STUDY ON THE ERP IMPLEMENTATION METHODS ON SAP, ORACLE NetSuite, AND MICROSOFT DYNAMICS

by

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Dedication

Dedicated to my Master Choa, My mom, and my son, Vijjwal without whose support this would be impossible.

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ABSTRACT

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The research compares implementation methods, success factors, and barriers associated with three major ERP platforms: Microsoft Dynamics, SAP, and Oracle Netsuite. The research intends to assist various businesses in determining which ERP system is most suited to their needs in terms of corporate operations, system implementation governance, and user adoption strategy.

Secondary data included article and journal reviews concentrating on best and worst practices in ERP installation, with a comparative approach. The installation procedures for each platform, Sure Step for Microsoft Dynamics, ASAP for SAP, and SuiteSuccess for Oracle NetSuite, were also examined, including their influence on implementation time and amount of customisation, as well as project outcomes. The research demonstrates that Microsoft Dynamics is adaptable and enables both on-premises and cloud implementation, making it ideal for SMEs,

although it frequently encounters governance and scope challenges. SAP, on the other hand, thrives in complicated setups that require a high level of configuration; nevertheless, installation projects are typically resource-intensive and time-consuming, especially when there is a user resistance--a nightmare. Oracle NetSuite is simple to adopt via SuiteSuccess and ideal for businesses that want or need to develop rapidly; nevertheless, it can be stiff in other areas because it is not easily configurable to an enterprise's requirements.

User participation and change management strategies are recognized as essential success aspects that can ensure user acceptance and satisfaction, particularly when the organization has invested in systems such as SAP, which may necessitate user familiarity.

This study adds to the ERP literature by outlining important Microsoft Dynamics governance issue assumptions and providing novel viewpoints on multi-vendor ERP systems. The research also concludes that diverse platform strategies must align with corporate objectives in order to achieve long-term success with such selections. Future studies should look at the integration of AI and post-implementation performance to improve ERP solutions even further.

The findings provide practical advice for organizations and practitioners, with an emphasis on customized implementation tactics, governance frameworks, and ongoing user involvement to achieve effective ERP outcomes.

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CHAPTER I: INTRODUCTION

1.1 Introduction

ERP

Enterprise Resource Planning is referred to as ERP. As the name implies, enterprise resource planning (Ranjan, 2016). A business or organization with several departments, including those for manufacturing, sales and marketing, human resources, and accounting and finance, is called an enterprise. Businesses would find it difficult to run their operations when they expand globally and open up to clients from various nations. This is where ERP software comes into play, providing internal control to all internal departments and stakeholders and automating company operations (Dumitru, 2023). Management is assisted in making defensible judgments by a single database that aggregates all of the organization's data. The right ERP package for the customer's business will lead to more productivity, cost effectiveness, and faster growth.

Figure 1.1:

ERP Implementation Life Cycle. Image Source:erp-information.com

As businesses develop and expand in the global market, more and more are investing in enterprise resource planning and needing faster software to track and enhance them decision-making process. The several departments that make up a firm or organization might be manufacturing human resources, finance and accounting, sales and marketing, or marketing and accounting. As a business grows internationally and welcomes clients from other countries, its operational management skills become increasingly crucial (Archana et al., 2022). ERP software streamlines these procedures and offers internal control to all departments and stakeholders. A central database houses all of the company's information, enabling management to make deft choices (Ahmad, 2016). With the right ERP system for the client's business, faster growth, cheaper expenses, and more efficiency are all achievable. Through the use of a single interface, an ERP system unifies all of an organization's processes, enabling the convergence of formerly

distinct operations. Users may access data more easily because of the consolidated dashboard and features like improved data protection and access management (Elbahri et al., 2019).

The choice of ERP methodology accounts for 50% of all ERP implementation errors (Lutovac, 2012). Project management approach was first employed in the 1960s, when many businesses were searching for ways to bring project advantages to execution more quickly. Essentially, project execution is a process that shows the team how to achieve success while implementing the project. According to Vukovic et al. (2023) a methodology is a comprehensive strategy that outlines the procedures that must be taken in order to finish a certain project.

Figure 1.2:

Reasons for Failure of ERP. Image Source: jiwebtech.com

All of these processes are connected by an ERP system, which gives businesses the ability to consolidate several functions into a single platform (Bahssas, 2015). This makes data access for users easier with a unified dashboard, increased data security, and access control capabilities. The term "project management methodology" was first used in the 1960s, when a number of corporate organizations began searching for workable ways to facilitate businesses' realization of benefits in a separate and structured entity (later called a "project") (Darling, 2016). The team is able to select the most effective implementation path thanks to the methodology and basis for project execution. A methodology is a series of instructions that must be followed in order to do a given task. Fifty percent of ERP installation difficulties may be attributed to the choice of ERP methodology (Yilmaz, 2011).

ERP software is distinct in two respects from more focused categories of business software that vendors and industry analysts sometimes refer to as best-of-breed. The first is that modules must be able to communicate with one another and with their users in order to be interoperable. For example, the production module will interact with the CRM module to get a sales order, and the manufacturing department will get information about what to create. Revenue is recorded in the accounting module upon customer payment, and data in the inventory management module is updated upon product dispatch. Another feature that distinguishes ERP software is central database where modules store, access, and share transactional and other data.

Figure: 1.3

Benefits of ERP. Image source: Rajeev, 2020

Most ERP systems handle a few essential business processes that are common to all kinds of businesses and are either managed by independent modules or as extensions of other modules. Since processing and accounting for financial transactions is essential for any firm, the ERP Finance module is the only module included in all ERP packages (Wallace, 2001). It automates financial analytics, forecasting, reporting, basic accounting, and invoicing. ERP offers a number of benefits, most of which are related to information sharing and standardization. ERP modules provide data interchange more easily than independent or unconnected systems, which has the potential to ease the administration of cross-departmental business processes. They can also

enable data from more modern technologies, such as the Internet of Things, or data generated during routine transactions to be accessed by ERP systems.

SAP

It describes how to use a number of strategies to get consistent outcomes. With its robust and wide features, SAP is the dominant ERP system in the market (Sahni, 2021). It is used by large businesses from a variety of industries to handle intricate business procedures and significant transaction volumes. A wide range of business functions are covered by SAP modules, including supply chain, manufacturing, HR, finance, and CRM. Retail, healthcare, utility, and manufacturing demands are satisfied by customized bundles (Wulandari & Maulana, 2023). Businesses benefit from this accuracy in terms of efficiency and adherence to industry norms and regulations. SAP responds fast to the changing demands of businesses. Its architecture enables straightforward interaction with third-party apps and SAP modules, ensuring a consistent system throughout the enterprise.

Figure: 1.4

SAP ERP. Image source: Stallions Tech

For departmental data to be accurate and consistent, integration is essential. SAP ERP displays a company's success in real time through sophisticated analytics and reporting. These technologies analyze, forecast, and publish data to assist businesses in making wise decisions. Data processing and analysis are accelerated using SAP HANA, an in-memory database (Färber, 2012). Because of its global reach, SAP offers services and support anywhere in the world. To help organizations realize the full potential of SAP, a vast network of SAP consultants and partners offers implementation, training, and support. Research claims that several sectors have benefited from SAP's software and services (Laverty et al., 2022). SAP is a software provider that helps companies across more than 25 industries run efficiently by offering services and software

solutions. They can include SAP's techniques in their business application. The global enterprise resource planning market is anticipated to grow from its projected $45.91 billion in 2022 to $59.97 billion by 2027, according to Statistica. According to https://www.statista.com, the top three ERPs globally are SAP (19.3%), Oracle NetSuite (11.2% globally), and Microsoft Dynamics 365 (about 6.2%).

Oracle NetSuite

For both small and big enterprises, NetSuite is a cloud-based ERP system with a wide range of applications (Amini, 2020). Because NetSuite is cloud-based, it requires no on-premises hardware or infrastructure, which lowers IT expenses and speeds up installation (Orlow, 2018). A wide range of company functions are covered by the NetSuite integrated suite of software, including order management, inventory control, e-commerce, financial administration, and customer relationship management. Integration links all business processes and allows data to move freely throughout the company (Sharma & Kaushik, 2022).

Figure: 1.5

Oracle Netsuite. Image source: erpadvisorsgroup.com

NetSuite is well-liked because of its adaptability and simplicity. It enables system customization for businesses without requiring extensive coding. Suite Cloud enables third-party solution integration tools and application development to enable platform change. NetSuite is well-liked because of how easy it is to use. The system's widespread acceptance is accelerated by its ease of use. A benefit for SMEs without sizable IT staff is user-friendliness. NetSuite is cloud-based, so it deploys rapidly. Businesses don't have to install the system on-site; it may be launched rapidly. Businesses may grow and swiftly adjust to changes in the market because of this adaptability (Balodi et al., 2023). Managing multinational corporations with several subsidiaries and currencies is made easier using NetSuite. Businesses may manage their international operations more effectively with real-time global visibility.

Microsoft Dynamics

Microsoft Dynamics is an ERP program that communicates with Power BI, Office 365, Azure, and more platforms (Zadeh, 2020). Users may easily use their preferred tools and interfaces thanks to this connectivity. Microsoft Dynamics provides cloud and on-premises solutions to a number of sectors. Because it is a scalable and adaptable ERP solution, mid-market businesses choose it. The simplicity and versatility of Microsoft Dynamics contribute to its widespread use. The technology is very adaptable to business requirements. Among its numerous organizational benefits are financial, supply chain, human resources, and project management (Malik & Khan, 2021).

Figure: 1.6

Microsoft Dynamics. Image source: Akkomplish

One important advantage of Microsoft Dynamics is its scalability. The system can handle larger, more complicated data sets as the business expands. With Power BI, Dynamics offers robust

business analytics and BI solutions. Businesses may make decisions based on accurate and up-to-date information with the use of real-time data analysis. Multinational operations benefit from Microsoft Dynamics' multi-entity, multi-currency, and multi-language features. Because it offers resources to manage international business procedures, it is perfect for multinational corporations (Menon, 2019). For system setup, training, and maintenance, a large number of Microsoft partners and consultants offer their assistance. By doing this, businesses can be confident they're getting the most out of their Microsoft Dynamics investment.

1.2 Statement of the Problem

ERP systems are beneficial, but many businesses find the implementation process too complicated. Challenges include user acceptance, ERP system integration with corporate operations, data transfer accuracy, and managing organizational transformation (Mahmood, 2020). The method of implementation chosen can exacerbate these problems and decide whether the project succeeds or fails. Though a lot of research has been done on ERP deployments, there aren't many comparative studies between SAP, Oracle NetSuite, and Microsoft Dynamics—particularly with MS Dynamics. Enterprise resource planning (ERP) systems, such as SAP, Oracle NetSuite, and Microsoft Dynamics, may be very beneficial to organizations.
These systems consolidate data, streamline business processes, and enhance decision-making. However, using this technology presents enormous challenges for many businesses. ERP installations are complex because of a number of factors, including managing organizational change, ensuring user approval, and aligning ERP functionalities with specific business processes. One of the main challenges that still exists in the ERP platform's data migration

process is accuracy. This process involves migrating data from older systems, which often results in delays and inefficiencies.

Another critical problem is system integration, which requires ERP systems to be successfully integrated with contemporary technology and business procedures in order to ensure long-term success (Wijaya, 2021). Customizing the ERP system to fit a company's specific needs is more challenging and can lead to increased risks, excessive cost, and delayed project completion dates.

Despite the abundance of information available on ERP deployments, much of it is disproportionately focused on SAP and Oracle NetSuite, with Microsoft Dynamics receiving less attention in comparison studies. In instance, Microsoft Dynamics' Sure Step methodology, which provides a flexible and scalable approach to ERP deployment, has received less attention and comparison than SAP's ASAP or Oracle NetSuite's SuiteSuccess methodologies. This lack of study is concerning, given how critical it is to match the appropriate ERP system and approach to the organization's size, industry, and aspirations.

Complicating matters further is the fact that each ERP system has its own installation process; examples include Microsoft Dynamics' customizable Sure Step, SAP's organized, staged ASAP model, and Oracle NetSuite's quick implementation. Although each methodology handles ERP adoption difficulties in a unique way, there are few thorough comparison studies that assess the performance of each strategy across a wide range of organizational circumstances. These knowledge gaps impede businesses from making wise decisions when selecting and

implementing ERP systems, which might lead to project failures, increased expenses, and a misalignment with company goals.

