you have done this classification.

8.6 THE COMPETITION

In this Unit we would introduce to some of the leading players providing IT based business solutions. But before entering what these players are offering, let us see the interesting competition that has been in past and what is prevailing presently.

In fact competition amongst application software developers started way back in 1960s-70s when MRP (Material Requirement Planning) got developed to automate inventory and production business processes in some manufacturing plants. Eventually, several large software providers, including Oracle and JD Edwards (now taken over by Oracle), set out to make this software accessible to more businesses. The '80s marked a milestone in the history of application integration when the first manufacturing resource planning (MRP II) systems appeared to support manufacturing processes beyond inventory and raw materials procurement. MRP II systems allowed the various departments involved in manufacturing to coordinate, and they had more advanced production scheduling capabilities.

By 1990, Gartner, as stated earlier, introduced the term ERP to recognize that many business functions, like accounting, sales, engineering and human resources (HR) apart from manufacturing were now using this technology to increase the efficiency of their entire operations also facilitating all employees with a single source of accurate data. Cloud ERP, came into existence first by NetSuite in 1998 bringing an improvement over on-premises systems. With this, available with all the main IT service providers, organizations can access critical business data through the web from any device with an internet connection with no longer need to purchase and maintain hardware. It also reduces the need for IT staffers and implement easily. This cloud model has made ERP systems, once limited to enterprises, accessible to smaller companies that lack the capital to launch and support a resource-intensive on-premises solution. Small and midsize businesses across industries can enjoy the same benefits as their larger counterparts, including automated processes, improved data accuracy and greater efficiency.

Integrated application systems have come a long way and technological innovations will lead to continued advancements with integration of Artificial Intelligence (AI) into them.

There are more than 100 ERP systems available worldwide for Small Business, Mid-Sized, Fast-Growing, and Large Enterprise. A survey based on 129 products indicates that top five companies providing integrated applications are /Oracle, SAP, SAGE, SYSPRO, and Microsoft. (Source : <https://www.selecthub.com/erp-software/>).

For comparison, we will take up the integrated applications with Oracle, SAP, and Microsoft, most popular globally, with their diversified products .

8.7 BUSINESS SOFTWARE SOLUTIONS FROM ORACLE

The integrated applications under the umbrella of Oracle are Oracle's E-Business Suite, JD Edward's EnterpriseOne, Hyperion, Peoplesoft, and

Siebel. Oracle took over JD Edward in 2005. JD Edward, earlier to it, had taken over Peoplesoft.

Oracle’s E-Business Suite (EBS) offers a complete set of applications, which are capable of automating entire business processes encompassing wide array of functions.

EBS Mobile Release 9 also updates to smart phone apps. EBS Cloud Manager helps enterprises to run EBS on Oracle Cloud Infrastructure (OCI).

Oracle EBS is an integrated set of business applications that deliver comprehensive procedural computerization and thus complete information. Information finally helps businesses in taking more informed decisions. Thousands of the world’s leading organizations rely on Oracle E–Business Suite to run their key business operations. Oracle Cloud Infrastructure, helps you save money, gain productivity, and respond to changing business demands with automated, scalable cloud infrastructure. Table 8.1 gives you a global view of different modules of Oracle E-Business Suite. Apart from the EBS, Oracle also provides business technology platform for database and data management, application development and integration, Analytics, and intelligent technologies for doing businesses in state-of-the-art areas and applications.

Table 8.1 : Oracle solutions under its E-Business Suite

S. No.	Solutions/ Modules	Description
1	Financials	Oracle Financials is an integrated solution that gives you complete visibility into your finances and control over all transactions, while increasing the efficiency of your operations. It covers Receivables, Payables, Assets, Lease Contracts (Financials), Lease and Finance Management.
2	Human Capital Management	This solution readies your company for human resources to rapidly deploy the best for maximum employee productivity, satisfaction, and retention.
3	Business intelligence	Business intelligence solutions help you meet the information needs of your users by providing self-service, Web-based access to information. It provides hundreds of pre-built reports and analytic capabilities. Oracle addresses the full spectrum of business intelligence requirements, such as data quality, data analysis, and information access.
4	Learning Management	Learning Management module provides a complete infrastructure that lets organizations manage, deliver, and track training, in both online and classroom environments.
5	Maintenance Management	Maintenance Management module helps you plan and execute maintenance activity for any asset, as well as keep track of information on asset costs and activities throughout an enterprise.
6	Manufacturing	Manufacturing module is a set of collaborative applications that optimize production capacity beginning with raw materials through final products, regardless of the manufacturing methodology used with Discrete Manufacturing, Process Manufacturing, Outsourced Manufacturing, Cost Management, Quality etc.
7	Marketing	Oracle Marketing integrates with Sales, Finance and the rest of your organization, for better planning and execution. It drives profit by intelligently marketing to the most profitable customers.

8	Order Management	Order Management uses Oracle Workflow to support tailored, automated fulfillment processes, without the need for customization. It captures demand from multiple channels using a variety of communication methods with Order Management, Inventory Management, Advanced Pricing, Shopping Experience, Landed Cost Management, Channel Revenue Management, Incentive Compensation
9	Procurement	Procurement is an integrated set of applications that connects all your purchasing functions, including sourcing, purchase order management, receiving, and payables, to give you a central repository of purchasing information, along with fully automated, self-service capabilities for Shopping, Procurement etc.
10	Product Lifecycle Management	Oracle Product Lifecycle Management is collection of applications that gives you a centralized repository of product and project information that will help you manage product activities collaboratively.
11	Projects	Projects, a set of Internet-enabled applications, delivers centralized project management functionality and serves as a bridge between operations and corporate finance to help you effectively manage the full lifecycle of every project, Project Procurement, Contract Lifecycle Management etc.
12	Sales	Sales enables you to have comprehensive customer and prospect information so that your sales organizations can meet challenging revenue goals with fewer resources. .
13	Supply Chain Management	Supply Chain Management lets you gain global visibility, automate internal processes and readily collaborate with your suppliers, customers, and partners.
14	Asset Life Cycle and Service	It helps enterprise Asset Management, Asset Tracking, Service Contracts, Service (TeleService), Field Service, Depot Repair etc.

(Source: <https://www.oracle.com/a/ocom/docs/applications/ebusiness/announcing-eb-innovations-2020.pdf>)

8.8 BUSINESS SOFTWARE SOLUTIONS FROM SAP

SAP (System Analysis and Program Development) was founded on April 1, 1972 in Germany by five former IBM employees with an idea to create standard enterprise software that could integrate all business processes and enable data processing in real time. Their products gained prominence with the application suite “R/3” in 1992 with the client-server software smoothing the path to a globalized economy, turning SAP into a global player. The company branched out into three markets of the future: mobile technology, database technology, and cloud. SAP acquired some of its competitors, including Business Objects, Sybase, Ariba, SuccessFactors, Fieldglass, and Concur. SAP has more than 238 million cloud users currently, more than 100 solutions covering all business functions, and the largest cloud portfolio of any provider. SAP operates 70 data centers at 37 locations in 17 countries.

SAP HANA was launched in 2011 giving very fast access to customers. Data analyses that used to take days or even weeks were now completed in seconds. Four years later, SAP launched SAP S/4HANA, its latest generation of business software. In 2019, SAP acquired U.S. company Qualtrics, a

leader in experience management software, placing SAP at the leading edge of this growing segment. The company’s integrated applications connect all parts of a business into an intelligent suite on a digital platform. SAP Business Technology Platform powers customers to become intelligent enterprises and supports cloud, on-premise, and hybrid customer landscapes.

Integrated Applications by SAP is the Business Suite which is a bundle of end-to-end enterprise software applications integrating data, processes and the business functions. SAP’s solutions are available for many industries like aerospace & defense, engineering, construction, operations, financial service providers, insurance, telecommunications and banking etc. Business Suite is used primarily by medium to large enterprises. It helps to run businesses better, faster, and simpler enterprise-wide responding more quickly to changing customer needs and market conditions. It includes CRM, Financials, HR, SRM, SCM and many more. The table given below describes them. The foundation of Business Suite is SAP ERP, often referred to as ERP Central Component (ECC). The Table 8.2 gives you a global view of different modules of SAP ECC.