1.3 Research Objectives

An in-depth analysis of the approaches taken by SAP, Oracle NetSuite, and Microsoft Dynamics ERP implementations are the main goal of this research.

1. To recognize the typical approaches used to integrate Oracle NetSuite, SAP, and Microsoft Dynamics.
2. To compare the advantages and disadvantages of these approaches in terms of what has worked for each.
3. To examine the specific difficulties that have arisen because of the implementation of Microsoft Dynamics.

1.4 Research Question

1. What are the key factors that influence the successful implementation of Microsoft Dynamics compared to SAP and Oracle NetSuite?
2. What are the common methodologies employed for implementing Microsoft Dynamics, SAP, and Oracle NetSuite?

3. How do the implementation methodologies for Microsoft Dynamics compare to those of SAP and Oracle NetSuite in terms of success factors?

1.5 Significance of Study

This study aims to fill the gap in the literature by comparing the implementation of enterprise resource planning approaches with a particular focus on Microsoft Dynamics. The research would be very helpful to organizations considering ERP systems as it would identify and evaluate the success factors and challenges associated with different ERP systems. Companies may utilize the data to lower risks, boost the possibility that the installation will succeed, and assist them in making decisions about their ERP initiatives. This work will contribute to the body of information already accessible in academia on ERP systems and implementation techniques, as well as provide a foundation for future research in the field.

While a great deal of research has been done on ERP systems, there aren't many comparison studies that specifically evaluate Oracle NetSuite, SAP (ASAP), and Microsoft Dynamics implementation processes. This study addresses the need for a thorough comparison, concentrating on Microsoft Dynamics in particular—a topic that is sometimes disregarded. By doing so, it fills a significant study vacuum in the implementation of ERP methodologies and gives new insights into the distinct merits, downsides, and uses of each strategy.

The success of the project depends on choosing the appropriate system and implementation strategy because ERP installations are challenging, expensive, and resource intensive. This research offers valuable insights to assist enterprises wishing to implement ERP systems in

selecting the best approach based on their size, sector, and operational requirements. Businesses will be able to make informed judgments since it offers a detailed comparison of every stage of each technique, including planning, design, testing, and implementation. Mismatches between business processes and ERP functions, as well as inadequate project management, continue to be blamed for the high failure rates of ERP implementations. By highlighting important success characteristics and typical implementation obstacles, this study helps to raise the success rates of ERPs across a variety of sectors. Through adherence to best practices and problem-solving techniques, firms may lower their risk of delays and overspending on ERP implementations.

This paper contributes to the subject of enterprise systems research by providing a comprehensive comparative analysis of the leading ERP systems and their methodologies. More research on user acceptability, scalability, and customisation in cloud and hybrid ERP systems may be conducted on it, which makes it an invaluable tool for future researchers looking into ERP installations. As cloud ERP systems spread, this study will examine the benefits and drawbacks of the cloud, especially as they relate to Microsoft Dynamics' cloud-first solutions and Oracle NetSuite's SuiteSuccess. The biggest gainers from this would be companies switching from traditional on-premises systems to cloud or hybrid models, as they will provide them with the skills and resources they need to manage the transition smoothly.

CHAPTER II:

REVIEW OF LITERATURE

2.1 Introduction to ERP Systems

Complex organizational structures, resources that need to be controlled and managed, integrated internal and external partner processes, and a vast amount of data and information that must always be available are all features of modern businesses (Hobday, 2000). To meet all of the above objectives, ERP solutions are required. Materials Requirements Planning (MRP) and other production-related information systems made it easier to construct complete software solutions in the 1970s (Klaus, 2000). These methods helped with the planning and management of resources that were exclusively related to production. These methods helped with the planning and management of resources that were exclusively related to production. It became feasible to plan for the use of all the resources needed for production, including financial and human resources in addition to material in the form of semi-finished goods and raw materials, with the advent of MRPII (Manufacturing Requirements Planning) information systems in the 1980s (Marques, 2012). Due to the company's integration of all activities and support of all internal business processes, The usage of integrated information systems (ERP - Enterprise Resource Planning) increased significantly in the early 1990s.

Since the foundation of ERP 1.0 was expanded with software programs like Supply Chain Management (SCM), Customer Relationship Management (CRM), etc. in the 2000s, the development of this generation of ERP predominantly relied on Service Oriented Architecture (SOA). Thanks to cloud technology, ERP systems have been possible to move from local

(on-premises) to the cloud since 2010. Currently, they are offered as Software as a Service (SaaS). The ERP system's cloud migration is being fueled by a multitude of causes. It was specifically not meant for users to adopt or use ERP 1.0 systems. According to almost 75% of business leaders, their ERP systems don't even close to meeting their long-term objectives, much alone

their present demands (Cusumano, 2024). Due to its 2.1x ROI, 91% lower energy use, and 55% lower pricing, cloud ERP is becoming more and more popular than on-premises ERP (Oracle, 2016).

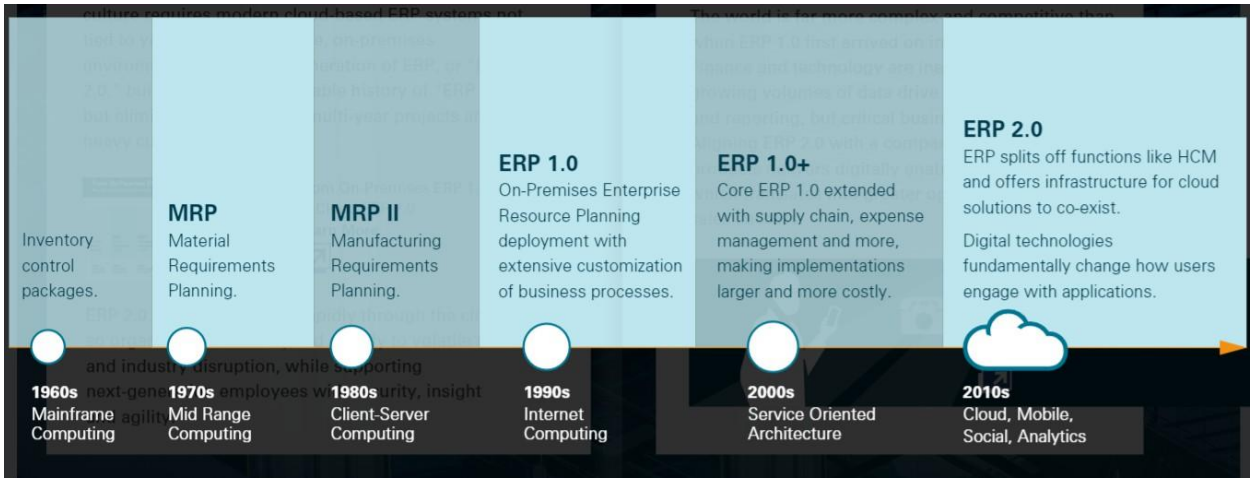

Figure: 2.1

Evolution of the ERP system. Image source: Oracle, 2016.

Cloud computing and cloud-based business practices are becoming commonplace in commercial operations globally. With cloud ERP, customers subscribe to software services provided by service providers and use an online enterprise resource planning (ERP) system, often housed in data centers. Because of its 2.1x ROI, 91% lower energy consumption, and 55% lower pricing,

Cloud ERP has grown in popularity over on-premises ERP (Oracle, 2016). Businesses are leaving outdated ERP systems in greater numbers due to the need for real-time data insights to be
competitive in the market; nowadays, they have a wide range of options when it comes to ERP systems (Haddara, GŸthesen, & Langseth, 2021).

All ERP systems have the characteristic of integrating data and processes inside the organization, regardless of categorization. For example, the sales sector's ERP system only keeps a customer's name, address, preferred payment method, and other information once they register. When the consumer puts further product orders, the ERP system will provide this information. Additionally, all of the customers' orders are contained in their order history, which is useful for other sectors including sales (for analysis of previous sales and prospective sales), financial accounting (for payment history and credibility), and marketing (for advertising and market analysis). All of the procedures inside the ERP system are interrelated, though. When a product is delivered to a customer, the value of the product in stock in the financial accounting system and the inventory level in the inventory management system both drop. When the customer pays for the goods, the client's account is lowered, and the company's account balance is increased (Adelsberger, Khatami, & Khatami, 2017). According to research, ERP systems are categorized into tiers based on a number of factors, such as the functional complexity of the system, the size of the business, the revenue of the ERP system supplier, and the target user base (Vukovic, 2023).

Enterprise resource planning (ERP) systems are critical to today's firms because of their ability to combine supply chain management, finance, and human resources into a single system. SAP,

Oracle NetSuite and Microsoft Dynamics are well-known as leading ERP providers due to their extensive range of products catering to different business types and sectors (Archana, 2022). These systems are more efficient, however there are major implementation-related issues due to their complexity. When adopting ERP solutions, many firms encounter delays, overspending, or complete collapses because of inadequate planning or the wrong methodological choice. Therefore, in order to ensure effective implementations, it is imperative that one understands the implementation techniques connected with these platforms. The process of implementing enterprise resource planning (ERP) software and ensuring that your team is maximizing technology is known as ERP installation. There are three primary steps to the procedure:

- installing software on-site or by utilizing a SaaS provider. Businesses frequently go to vendors or implementation partners with knowledge of certain use cases, ERP, or vertical industries for assistance.
- moving information to the new ERP from your old system or systems.
- introducing the new program to the financial staff. During this phase, you can incorporate knowledge transfer from staff members who have already used the system or formal instruction from your implementation partner.

Success rates for ERP implementations are increasing due to more automation, more adaptable configuration choices, user-friendly interfaces, and a focus on mobility. Actually, ease of use is The most important consideration is when customers are choosing a provider for financial apps. One of the greatest methods to ensure success is to assemble a strong implementation team that includes leaders from every area in your company, such as operations, sales, and accounting.

Verify that the ERP you select can easily interface with both your major partners' and your other financial systems. Additionally, you should confirm that you can get up and run in a fair length of time—ideally, no more than 90 days. Finally, ensure that finance rules and procedures are in order to maximize the benefits of the new system.

ERP systems have the ability to revolutionize businesses and support their growth, but successful ERP deployments share a few traits. The first is staff adoption and morale, which requires building buy-in by showcasing how end users will directly benefit from the ERP. Offering dashboards and solutions that are tailored to each company makes this easier; one practical way to accomplish this is by enlisting the help of a third-party partner to help with customized implementation. Reasonable scheduling expectations, together with effective planning and implementation execution, are also essential.

There are several phases in a project life cycle, which go through several developmental stages. It is a logical sequence of steps that results in the project delivery. The project management process has five distinct phases, namely project initiation, planning, execution, monitoring, and closure.

The PMBOK states that although project managers concentrate on the requirements of the project, they have no influence on the project's final result. It might take months or years, depending on the requirements of the project. After being allocated to the project, the stakeholders concentrate on the task breakdown structure since they lack the resources to grasp the project's overall needs or vision. The project managers see the requirements and cost

estimates but fail to see the project requirement, which requires a lot of analysis and time (Grisales & Lopez, 2011).

The process of incremental elaboration must be used to define the project requirements. To start, the organization's components that are anticipated to undergo change are identified by defining the project scope at a high level. The team's next task is to expand the scope declaration by looking into the unspoken demands, or business requirements. Now, the team can finally go to work and use a technical approach to find solutions that satisfy the project's needs. Though the concept might seem simple, the truth is that 71% of projects fail miserably or encounter difficulties of some kind; this means they go over budget, take longer than expected, or provide fewer features and capabilities than the client had hoped for (Standish Group, 2004).

Project teams struggle to create exact requirement statements when they lack the resources necessary to adequately include stakeholders throughout the requirements development process. Regretfully, a lot of project management teams lack the knowledge and experience necessary to effectively include all pertinent stakeholders in joint meetings where everyone may clearly state what they need from the project. As a result, the project manager or a small group of team members document the demands of the stakeholders on such initiatives. These demands are then communicated throughout the company to attain alignment and buy-in. Rework can be costly if unfulfilled or misinterpreted requirements are found later in the project life cycle or after implementation.