Table 8. 2: SAP solutions under its business suite SAP ECC

S. No.	Solutions/ Modules	Description
1	Financial Accounting (FI)	The FI component records a company’s all financial transactions. It handles receivables from sales, payables for procurement, and cash management as well as bank payment and reconciliation processes.
2	Controlling (CO)	The CO component manages cost center accounting, profit center accounting and internal orders and also offers financial planning. It’s product costing feature is used to compare simulated costs and actual costs primarily intended to help manufacturing organizations. Together FI and CO are often referred to as FICO, FI-CO or FI/CO.
3	Sales and Distribution (SD)	The SD component manages major processes of sales and distribution. This includes selling products or services in national and international markets through direct sales to customers or through distribution networks. It also handles customer’s returns, along with billing and credit issuance.
4	Materials Management (MM)	The MM component manages procurement, from local vendors or international suppliers, and inventory for all goods issuance, goods receipts and transfers of a material from one plant or storage location to another. Counting and reconciling materials’ physical inventory is also managed in MM.
5	Production Planning (PP)	The PP component helps businesses create demand and manufacturing capacity alignment to help plan product manufacturing, sales and distribution. It can be used for discrete, process or repetitive manufacturing.
6	Quality Management (QM)	The QM component extensively integrates with procurement, production, sales, and equipment maintenance processes. It can be used to manage complete internal or external audit’s business processes. It can also assist in finding root causes of a product’s failure to ensure ongoing quality improvements to a company’s business processes.

7	Plant Maintenance (PM)	The PM component monitors machines and functional locations (such as a chiller room or a boiler room) to make sure that they are in proper working order providing alerts when issues are detected to prevent machine failures and production disruptions. Business processes such as preventive maintenance, corrective maintenance and refurbishment maintenance are all covered in this module.
8	Customer Service (CS)	The CS component handles business processes related to a company providing maintenance services to customers' equipment.
9	Project System (PS)	PS is meant to manage large, complex projects such as setting up a new manufacturing plant or monitoring a plant's maintenance turnaround. All project-specific procurement or production through PS ensures that this component is able to allocate a project's costs correctly while remaining within the defined project's budget.
10	Human Capital Management (HCM)	HR is used for payroll, time management activities such as attendance and leaves, career development, travel and workplace safety.
11	Customer Relationship Management (CRM)	It focuses on sales and marketing, SAP customer experience solutions, customer data, marketing, commerce, sales, and service
12	Supplier Relationship Management	It covers procure-to-pay and collaborative service procurement
13	Product Lifecycle Management	It helps to manage a company's product lifecycle needs
14	Supply Chain Management	It focuses on business planning, logistics and order fulfillment with supply chain planning, supply chain logistics, manufacturing, and enterprise asset management

(Source: <http://www.sap.com/>)

SAP also provides state-of-the-art business technology platform for database and data management, application development and integration, Analytics and intelligent technologies for digital transformation, machine learning, Blockchain, Internet of Things, Cloud Computing, Big Data. You will study about these terms for better understanding in further Units.

We will now have a look at the business solutions offered by Microsoft.

8.9 BUSINESS SOLUTIONS FROM MICROSOFT

Microsoft Business Solutions offers integrated business applications. It creates applications and services for retailers, manufacturers, wholesale distributors, and service companies like the other two players covered in earlier Sections. The Microsoft product which provides integrated business solutions is known today as Microsoft Dynamics 365. With Dynamics 365, customers have the only portfolio of intelligent business applications that empowers everyone to deliver operational excellence and create more engaging customer experiences. Dynamics 365 applications can be easily connected with the systems and tools which are already in use by customers

to add and extend capabilities for the existing capabilities in order to accelerate the business growth with optimized operations connecting with every customer in more innovative way with mixed reality and Internet of Things (IoT).

MS Dynamics 365 has about 12 standard application modules which can be integrated as one software solution. Based on the requirements customers can select one, some, or all application modules for the business growth. The modules are Finance and Operations, Retail, Human Resource, Sales, Customer Service, Project Service Automation, Field Service, Marketing, Supply Chain Management, Artificial Intelligence(AI) for Sales/Customer Service/Market Insight, Mixed Reality for Remote Assistance and Layout, Business Central as ERP for SMBs i.e. for Small and Middle level Businesses. Apart it has eCommerce module for online shopping, marketing, and eCommerce activities. Microsoft itself uses the Customer Service module to manage the process of updating Windows operating systems and other software resources, provided by them, to the latest versions. Further, MS Dynamics eShop Sales Portal is fully-integrated with a simple user interface built for in-house sales representatives. With eShop, sales team is sufficiently equipped with all what they need to maximize sales and provide great customer order management. Table 8.3 gives you a global view of different application software modules of Microsoft Dynamics 365.