Requirements definition activity is enhanced when sales team and project team meetings include cooperative meetings and group management techniques led by an unbiased facilitator, that is, someone who isn't invested in the project's success. Attending these facilitated sessions allows everyone who needs to be involved in the project to participate in the requirement-building and decision-making processes (Hyväri, 2006).

If there is to be any possibility of success at these meetings, they must all be thoroughly prepared before they start. The project management team and facilitator can plan by setting objectives, delineating the tasks to be accomplished, and selecting the approaches to be used in order to meet the project requirements. The facilitator uses collaborative tactics to acquire information, confirm its accuracy, and make necessary revisions as the meeting goes on in order to satisfy the project needs. Following a guided meeting, every decision and output produced is subsequently endorsed and owned by every participant.

Overcoming obstacles may be an aspect of putting an ERP into practice. Finding the right supplier and getting workers on board with the change are two of the most frequently brought up ERP problems. If an ERP system isn't a suitable fit for your company, it won't be installed well. It's recommended by various advisers to compare five different ERP companies before choosing one. When choosing a vendor, consider a number of factors such as the vendor's experience with comparable verticals, product or service types, and sizes; their capacity to provide a practical demonstration; their familiarity with relevant tax laws and regulations; and their guarantee of continuous operations for a minimum of five years. Teams may object to the ERP transition if you don't show them why the new system will benefit them. Prior to beginning

implementation, describe how ERP will streamline each team's everyday tasks and ensure that sufficient time is allotted for training along the route to aid in acclimating them to the new system.

ERP implementations might not be successful if risk is not sufficiently handled. Stated Differently, project managers need to plan, but first they need to identify possible roadblocks. For example, a monumental failure in the implementation of a global distributor led to considerable shipment delays and lost revenue. It turns out that the company was having trouble integrating the new subsidiary's operations with its own since it had just acquired another company, which created issues with operations even before the implementation began. To reduce that risk, firm leadership must have identified and handled those operational issues prior to the ERP deployment. The ERP implementation methodology incorporates the processes and procedures that make up the framework or approaches used to deploy ERP projects. The most well-known ERP methodologies have been developed by the major worldwide ERP systems, such as Oracle Financials, PeopleSoft, and Systems, Applications, and Products (SAPs) (Anand, 2007).

2.2 ERP Implementation Frameworks

Common Implementation Models

Implementing enterprise resource planning (ERP) is a complex and dynamic process that calls for a fusion of organizational relationships and technological advancements. It frequently constitutes the largest IT project a company has ever worked on and necessitates system and organizational fit. ERP assistance for business operations across several departments within a company is a dynamic process that depends on a number of variables rather than a generic, inflexible, and consistent approach. As a result, issues with the ERP implementation process

have emerged as a major industry concern. Consequently, the ERP installation process receives a lot of attention from academics and practitioners in scholarly or industry publications. However, ERP system research has been dominated so far by issues about diffusion, utilization, and effect.

Figure: 2.2

ERP System. Image source: Mirnah, 2022

The techniques/methodologies used in the configuration and implementation of ERP systems have received less attention; although being commonly used in practice, they are still largely undocumented in the field of information systems research.

- Waterfall Model: This is a classic linear project management methodology in which all phases (requirements collecting, design, development, testing, and implementation) must

be finished before going on to the subsequent one. The best projects for waterfall development are those whose needs are known from the start and are unlikely to alter. When it comes to ERP, the waterfall approach is frequently applied to big, complicated projects where careful planning up front is essential (Mukwasi et al., 2018; Stepanov, 2021).

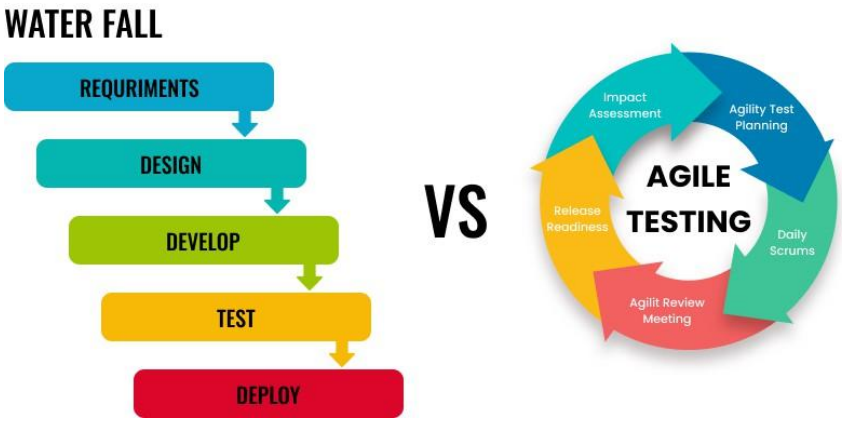

Figure: 2.3

Waterfall vs Agile. Image source: softqubes.com

- Agile Model: Agile is an iterative, more adaptable technique that places an emphasis on cooperation, incremental progress, and adaptation. Agile ERP systems divide the project into manageable sprints, allowing for continuous conception, creation, and testing of the system's components. When demands alter or a faster implementation is needed, like with cloud-based ERP solutions, agile is very beneficial (Nagpal et al., 2015). Agile is being used in ERP deployments more and more to meet the demands of rapid change and business process customization.

Implementation Strategies:

Big Bang: With this approach, the ERP system is simultaneously implemented across all departments and functions. This method is faster, but there's a higher risk of failure because one mistake may bring down the entire business. Smaller businesses or those looking for a quick system update may find it suitable. However, failures of the Big Bang approach, such as the Hershey ERP implementational the late 1990s, show the perils of implementing quickly without conducting adequate testing (Motiwalla, 2009; Fetouh, 2011).

This strategy, which is also called the "single-step method," involves transferring all users to the new system simultaneously. By the go-live date, you must have finished all of the new system's configuration, testing, and training. The upside is that you get to experience the benefits of ERP right away, like increased productivity, improved insights, and reduced operational expenses. But once the system is in place, it's difficult to go back, so doing things right is essential. Any mistake or malfunction, no matter how little, can have an effect on clients, staff, and business associates. A brief decline in production as staff members get used to the new system is another possibility.

Phased: Using the phased approach, the ERP system is gradually installed, often department by department or module by module. This reduces the danger and allows for ongoing testing and adjustment. The phased approach is more suited for larger companies or those with complex operational structures since it provides greater control over the implementation process (Khanna, 2012; Monk & Wagner, 2013).

The distribution of features, tools, and components is carried out over a longer time frame—weeks or months—in a staggered rollout. Compared to the big-bang technique, this more measured approach may carry less danger. Additionally, it allows the business to prioritize "quick wins" and carry over the lessons learned from the first implementation phases into later stages. Phased rollout comprises three main methodologies. Businesses may turn on one ERP module, work out any bugs and process problems, and then move on to another. Deploying by business unit, such as operations or HR, and then proceeding according to needs is an additional choice. The third strategy divides the implementation geographically, allowing for system testing and refinement at one site before expanding to additional offices, factories, or facilities. Nevertheless, gradual implementation has disadvantages: Gaining the full benefits of the new ERP takes longer, and your business will have to pay for and maintain both the old and new systems concurrently.

Parallel Adoption

Using this approach, the company continues to use its previous systems concurrently with the new ERP for a certain amount of time. Because redundancy inherently provides safety, especially when it comes to safeguarding essential services that must always be performed, this strategy is typically seen as the least dangerous. This method also helps people accept technology gradually. However, because it takes more staff time and money to maintain two systems operating concurrently, parallel adoption can be a costly strategy. However, adopting in parallel is not without danger; inputting data twice into two distinct systems increases the likelihood of mistakes.

Hybrid

This method incorporates aspects of the previously mentioned tactics, as its name suggests. For instance, a firm may employ a big-bang approach to turn on basic ERP modules before gradually rolling out other modules to certain departments or locations.

2.3 ERP Implementation Methodologies

SAP Methodology

There are two structured methods for implementing SAP: the traditional approach and the structured method. The ASAP methodology has lately replaced the conventional technique known as the "SAP procedure model" methodology. However, an antiquated SAP approach is still in use today due to its versatility in producing enormous profits of over a trillion dollars for the company. The SAP Procedure Model has the following stages:

- conceptual and organizational design.
- system customisation and detail design.
- Production setup.
- assistance with production.

Accelerated SAP (ASAP) is a standard methodology used for system installation and SAP project preparation. By using this SAP implementation strategy, one may effectively reduce time, money, and quality while also accelerating the SAP ERP implementation process. There are seven key phases in the SAP implementation process.

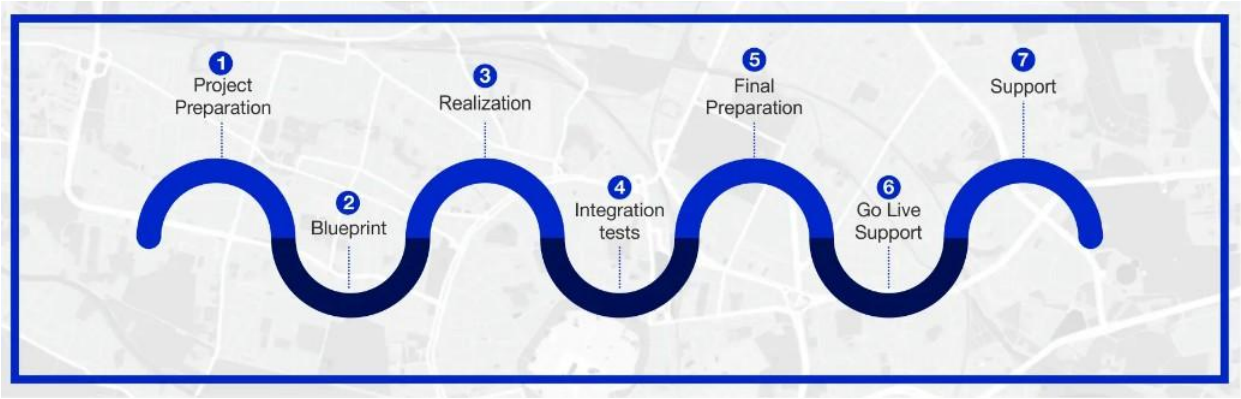

Figure: 2.4

Phases of SAP Implementation. Image source: Cloud4C, 2021

Phase 1: Project Preparation

It includes developing the entire project after considering all aspects, which may be tough given the vast landscape. As a result, selecting one of the leading SAP installation companies, or SAP MSPs, is critical. They may provide several types of support in establishing the most efficient SAP plan. After you've picked up your techniques and tools, identify which operations need to be changed or transferred to SAP. System research, project and resource planning, and other essential activities have been performed as of now. To ensure company continuity, plan for no downtime during the SAP ERP implementation process.

Phase 2: Business Blueprint

Before adopting the ERP strategy, it is critical to properly understand and describe future business operations. There will always be inconsistencies or holes in business practices in the past, present, and future. The establishment of a blueprint document can help to close these gaps and ensure smooth SAP project planning. During these meetings, the SAP implementation

partner will look for any gaps and optimize both present and future SAP procedures. This phase also includes the identification of additional factors, such as the organizational structure and satellites. The essential facts that must be adjusted for the SAP implementation succeed and the SAP or ERP software to work are part of the organizational structure changes.

Phase 3: Realization/Implementation

After the gap analysis is finished, the SAP implementation partner will configure the baseline system, also referred to as the baseline configuration. The ERP implementation project plan will close any gaps in the business design and optimize the system to satisfy all process and business requirements in order to guarantee smooth SAP deployment. At this point, the SAP implementation team also makes any necessary adjustments. In this phase, systems that have lain inactive will be converted, and any necessary modifications will be made to connect the present infrastructure with the ERP deployment methods.

Phase 4: Integration Tests

Parallel to the implementation and migration, testing will begin. To measure how effectively the installation is progressing and to ensure that the SAP systems are providing results, the ERP implementation phases will begin executing many tests. There are numerous options for the integration phase. Only half of the current method can be tested and migrated as part of the initial setup. Testing a single process once it has been established on the SAP landscape is another configuration option. The entire technique and workload are tested at the conclusion.

Phase 5: Preparation

The last step of preparation includes the actions required to make your team and systems ready for go-live. Based on the results of the realization and testing stages, an implementation approach will make any changes required for a complete migration to SAP systems. Employees will be trained in how to utilize SAP and ERP software for everyday duties. This phase serves as a pre-check to ensure that everything is fully prepared before going live.

Phase 6: Go-live

During this stage, all data is transferred to SAP systems in the production environment, and the pre-production environment is replaced with the live environment. Following the transfer of all data to the new SAP systems, the old ones are no longer in use. The project managers will oversee the implementation of new apps, data transfer, and frequent testing to ensure that everything works properly. SAP systems are performance tuned and regularly monitored. During this phase, the production support system configuration and implementation project plan are finished.

Phase 7: Production/GO Live Support

This phase includes establishing a specialist support staff and transferring from the installation team to the support team, which can continually monitor and resolve any production difficulties. When required, the support team will help users and root users in becoming used to SAP systems and applications. Support documentation is generated and updated to ensure smooth operations.

A full redesign of the present system, functionality, and business processes is required for this strategy. The analysis of the As-Is and To-Will need a large amount of time. Consensus is the

cornerstone of decision-making, which occurs very slowly and requires time to achieve. This technique has the following drawbacks:

- Because this is a study of existing functionality, an SAP implementation based on the SAP process model is typically a mirror of the present implementation. To put it otherwise, it is cautioned against realizing the significant added value that would come from using an ERP system.
- The company's installation acts as the basis for the present business procedures.
- The firm does not use SAP best practices.
- The lengthy implementation duration is due to regularly extended periods of analysis and conceptual design.

Costs are reduced by using the ASAP technique, which significantly quickens implementation and completes the project plan's time limit. While the traditional method takes years, the ASAP implementation methodology may be implemented in as little as a year. Project implementation may be managed in a tried-and-true, complete, all-inclusive, and practical possible manner with the help of the ASAP approach. Installation, upgrades, strategic research, and other tasks are handled ASAP. Among the main tools that support the technique are SAP solution manager, SAP solution composer, and SAP roadmap composer. During the 2011 deployment, when SAP software was assessed, over 30% of the projects were found to have failed because of insufficient project planning. Conversely, less than 10 percent of the initiatives were deemed unsuccessful for technological grounds.

Many tools, models, examples, and reference facilities that provide a comprehensive structural development of all professions that follow resource acquisition, respectively, increase implementation speed (Yilmaz & Ozcan, 2011). A comprehensive set of tools is provided to aid each ASAP operation. The materials contained in the ASAP packages address needs, problems, and current issues while also providing continuous education. Using the ASAP approach reduces the overall cost of the project and boosts the project's chances of achieving its deadline while supporting tools and features during the SAP ERP implementation stage. The job produced is of high quality, yet the risk of failure is low.

Oracle NetSuite Implementation Methodology

NetSuite implementation refers to the process of implementing and modifying a company's NetSuite ERP system. Planning and preparation, configuration and data transfer, testing, and training is frequently included in the overall implementation plan for your NetSuite launch date. Working with consultants, you will create business requirements, tailor the application, migrate data, link it to other systems, educate users, execute tests, and ensure a smooth live.

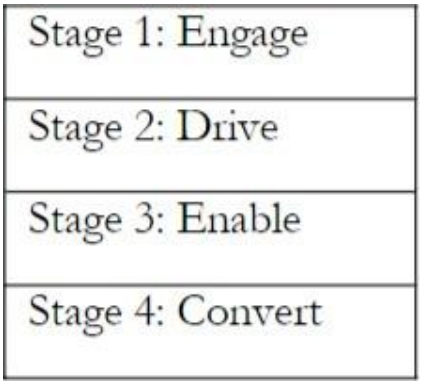

Figure: 2.5

Stages of implementation. Source: Archana, 2022.

The duration and difficulty of implementation varies every firm, but careful planning, teamwork, and post-implementation support are required for success. Administrators collaborate with the NetSuite team to oversee the initial implementation of the NetSuite application. NetSuite installation refers to the process of changing NetSuite software for your firm. It's a difficult process that might take months to finish. Among the implementation tasks include:

- Account Setup
- Security and Authentication Setup
- Users, Roles, and Permissions Setup
- System Integrations
- Data Migrations
- Customizations
- Sandbox Management

The engagement phase with the customer aims to set expectations and provide a framework for effective implementation. The tipping point A framework of effectively established expectations and trust is created between the client and the implementation team, with a stronger emphasis on customer interaction. The goal of this session is to guide the customer through the setup requirements and initial tour of NetSuite, according to the methods for Oracle Net Suite's second phase, DRIVE. The milestone customer is conversant with NetSuite's foundations and configuration requirements. The Enable Stage connects the client with the delivery team. The client will lead this session, which means they will show their company's operations to the delivery team. During this session, the client is required to verify that they are comfortable with and understand the Net Suite application. The Convert stage's purpose, according to Oracle Net Suite's procedures for the last and fourth stages, is to validate business readiness, inspire trust, and offer client system ownership.

Appropriate planning is vital for a successful NetSuite ERP setup. In this regard, an essay is analogous to a NetSuite implementation project. Spending more time planning and studying will reduce the amount of time required to write and revise. Implementing Oracle ERP Cloud is a crucial undertaking that may lead to increased productivity, improved business procedures, and sharper decision-making abilities. A successful NetSuite implementation requires competent project manager. Before any ERP implementation begins, a project leader should be identified. Depending on the size of the firm, someone may end up working full-time on NetSuite implementation. It is advised that you choose a team leader with great project management abilities. This person will need to be able to respond quickly to difficulties and aid in keeping

NetSuite partners informed us of any internal changes on time. Take into mind the recommended measures to ensure a successful Oracle ERP Cloud setup:

- Initiate: Launch the project, go over the deliverables, and schedule the implementation.
- Analyze: Determine the mapping of business needs and develop an implementation strategy.
- Configure: Set up and instruct ERP to arrange data integration and process flows.
- Deploy: Prepare the system and users for the live environment.
- Optimize: Examine, Arrange, and Implement Upgrades to Address Future Requirements

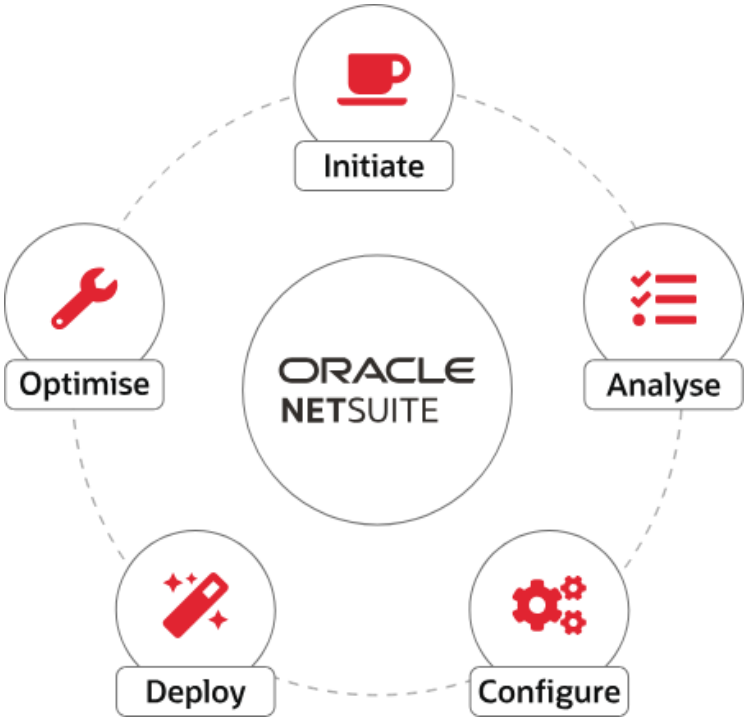

Figure: 2.6

Oracle NetSuite methodology. abvt.com

Every business has distinct needs and budgetary limits. As a result, a provider must give tailored estimates and pricing structures based on the demands of each company. A NetSuite setup normally requires a firm to invest between 50 and 150 hours to properly examine its requirements. This is a comprehensive, step-by-step guide for installation. Some organizations, for example, are very young and will not require a data migration. While some businesses may just require the additional features that NetSuite has already built for a certain industry, others may require technical modifications that necessitate the use of unique code. One of NetSuite's most notable benefits is that all of its clients utilize the same version. In contrast to the bulk of ERP software, no further connectors will be required over time. As a result, it is vital to prepare ahead of time with your NetSuite installation partner so that they can share their expertise and assist guarantee the implementation runs as smoothly as possible. If you introduce more or different NetSuite features than you had planned, your go-live date will be delayed.

- Formal Introduction: Talk with your partner about the project's overall scope and its high-level goals.
- Create a team: To assist the NetSuite partner throughout this process, the organization will choose a dedicated group of people.
- First Configuration: Schedule many work sessions for the NetSuite deployment. Draw a diagram of every potential company scenario and find out how NetSuite best practices (distribution, finance, CRM, and so on) would represent the needs.
- Data migration gets underway: The moment that NetSuite starts consuming corporate data, data migration starts.

- The committed group picks NetSuite: The specialist personnel learn NetSuite and discusses any holes in the process as they observe new developments.
- Configuration: Partner starts to apply NetSuite modifications.
- Data migration complete: Every piece of information from the old system has been moved over to NetSuite.
- Test Case: Devoted users start assessing the system's ERP capabilities.

NetSuite's rapid cloud implementation method is based on a preconfigured, sector-specific solution that provides a speedy time to value. It is designed to decrease risk and simplify project management via the use of integrated templates and best practices. Implementing NetSuite ERP (Enterprise Resource Planning) is difficult. To execute it successfully, you will need to devote a large amount of time and resources.

Microsoft Dynamics Implementation Methodology

A comprehensive and scalable approach called Microsoft Dynamics Sure Step was created to assist businesses in streamlining and improving the execution of their Dynamics projects. When deploying Dynamics 365 Business Central, Dynamics 365 Sales, or any other Dynamics product, the Sure Step method could help you succeed. The Sure Step methodology is a step-by-step approach that addresses every facet of a typical Dynamics installation project, from project conception to implementation and beyond. It may be customized to meet the unique requirements of any size or complexity of organization because of its scalability and adaptability.

Figure: 2.7

Microsoft Dynamics Implementation Methodology. Image source: erpsoftwareblog.com

- Diagnostic Phase: This phase comprises identifying the key players, evaluating the current systems, and outlining the requirements for the business. The goals are to have a thorough understanding of the organization's current state and identify the areas that require improvement.
- Analysis Phase: In this phase, the solution design is created, and the business requirements are examined. The analysis phase includes developing a project plan, defining roles and responsibilities, and estimating project costs.

- Design Phase: In this phase, the functional requirements are documented, and the solution is developed. This stage also includes developing a test plan, outlining the training requirements, and figuring out any customisation needs.
- Phase of Development: This phase involves creating the adjustments and building the solution. When the testing plan is completed, the solution is checked against the business requirements.
- Phase of implementation: During this phase, data migration, solution installation, and the final user acceptance test are all done. The training plan is executed, and the final implementation is complete.
- Operation Phase: During this phase, the solution is continuously improved, maintained, and supported.

Various approaches are available to ensure the smooth implementation of Microsoft Dynamics 365.

- The Waterfall Approach: This project management paradigm walks projects through phases including analysis, design, development, implementation, and maintenance, beginning with an idea and going step-by-step.
- Agile Framework: Agile serves as a general phrase that encompasses a variety of tactics, rather than a stand-alone methodology. XP, DSDM, Scrum, and the Sure Step for Agile adapted for business applications are a few notable examples.
- Scrum Strategy: Based on agile principles, Scrum works best in settings where requirements are fluid or unclear. Every sprint, which lasts thirty days on average, covers phases one through user review and analysis. Consider the process as a cycle that begins

with a product backlog, progresses through a 30-day sprint, and ends with working software pieces.

- Hybrid Approach: Based on agile principles, this strategy combines the finest aspects. It begins with identifying and ranking needs by corporate procedures, and then a draft design blueprint is created. The next sprints, which might have different durations, concentrate on developing, testing, and obtaining user input in addition to fine-tuning designs.