Table 8.3: Microsoft’s Integrated Applications

S. No.	Applications/ Modules	Description
1	Marketing	To create connected customer experiences, find and nurture new customers, stay on top of the market trends, strengthen relationships and earn loyalty, help with compliance requirements and protect customer data. Easily customize and connect with tools you already use. Personalize customer experiences with AI.
2	Sales	It can be used to find and build stronger relationship, improve productivity and performance, to get a single view of customers, explore e-books, videos, webinars etc.
3	Customer Service	To deliver positive customer experiences faster, optimize resources and help technicians to be more efficient, reduce operational costs, quickly address and resolve issues using AI-powered virtual agents, freeing agents to handle more complex matters. To deliver immediate access to the right content at the right time, collaborate, share tips, and leverage rich insights from experts and external users.
4.	Field Service	To ensure consistent and dependable operations by predicting, detecting, and resolving service issues before customers even know there’s a problem. To deliver exceptional onsite customer experiences while optimizing resources and costs by dispatching technicians when and where they’re needed most.
5.	Finance	To automate finance management processes to increase efficiency, decrease operational expenses and financial complexities, improve financial controls, and make timely decisions to drive agility and growth using comprehensive, real-time financial reporting, embedded analytics, and AI-driven insights, minimize costs and optimize spending across business geographies with process automation, budget control, and financial planning and analysis.

6	Supply Chain Management	To connect operations across small or medium-sized business, predict disruptions and respond fast by digitizing the supply chain, enhancing visibility, improving planning, and maximizing asset productivity.
7	Business Central	To ensure business continuity with a cloud solution that connects sales, service, finance, and operations teams to help them adapt faster and deliver results.
8	Project Operations	To connect project-centric business in one application, get the visibility, collaboration, and agility needed to drive success across project-centric business—from prospects to payments to profits.
9	Commerce	To unify physical and digital commerce, build brand loyalty through personal engagement, and exceed customer expectations.
10	Human Resources	To take the work out of managing the workforce, streamline and optimize processes, empower employees with skill development and set them up for success.
11	Manufacturing	To coordinate entire manufacturing process from product configuration, supply and capacity requirements planning, to scheduling and managing shop floor.
12	Retail Management	To run retail operations from point-of-sale to delivery, increase customer flow, speed up lines and tasks, control inventory, and automate purchasing.

(Source: <https://dynamics.microsoft.com/en-us/>)

So, you can see that there is a solution for virtually every thing that your business needs. For all type of business i.e. Small, Medium, or Large, integrated application solution is available worldwide with state-of-the-art technologies. It is up to the business houses to select the right solution for the respective requirements.

Activity B

Go to the websites of Oracle and SAP, list down five business advantages or competitive edge that their customers achieved after the implementation of their business solution.

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8.10 SUMMARY

Integration of business solutions has emerged as a basic requirement of business today. No one wants to wait for the information coming from various departments and then compile for further use. Technology available today is well capable of providing right information at the right time. It is up to the user to decide what they want. Right from IT infrastructure to integrated application software, everything is available with no hurdle of devoting much time towards change over from the previous practices. Integration of business solution has emerged as an important tool here. They connect your customers, suppliers, employees any time and all the

time from any where. Thus it works for your whole business and not just one department. The unit has tried to explain the concepts of integration and has highlighted the solutions, which are available in the market today.

8.11 UNIT END EXERCISES

1. What are the technology related challenges that are invisible to your organization? Highlight the pitfalls? How integrated software applications can help in this?
2. What are integrated software applications? Talk about their advantages and business utility.
3. Write notes on the business software solutions provided by
 - a. SAP
 - b. Oracle
 - c. Microsoft
4. Compare the Business solutions provided by Microsoft and SAP. Clearly highlight the features which are common between the two.
5. Compare the Business solutions provided by Oracle and SAP. Clearly highlight the features which are common between the two.

8.12 REFERENCE & SUGGESTED FURTHER READINGS

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