2.4 ERP Implementation Success Factors

Establishing key success factors (CSFs) for an ERP installation is common; yet, despite a large body of research on CSFs, ERP implementations remain more widespread than effective (Colmenares, 2004). According to Finney (2007), CSFs for ERP projects are defined as references to any element or condition that was deemed necessary for the ERP's proper deployment. It is viewed as a set of duties that need careful consideration and continual attention in order to create and maintain an ERP system. CSFs are very useful since they provide specific information and guidance on where to invest additional care, resources, and continuing attention when planning an ERP project that will be effectively executed.

However, there is much dispute over the universality of CSFs. According to some academics, CSFs are reusable, omnipresent, and relevant in every situation (Borman, 2013). Another researcher, Mahraz (2020), claims that CSFs vary based on the organization, industry, and management being studied, making it hard to establish a generic compilation of CSFs that can be applied to all ERP systems.

Order	CSF Des cription	Frequency
1	Top Management Support	33
2	Project Management	29
3	Training and Education	28
4	BPR management	27
5	Project Team composition/Team Work	27
6	Effective Communication	26
7	Change management	26
8	Business plan and vision	22
9	ERP Choices	19
10	Technical implementation/IT infrastructure	19
11	Project champion	15
12	Legacy systems consideration	14

Figure: 2.8

Ranking of CSF according to their appearance frequency. Source: Mahraz, 2020

ERP adoption is becoming more challenging, needing careful consideration from all stakeholders, especially during deployment. Many studies have been undertaken on the challenges of implementing ERP systems within businesses. Most research has focused on critical success aspects. It dominates ERP literature and is primarily focused on identifying and assessing every factor that determines project success. Because it needs awareness of numerous elements, identifying CSFs for an ERP installation is difficult to follow a logical list.

ERP systems have standard procedures, but modifications may be necessary to tailor the system to specific company requirements. However, excessive personalization can lead to complexity, cost overruns, and compatibility issues with future improvements. Finding the right balance between personalizing and exploiting out-of-the-box capabilities is challenging (Maddalena et al., 2023). A scalable ERP system can grow with organization, allowing for more users, data,

and features. According to the survey, scalability is critical for businesses operating in rapidly changing markets or with long-term growth objectives.

2.5 Choosing Implementation Process

An on-premises ERP system and a cloud-based system differ greatly, notably in terms of the capacity to customize the system to meet the needs of the organization. Cloud ERP system suppliers are focusing on various elements, including system architecture. As a result, businesses must make difficult decisions about which vendors to hire and why. Many different vendors, from large, well-known corporations to smaller, lesser-known ones—are developing their own ERP software. The bulk of providers have included cloud implementation support into their present systems, while some are focusing primarily on it in forthcoming versions. Then There are organizations that have always used cloud-based technologies. When deciding on an implementation strategy, various factors must be considered.

Function	Before ERP	After ERP
Accounting	Manual data entry, prone to errors	Automated processes, increased accuracy
Inventory Management	Disconnected stock systems	Real-time inventory tracking
Order Processing	Slow, manual paperwork	Streamlined digital workflows
Human Resources	Inefficient employee data management	Centralized employee databases
Purchase Orders	Delayed approval processes	Automated approval workflows

Figure: 2.9

Functions of ERP for different organizations. Image source: John, (n.d)

One of the most significant benefits of cloud ERP systems is the cheap cost of login. Industries lack the funds to acquire and maintain costly instruments, equipment, or forms of guarantees with adequate substructure to sustain the group of processes. They merely detect and retrieve software requests from clients, allowing a hosting firm to deliver and manage the process service. Additionally, cloud ERP systems require less IT support and maintenance (Gagnon, 2011; Purohit, 2012). Because the hosting firm maintains the physical tools, industries do not have to worry about testing and commissioning the organization on a regular basis or ensuring that every piece of equipment is in active use. Cloud ERP systems identify the applications offered as network services, the database hardware and software methodologies, and the

information centers that supply and manage such services. The three principal services presented are software as a service (SaaS), infrastructure as a service (IaaS), and platform as a service (PaaS). Clients or sellers just pay for the workstation infrastructure in the IaaS model. PaaS means that the seller hosts the organizational frameworks, software design tools, and infrastructure. The stage's ability to continue employing the hosted substructure to create Web developer apps. The type of software as a service (SaaS) and how the client pays for software hosted by the provider.

Certain aspects are internal, while some are external, such as rigid procedures. Some examples of external influences are as follows:

- A tender request for a public sector procurement information system. A functional specification for the future information system is contained in the tender. The functional specification defines a list of all the functionalities necessary for future ERP system implementation. When it comes to developing functional requirements, the possible consulting business is unaware of the elements (both basic and complicated) that are integrated into the logic of a certain ERP system.
- All popular ERP systems (such as SAP or Oracle Financials) already have the localization feature built in. Localization is the process of compiling the protocols and reports that the state has required. The central management of an ERP system does not decide to build the localization for a specific business process or report that is required for a company's current condition if it is not financially authorized, for the same reasons (a limited number of customers, the industry line, etc.).

- The information system needs to adjust due to continuous changes in business practices brought about by outside market pressures. For instance, say in the case of company X, sales of product A, which generated 65% of income, stopped; nevertheless, there was a specialized market for the sale of product B, which was created by repurposing the A product. In this specific case, it was necessary to implement new business operations in the production module and for the transfer of goods under an operating system. But changes induced by the market are often unpredictable. If businesses want to stay competitive, they must follow business procedures and incorporate them into the information system.

There may be the following internal components present:

- Senior management that is unresponsive and uninterested in the company is a hallmark of regressive corporate practices. If senior management is against changes in company operations, there is a good chance that the implementation will fail for a variety of reasons (profit is still a huge risk; if anything changes, there is no motivation to participate).
- The project team has no motivation to work on it. Employee unhappiness with current working conditions sometimes keeps them from wanting to devote additional time to assisting a company in implementing ERP systems.

Certain variables that have been identified—like chaotic market conditions—cannot be avoided, and neither the customer nor the consulting firm can control them. The practical advice is that the

company, and the management specifically, should identify the root causes of the problem and take action to eliminate or drastically minimize them. That would lead to the effective implementation of an ERP system. To optimize it and thereby improve business operations, However, the organization's forward-thinking management must exert a substantial influence on execution.

2.6 Comparison of Methods

The ways in which the different suppliers furnish their ERP systems differ. As a result, choosing a provider mostly depends on the company's goals.

Many businesses employ a 3-tier design, which separates the client, application, and database. This is because many instances of a tier may be installed to improve capacity or messages may be queued, which should make simultaneous users and transactions simpler.

SAP has three-tier architecture and is based on their own database model. Additionally, this idea is a major component of almost all of their commercial goods. Their main goals are to speed up the system and minimize data transfer. Oracle placed a high priority on product flexibility, Therefore, the system is made up of a number of small modules that may be combined to increase capacity. Additionally, they depend on their well-proven database technique. They employ a WebLogic Server to provide communication between the applications, the database, and the middleware. NetSuite is the most cloud-focused ERP solution since it has always been cloud based. They worked very hard to enable international companies to have different setups and systems in subsidiaries and other countries. They do this by using a two-tier architecture where the client connects directly to the infrastructure and database, enabling it to connect directly to the enterprise's main ERP system.

	SAP	Oracle	Microsoft Dynamics
store Part	19%	13%	16%
Short-list Rate	38%	18%	31%
Collection Rate When Short Recorded	38%	22%	22%
Application Period	23.1 months	24.5 months	23.6 months
Total Price of Ownership	$2.09 million	$2.38 million	$2.06 million
Reimbursement Period	30 months	29 months	12 months
Disruption at Go-live	44%	42%	41%
Realized 50%+ of Anticipated Business Benefits	34%	21%	26%

Figure: 2.10

Comparison of SAP vs. Oracle vs. Microsoft Dynamics. Image source: Elbahri, 2019.

Microsoft continues to expand upon the foundation technology it acquired from the business that once owned Dynamics AX, formerly known as Axapta. This technique consists of several levels that developers may use to store modifications and customizations. This method increases the customers' options and makes it simple to add and delete modifications from the system. With an emphasis on making the system quicker and simpler to use, Microsoft recently announced a new version of the ERP system that is exclusively hosted on the cloud for the first time. To improve scalability, they have modified a few features and combined a few others rather than adding many new ones. It's important to note that Microsoft is the only provider of these systems to specifically state that they are delivering an IaaS solution that will increase customer opportunities while simultaneously increasing customer obligations. Every other system is a Software as a Service (SaaS) offering that provides the user with nearly a ready-to-use solution

along with customization options. Which ERP product from Microsoft, SAP, or Oracle is better depends on many important aspects, including:

- Current IT setup, including systems and infrastructure.
- The particular sector in which the company works.
- Particular needs for an ERP system.
- Long-term strategic goals and strategies.
- Present requirements for operations.
- The amount of money and resources you're willing to devote to.

Table: 2.1

ERP and its features.

ERP Software	**Origin**	**Key Features**	**Strengths**
SAP ERP	Germany	Comprehensive suite of business applications and data management tools	Robust functionality, scalability, and integration capabilities
Oracle NetSuite ERP Cloud	USA	Modules, including financial management, supply chain, human capital management, and customer experience, Applications, including	Flexible implementation options, advanced analytics, industry-specific capabilities, Modular architecture, real-time visibility, and

		financial management, inventory management, order management, and e-commerce	customization capabilities
Microsoft Dynamics 365	USA	Modules including finance, supply chain management, sales, marketing, and customer service	Intelligent insights, automation capabilities, cross-functional collaboration features

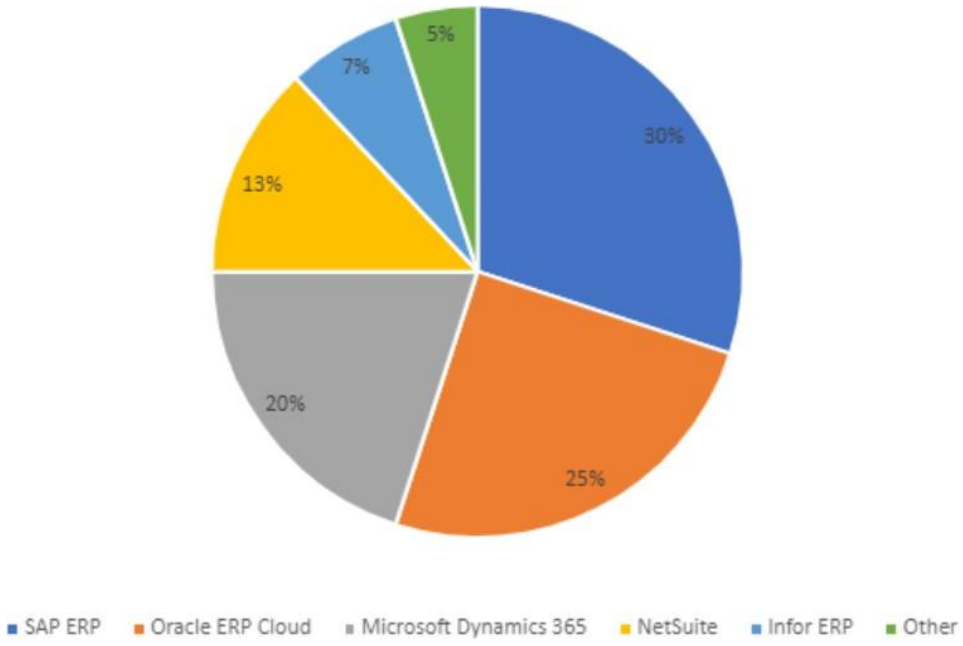

Figure 2.11:

Comparison of top ERP softwares. Image source:

The decision to select SAP, Oracle, or Microsoft Dynamics should be based on the long-term objectives, financial constraints, and unique requirements of the firm. SAP is more expensive and sophisticated, but it performs exceptionally well in integration and is perfect for large, complex businesses. Oracle might be expensive, but it provides scalability and end-of-end solutions. Although Microsoft Dynamics is easy to use and integrates well with current Microsoft ecosystems, it might not be comprehensive enough for larger enterprises.

2.7 Case Studies of ERP Implementations

SAP implementation

Nestlé (Success): In order to facilitate a seamless and unhindered shift towards a more dynamic, dependable, and expandable infrastructure, Nestlé opted for the RISE with SAP solution. This Comprehensive package comprises enterprise resource planning software, industry best practices, and outcome-driven services that assist businesses in leveraging cloud computing for their vital, core systems. Nestlé is now able to automate business processes throughout its operations, develop cutting-edge business models at a global scale, and achieve better agility and resilience thanks to its global cloud transformation. The successful worldwide SAP implementation at Nestlé serves as a testament to the value of careful preparation and capable leadership. In order to standardize procedures throughout its international operations, Nestlé started a phased ERP installation. The initiative was successful because the corporation made significant investments in staff training and changing management. The staged strategy ensured minimum business disruptions by allowing for continual testing and enhancements (Bradford, 2015).

Tata

TCS, an acronym for Tata Consultancy Services, is frequently used. The business is a well-known worldwide suppliers of outsourcing, consulting, and information technology services. Over 40 nations are engaged in the operations. New product creation, system integration, data center management, and IT and strategic consulting are among the specialties. The organization is renowned for providing stable employment and a congenial work atmosphere. The business used SAP for a number of years.

Amazon using SAP

Amazon uses an ERP software called SAP (Systems Analysis and Program Development). SAP was created in Germany in 1972 by five former IBM employees who envisioned real-time software integration of all business and data processing. It's regarded as the best ERP software for advanced analytics using AI and machine learning

Stand-out SAP features

SAP features include:

- Financial management
- Human resources management (SAP SuccessFactors)
- Supply chain management
- Customer relationship management (SAP C/4HANA)
- Analytics and reporting (SAP Analytics Cloud)
- Manufacturing and production planning
- Project and portfolio management
- Database and data management

- Enterprise asset management
- Research and development/engineering:
- Procurement and networks
- Enterprise performance management
- Internet of Things (IoT) and digital supply chain

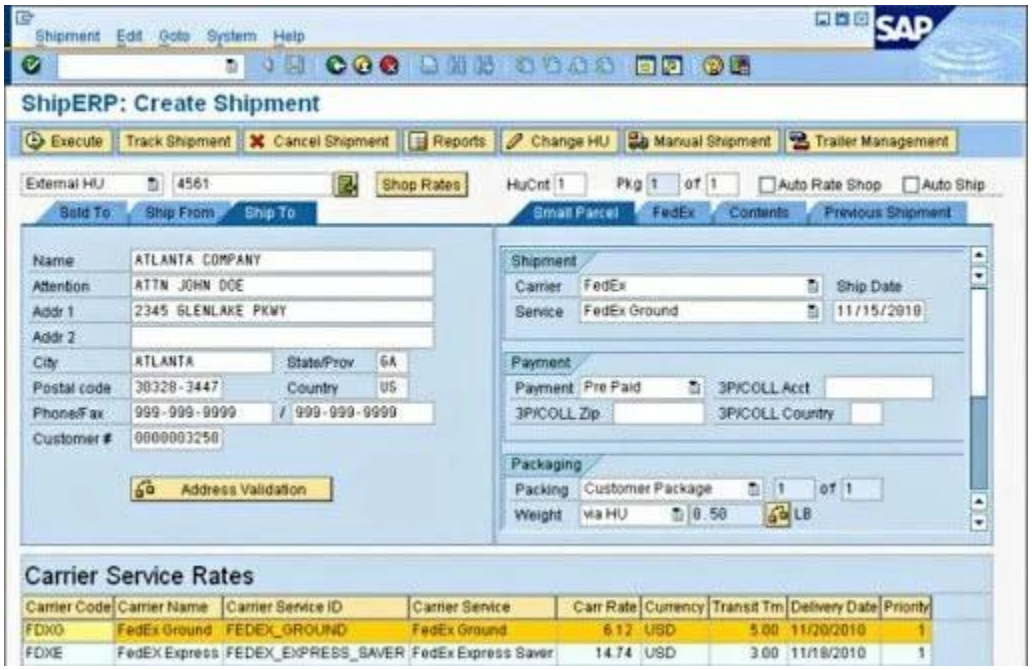

Figure: 2.12

SAP implementation for the shipment. Image source: peoplemanagingpeople.com

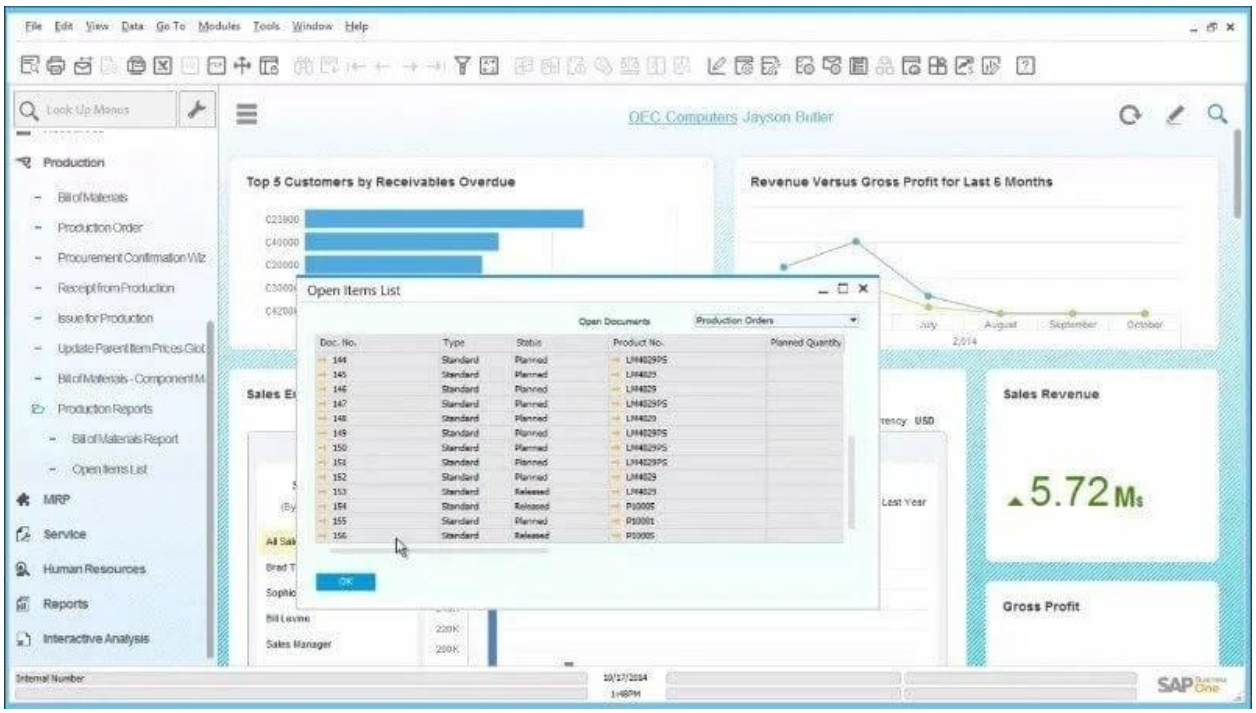

Figure: 2.13

SAP ERP interface. Image source: peoplemanagingpeople.com

Smaller ERP solutions, such as SAP Business One and SAP Business by Design, can cost between $10,000 and $250,000 per year for software licensing (Kim, 2024). Implementing SAP B1 or SAP Business by Design can cost between $50,000 and $500,000 (Kim, 2024).

Lidl (Failure):

Lidl launched what was intended to be a revolutionary project in 2011. The German discount store assembled hundreds of outside experts and thousands of employees to assist in the implementation of an enterprise resource planning (ERP) system. Over the course of the seven-year initiative, SAP even named Lidl as one of their top clients in 2017. But bye

2018, the chain had lost about 500 million euros, or $580 million USD, in total due to the Lidl ERP system and SAP implementation failure.

The Lidl ERP system breakdown was ultimately caused by a number of problems. Lidl refused to modify any of its internal procedures to conform to the recommended practices of the ERP provider. Rather, Lidl made the decision to alter the ERP program. The enormous needs gap meant that any attempt to close it would be the end of this misguided enterprise. The main reason for the project's late completion was the excessive number of adaptations that were needed. This is just one more reason why it's advisable to use the best practices that the majority of contemporary ERP systems offer rather than undergoing substantial changes.

Oracle NetSuite implementation

Fulton & Roark (Success)

One retailer of men's grooming items that has successfully used ERP is Fulton & Roark. The North Carolina-based company used a spreadsheet to manage its inventory and Sage Live desktop accounting software to track its financial data before upgrading to a full-featured ERP. The company's leadership believed its existing procedures weren't keeping up as revenues started to double annually. Spreadsheets were unable to take into account fluctuating inventory costs, and the accounting software lacked the procedures required to enter the crucial financial statistic known as the cost of goods sold (COGS). The Fulton & Roark team thus performed duplicate data input by hand. Team members claim that after a three-week implementation phase, changes happened right away. The Fulton & Roark team completed their ERP implementations in around 20 days. The company's narrative also highlights one of the key success factors: persuading

management to support ERP implementation. In this instance, the initiative was started by the co-founders, which experts claim frequently encourages staff acceptance.

Dubai business (Failure)

Oracle NetSuite is a comprehensive set of cloud-based apps that improve productivity, simplify corporate procedures, and offer real-time data. On a single platform, it assists companies in managing their finances, operations, and customer interactions. Despite its powerful capabilities, serious operational interruptions might result from poor implementation or from not having a reliable backup plan. The incorrect NetSuite implementation caused a catastrophic system breakdown for the Dubai-based company. They risked possible income loss, everyday activities were suspended, and their financial data was exposed. To put it succinctly, they had no idea what to do and desperately required a NetSuite disaster recovery strategy to organize their business.

Starbucks - Oracle ERP

Starbucks uses Oracle ERP, a cloud-based software solution used to automate back-office processes and day-to-day business activities. It's a business management software suite that includes financial management, supply chain management, project management, accounting, and procurement. It's regarded as being the best ERP software system for end-to-end analytics.

Oracle ERP features include:

- Financial management
- Procurement
- Project management

- Risk management and compliance
- Supply chain management
- Enterprise performance management
- Human capital management
- Customer Relationship Management (CRM)
- Analytics and business intelligence
- Asset management
- Order management
- Manufacturing management

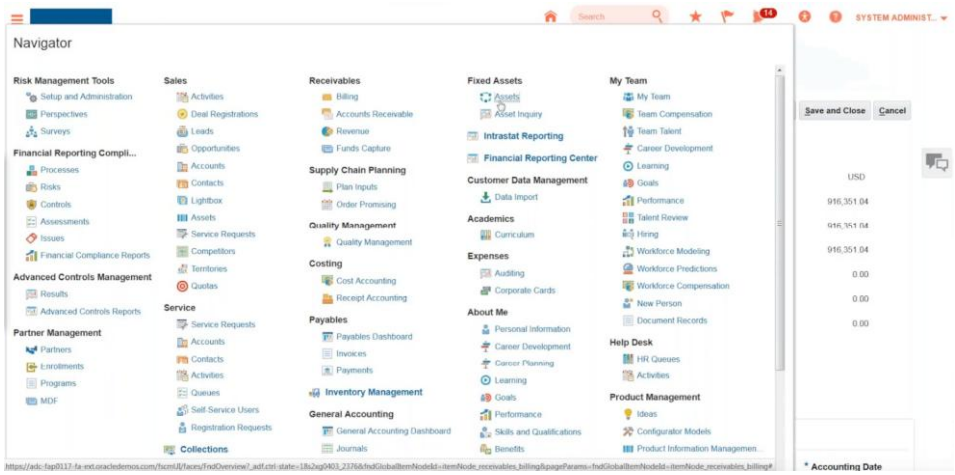

Figure: 2.14

Oracle ERP allows the user to view all areas of a business on one screen and includes identifying information. Image source: peoplemanagingpeople.com

Oracle's Enterprise Resource Planning (ERP) Cloud solution will cost $625 per month or $7,500 annually as of December 2023. Even though you only need five, the purchase requires a

minimum of 10 people. Monthly fees for financial reporting compliance begin at $175 per user. An extra $80 is added to each user's monthly cost for additional financial controls. The monthly cost of access restrictions is $150 more for each user. This translates to an annual base cost of $75,000 (Kim, 2024).

Problems to Avoid in NetSuite Implementation

- Fear of Change: A common fear among certain employees is changing, and they would much rather carry out their daily tasks in the same manner. Many firms have this common NetSuite implementation issue, but there are a few simple measures that can help resolve it. Building awareness and enthusiasm about the impending changes may be achieved by including key personnel in the process and providing thorough training.
- Budget Overruns: This NetSuite installation issue stems from an uncontrolled project scope extension beyond its originally defined boundaries and goals. It means adding features, specifications, or changes to the project that weren't originally intended. Expanding the project's scope beyond what was originally planned might lead to delays, increased implementation costs, and challenges in efficiently allocating project resources.
- Inadequate Professional Resources: Proper ERP system implementation takes time. You will need a team, if not at least one person, with NetSuite expertise, depending on the size and complexity of your firm. Think about filling critical jobs with backfills so process owners may concentrate on implementation rather than day-to-day work.
- Selecting the Wrong Installation Partner: A lot of consulting firms make the false claim that they are ERP installation specialists. You'll need a partner that is knowledgeable in Suite Billing and the Contract Renewals SuiteApp if your business uses SaaS.

- User-Side Functional Gaps: In spite of careful preparation, NetSuite implementation may be compromised by a lack of user comprehension. Staff members might find it
  It is difficult to get used to the new system if they are unfamiliar with NetSuite's features and workflows. This may lead to mistakes, a decline in productivity, and ultimately aversion to using the platform.

Microsoft Dynamics implementation

Trek Bicycles (Success)

Trek redesigned its internal processes to use Microsoft Dynamics CRM to combine sales and customer data. More scalability, decreased development costs, better customer experience, and more cooperation and efficiency were the outcomes of the implementation. The company chose the cloud version of Dynamics CRM because of its current investment in Microsoft Office productivity products and its SQL Server-based business intelligence stack. Trek was able to tailor modules to suit its unique requirements because of the system's scalability and flexibility, which were credited with the project's success. Additionally, improved data flow and communication were achieved through seamless connections with other Microsoft applications, including Office 365.

Toyota - Microsoft Dynamics 365

Toyota Industries Corporation is Toyota’s head company. It wanted to expand its reach globally to offer high-quality services like improved operational management accuracy, a paperless system, reduction of work hours, and an increase in overall efficiency. So, Toyota chose

Microsoft Dynamics 365 for the job. Dynamics helps manage the after-sales service skills and operations for distributors offering services to their products to customers all over the world.

Stand-out Microsoft Dynamics 365 features

- Sales
- Customer service
- Field service
- Marketing
- Finance
- Supply chain management
- Human resources
- Commerce
- Project operations
- Analytics and AI.

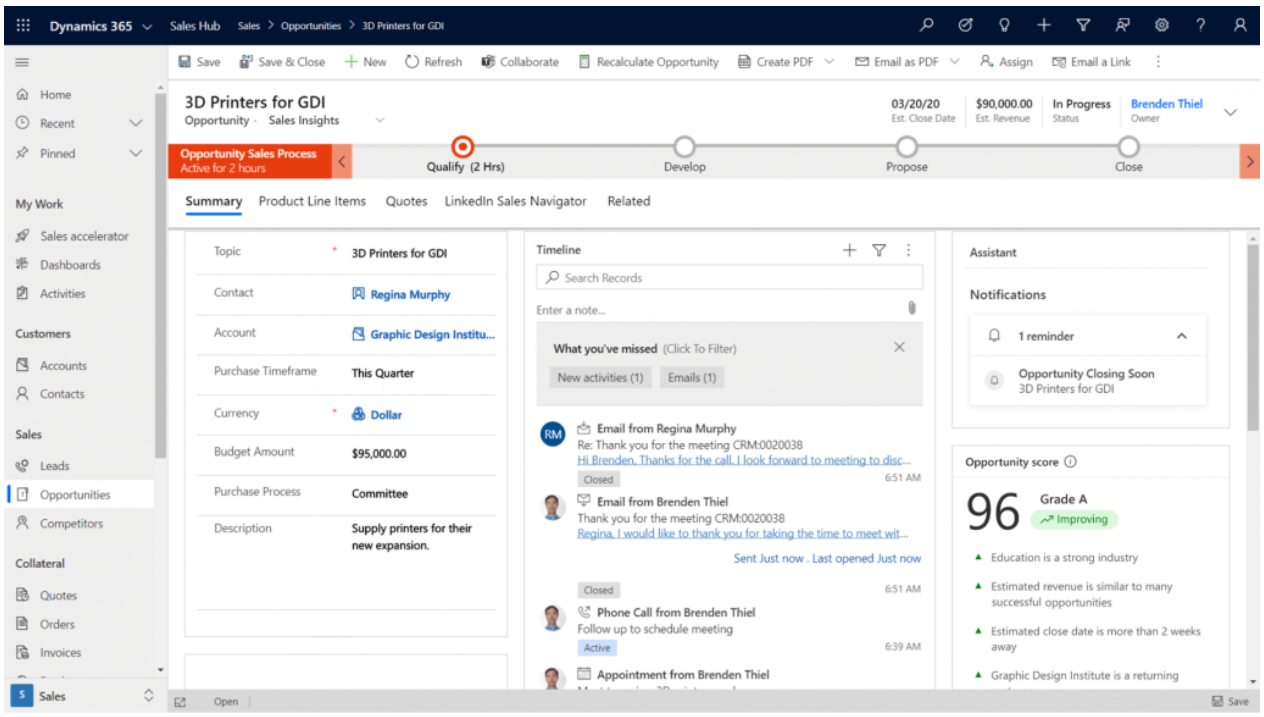

Figure: 2.15

Dynamics ERP provides a user dashboard to view multiple areas of business at once. Image source: peoplemanagingpeople.com

The cost of Microsoft Dynamics 365 varies based on the service. Sales Professional: The first license is $65 per user per month, and each subsequent license costs $20 per month. Sales Enterprise: The first license is $95 per user per month, and each subsequent license costs $20 per month. Customer Service Professional: Basic customer service features cost $50 per person each month. Customer Service Enterprise: Advanced customer service costs $95 per user each month. Customer Insights: Each tenant pays $1,500 a month (Microsoft Dynamics 365).

CHAPTER III:

METHODOLOGY

3.1 Research Design

Three popular ERP systems will be compared and evaluated in this study using a comparative analysis approach: Microsoft Dynamics Sure Step, SAP's ASAP, and Oracle NetSuite's SuiteSuccess. A qualitative research technique called comparative analysis compares several components methodically in order to find similarities, contrasts, strengths, and shortcomings. Comparing the distinct stages of each implementation technique, including planning, design, development, testing, implementation, and post-implementation assistance, is the aim of this study in order to determine which is more appropriate for whatever organizational environment.

A comparison analysis makes it possible to systematically assess any ERP approach using a set of uniform standards. This procedure ensures that the benefits and drawbacks of each implementation method are identified and compared, providing accurate insights into which strategies are best suitable for various business types (Rose, 1991; McNabb, 2015). By focusing on standardized phases that are shared by all methodologies (planning, design, etc.), this strategy enables for an unbiased assessment of how each methodology solves significant concerns like user acceptability and customization (Yin, 2018).

By comparison, this research can determine the best techniques for ERP deployment. For instance, by contrasting Oracle NetSuite's and SAP's ASAP methodologies, one may ascertain which strategy provides better means of mitigating disruptions throughout the changeover phase.

Comparative studies of ERP deployments have shown that careful evaluation may be able to determine which strategies are more effective in different business environments (Karakanian, 2000). ERP installation outcomes might vary depending on a number of factors, including industry, IT infrastructure, and organizational size. Various firms deal with differing degrees of complexity. Which approach is more suited for small-to-medium-sized businesses (SMEs) as opposed to large corporations may be determined through a comparative study. For instance, Microsoft Dynamics Sure Step could offer a stronger foundation for companies needing substantial customisation and hybrid implementations, whereas Oracle NetSuite's SuiteSuccess might shine in cloud-based quick installations (Shehab et al., 2004).

When filling up gaps in the literature, comparative analysis is very helpful. For example, Microsoft Dynamics ERP has received less attention than SAP and Oracle. By addressing this gap, giving a fairer assessment of the three systems, and giving enterprises greater clarity on which ERP approach best suits their requirements, the comparative framework of this study will advance academic knowledge (Madapusi & D'Souza, 2012). We emphasize that today's environment requires ERP, but not necessarily the tactics for its implementation. If the customer prioritizes migration as a success element, it is advisable to provide a plan rather than a specific ERP. This issue is not mentioned in any research, and no study has been conducted in this area. The project's failure is determined by a variety of factors, but implementation tactics play a vital part in the project's success or failure; nevertheless, this area will require further research with primary data in the future.

3.2 Sources of Secondary Data

SAP, Oracle NetSuite, and Microsoft Dynamics ERP implementations require several accurate and relevant secondary data sources. This category will include peer-reviewed journal articles and research papers on ERP applications, from case studies to theoretical frameworks. Reputable consulting firms and researchers provide ERP market trends, installation success indicators, and system comparisons. These papers will provide strategic and practical advice. ERP implementation case studies from other companies will also be relevant. A comprehensive literature review of SAP, Oracle NetSuite, and Microsoft Dynamics methodology, success factors, hurdles, and comparative evaluations requires access to JSTOR, IEEE Xplore, and Google Scholar. The study needs a comparative analysis of ERP adoption methods, and these sources give details.

- Scholarly Journals: Academic research will give a solid foundation for understanding ERP theory and the technical aspects of implementation strategies.
- Vendor paperwork: Extensive documentation from SAP, Microsoft, and Oracle NetSuite will be scrutinized to ascertain the exact phases of execution and the regulations that oversee each organization's methodology.
- Case Studies: Thorough case studies of companies that have implemented ERP systems effectively and unsuccessfully are necessary to identify lessons learned and offer helpful insights into the practical application of ERP methodology in the real world.

3.3 Data analysis

The installation strategies, success factors, and difficulties for Oracle NetSuite, SAP, and Microsoft Dynamics ERP will be examined in this study. As you begin the inquiry, learn as much as you can about the implementation methods used for each system. The responsibilities of

suppliers and consultants, together with the implementation phases, methodologies, and tools, are addressed. Following strategy identification, a comparison of ERP systems will be conducted to discover commonalities and variances. We will examine implementation, customization, integration, and scalability to establish each system's implementation process. This comparison examines how various strategies affect ERP implementation success. The analysis must assess each system’s ERP implementation success factors. The study catalogs and compares success variables to identify the most important. This study will use current research and case studies to evaluate each ERP system’s methodology. Documentation and analysis of MS Dynamics, SAP, and Oracle NetSuite ERP implementation difficulties will also occur. Data migration issues, organizational unwillingness to change, inadequate training, difficult integration, and budget overruns are all potential impediments. Compare issues to find similarities and variables that affect implementation success or failure.

This approach makes it possible to pinpoint the methods' differences and similarities. For instance, Microsoft Dynamics Sure Step offers flexibility based on organizational needs, whereas SAP ASAP is renowned for its organized, multi-phase strategy; Oracle NetSuite's SuiteSuccess stresses speedy cloud implementation with pre-configured solutions (Holland & Light, 1999). Certain techniques are better suited for certain organizational settings (e.g., small companies versus large organizations, cloud vs. on-premises solutions) and will be highlighted by the analysis.

3.4 Scope and Limitations

The goal of this study is to compare Oracle NetSuite, SAP, and Microsoft Dynamics ERP implementation processes. We’ll focus on ERP system implementation phases, tools, strategies,

and roles to identify what makes them successful or unsuccessful. The study will use secondary data from scholarly articles, corporate reports, books, conference proceedings, and internet databases to gain insights. The study will prioritize new and relevant sources to stay current on ERP installation trends and practices. Microsoft Dynamics will be the main ERP system analysed to determine its installation process.

However, studying has several limitations. Case studies and industry reports may be biased towards the authors or organizations; ERP implementation perspectives, which could affect secondary data. Depending on the ERP system and source, secondary data may be scarce or unreliable. This constraint may reduce analysis compared to primary research. Since organizational size, industrial sector, geographic location, and special business requirements vary, the results may not apply to every company or industry. These issues impact ERP systems differently. Time constraints in gathering and reviewing vast secondary data sources may prevent a full comparison.

The diversity of organizational environments in which ERP systems are used is another drawback. An approach that is effective for a huge organization, for instance, might not be appropriate for a small or medium-sized business (SME). The research will use a comparative analysis of case studies to try and explain these variances, although its results might not hold true for all situations. When translating the findings to real-world settings, contextual elements including industry, organizational size, IT infrastructure, and preparation need to be taken into account (Madapusi & D'Souza, 2012).

CHAPTER IV:

RESULTS

The results of a study on SAP, Oracle NetSuite, and Microsoft Dynamics implementation techniques are presented in the dissertation's results section. Three popular ERP systems are examined in this study: Microsoft Dynamics, SAP, and Oracle NetSuite. The study concentrates on their implementation strategies and how they affect efficiency, user happiness, project risk management, and typical dangers. All three well-known, respected brands—Oracle NetSuite, SAP Business One, and Microsoft Dynamics 365 Business Central—offer Software as a Service (SaaS), which is unquestionably an extra benefit for any business in the modern world. However, selecting the biggest, most potent, and most general solutions available on the market frequently has disadvantages, just like any software project. A less focused and committed approach to implementation and maintenance combined with a less specialized software design industry might spell tragedy. The results are consistent with previous research that highlights the significance of user training and executive assistance as essential success elements in all three systems (Archana et al., 2022; Elbahri et al., 2019). This study does, however, show that Microsoft Dynamics' methodology could provide a more flexible foundation for businesses going through a lot of change.

4.1 Research Question One: Success Factors Contributing to Successful ERP Implementation

Common criteria for both successful and unsuccessful implementations are included in the literature. Momoh et al. (2010) identified nine crucial elements that are crucial to the failure of

ERP implementation: excessive customization, the challenge of internal integration, a lack of change management, a poor understanding of the implications and requirements for business, a misalignment of IT with business, hidden costs, insufficient training, and a lack of support from top management. Failures in implementation are not unusual. This is a result of widespread misunderstandings regarding ERPs, but it is preventable if one takes into account the lessons that may be drawn from previous mistakes. Less than 10% of ERP implementations are successful, according to other research, suggesting that ERP implementations are more likely to fail than succeed and that the chance of failure increases with the size of the ERP project (Svensson, 2021).

Distributors and manufacturers participated in a 2019 poll; just 2% of firms classify their ERP initiatives as "not very successful," whereas about two thirds (67%) of them view their ERP installation as either "highly successful" or "successful." (Tajammul, 2024). Businesses that implemented ERP systems with great success attributed their success to internal organizational components like management support, effective change management programs, and thorough due diligence. Just 12% of respondents were asked what went wrong during installation mentioned the software's low quality. Poor business process reengineering and poor testing were the two main issues identified during deployment. 49% of businesses claimed that all business operations have improved after using ERP. Just 5% of businesses claimed they didn't enhance their operational procedures. Midsize businesses with $100 million to $250 million in revenue had the quickest ERP installations, taking only 6.7 months, according to a survey on the topic. Very big businesses with annual revenue of over $25 billion took the longest, at 12.35 months (Tajammul, 2024).

If an ERP is implemented early, on plan, or on time, the vast majority of organizations—80%—achieve a return on investment (ROI). But only 9% of businesses say They've seen a return on investment since putting ERP in place. Eighty percent of firms claim that the consolidated data infrastructure provided by ERP facilitates productive cooperation on novel applications. Roughly 38 percent of companies think ERP improves their ability to adjust to shifting client needs. ERP makes it possible for 75% of businesses to connect with customers in real time. Moreover, data integration is one of the key advantages of ERP investments (74%). supplying a smooth experience and raising data quality with improved datasets (73%). 72% of customers have an omnichannel experience across many devices (Tajammul, 2024).

In terms of implementation, 10% of respondents said they needed little customization, 33% said they required some customization, and 37% said they required extensive customization. Among the organizations that implemented ERP, 49% went online within the authorized period, 13% went live earlier than anticipated, 27% went live a bit later than planned, and 11% failed to go live within the allotted time. The main cause of organizations' implementation budget overruns was an expansion of the original project scope. Experts in the industry state that manufacturing organizations are the ones who use ERP software the most (21%), followed by banking, financial services, and insurance companies (16%), and telecommunications companies (13%). It is anticipated that over 55% of retail organizations would choose to implement hybrid ERP systems. In terms of satisfaction, 31.6% of decision-makers and members of the project team say they are very happy with their ERP systems. Nonetheless, 21.1% express unhappiness with the ERP systems they now use. Approximately 50% of the businesses questioned in 2020 said they

were either improving their current ERP systems or preparing to adopt new ones (Tajammul, 2024).

Of the firms using ERP systems, 53.1% have used cloud-based ERP solutions. While the remaining businesses still depend on systems that are located on-site. Additionally, of those who utilize cloud computing, 46% choose private cloud solutions, and 12% think about public cloud possibilities. Regarding cloud deployment, hosted ERP systems are preferred by the majority (76.5%). However, the Software as a Service (SaaS) approach is preferred by 23.5%. On the

On the other hand, businesses that use on-premises ERP solutions usually host them internally. 80% of

The situations, the remaining 20% choosing external infrastructure. What's interesting is that 53% of businesses include ERP adoption as a key element of their larger digital business transformation programs (Tajammul, 2024).

Of the organizations that use ERP implementation methodologies, 32.1% choose the "big bang" strategy. deploying all components of the system throughout one project phase. On the other hand, a comparable proportion of businesses chose a hybrid strategy. combining phased implementation techniques with Big Bang features. Businesses understand the need of business transformation consultants or ERP professionals because they understand the vital role that expertise plays. The main reason for hiring them was their 81% ERP implementation expertise. in addition to fields like business process management (42.9%). Among other essential roles are project auditing (28.6%) and organizational change management (33.33%) (Tajammul, 2024).

Poor project management, an inability to control installation costs and schedules, and internal opposition to new systems are common ERP problems. These issues arise from selecting the incorrect ERP partner, buying software that isn't appropriate for your business, and having unclear goals for the ERP deployment. Your company may grow with an ERP system, but in order to avoid being just another regrettable ERP statistic, you need to make the appropriate platform and implement team selections. Fifty percent of ERP deployments failed the first time, according to data gathered over many years. The majority of implementations end up costing three or four times as much as planned. 30% more time may be needed for implementation than expected. When a company goes live, 51% of them encounter operational interruption. Sixty-five percent of the time, system changes required to increase accessibility might result in expenditures (Branka, 2024).

Project buy-in

One of the most crucial elements in an ERP implementation's success is project buy-in. Employees buy-in denotes a complete commitment to the project, readiness to provide the resources required for success, receptive to novel ideas for business processes, and readiness to be adaptable and ready for training. Top management's guidance and clout are essential for a successful ERP deployment; therefore, organizational buy-in must begin at the top and trickle down to the functional users. In order for end users to completely commit to the project themselves, it is critical that they are aware that upper and middle management support the initiative. According to the study, senior management should designate the project as their top priority and take the necessary efforts to ensure that all procedures and stages are understood during execution (Vayyavur, 2015).

Employee engagement and performance are the primary indicators of top management's perceived lack of commitment to the project, which is felt throughout its execution. End users may conclude that their involvement in the implementation is optional if they believe that the organization's management doesn't care whether the project succeeds or fails. It is to be expected that end users who have not put in the utmost effort in learning the new software would find it difficult to carry out their routine business operations with the new ERP system. After that, end users can quit utilizing the system and go back to carrying out their jobs manually.

Change management

Project success depends on staff attitudes toward execution in addition to project buy-in. Individuals in the information technology industry are used to and anticipate change, as it's a given for those in this line of work. This isn't the case, though, for workers in other functional domains (including purchasing, finance, and human resources). Our experience has shown that when consumers are informed about potential ERP deployment, they are usually resistant since they dislike change. Employees experience stress and anxiety due to the realities of learning a new program and the changes that will occur in their daily business operations with the new ERP, often known as business process reengineering. It might be difficult, but maintaining a good attitude among staff members is essential to a successful ERP installation.

Effectively convey the specifics of the impending implementation, including the training program and timetable. It is important to inform staff members of the status of the project as well as any obstacles encountered. A barrier between management and staff is created by a lack

of communication, which also has an impact on worker attitude and output. Describe the beneficial improvements in knowledge and abilities that result from picking up new software. Employers need to ensure that staff members understand that they are expanding their skill set in addition to learning new software. Employee resistance and implementation difficulties may result from a failure to inform them of the perceived benefits (Kiran & Reddy, 2019).

Human factors

Failures in implementation of ERP can also be attributed in large part to human issues. The study's findings recommend that the company concentrate on the following six areas: business process reengineering, vendor support, organizational culture, training, user participation, and support from senior management (Chatzoglou et al., 2016). As much of a risk to success or failure as

insufficient project definition is associated with inadequate training and low staff engagement. It was discovered that poor user education and training during implementation posed a risk for failure; on the other hand, appropriate user education and training was crucial to user acceptance and ERP satisfaction (Amini and Safavi, 2013). It motivates managers to provide user training with more careful thought in order to improve ERP implementationsuccess (Guimaraes et al., 2015). They found that giving users more ERP training and expertise improves communication since it makes them more capable of explaining their demands to developers and more able to comprehend the technical jargon they employ. Their research also found a clear correlation between end-user tasks and user participation, management support, developer capabilities, and user training.

Employee training

Given the steep learning curve associated with many of the most widely used ERP products, Employee training is a critical component of every ERP implementation and needs to be handled carefully. Guimaraes et al. (2015) exhort managers to recognize that end users increased Pleasure and confidence are directly related to their ability to use the new system. ERP programs come with extensive capabilities; thus, the consultant needs to be adequately trained. Not only should the training be sufficient, but it should also be the appropriate kind. Many businesses have switched to various forms of virtual training; some even provide on-demand training to give businesses flexibility and cost savings, but in-person, hands-on training is still preferable.

While virtual training has its uses, users learning a new system require devoted time with a trainer in a real test environment to receive sufficient instruction. Users will not devote the time and attention required to master the capabilities of the new system if they participate in virtual training while sitting at their desk at their workplace. They won't be focused on the work at hand since they will be preoccupied with emails, interoffice conversations, and other business-related activities. Employees can concentrate better on the topic at hand if the training is conducted in a calm setting away from workplace distractions.

Participation of employees

The duration of an ERP implementation might range from a few months to many years. Employees will need to make long-term commitments to this, which include attending many training sessions, verifying data, and picking up new business procedures, all while juggling their regular, daily job obligations. Management must ensure that staff members are involved in the implementation process to prevent a decline in morale. After all, the ERP implementation would

be significantly impacted by the users' expertise. In the implementations we have oversee, we have discovered that assembling a group of cross-functional specialists to meet regularly was advantageous. Modifications to the timeframe or training program, difficulties with training, challenges with data translation or validation, or any other implementation-related concerns. Employees believe they have a significant impact on the project when they collaborate and communicate well across functional boundaries in the team meetings. After implementation, we would continue to meet as a user group team instead of an implementation team because the knowledge gained from the sessions would prove to be very helpful.

Data validation

Data validation is not frequently mentioned in literature as a crucial component of ERP installations. Nonetheless, the main objective of an ERP system is data collection and analysis. Users will be required to verify data that has been cross walked to the new ERP system from the old system during an ERP implementation. The aim of absolutely clean data from a conversion can never be achieved by an organization, but data integrity is still important and crucial to the success of ERP installations.

The company has to be aware of the data's quality and collection methods during implementation (Xu, 2019). The author goes on to say that there is no doubt that the success of the implementation is impacted by the quality of the data. Ensuring the accuracy of any crosswalks created for data conversion should be the organization's first responsibility when it comes to data validation. Data that turns out to be erroneous because to an imprecise crosswalk is difficult to locate and typically does not surface until after deployment. This is a result of the

improper crosswalk value, which causes the value in the field to be mismatched even if it is legitimate based on the permitted values. When significant discrepancies between numbers Before and after conversion are found, these kinds of data inaccuracies will become evident in reporting and analysis later on. It will now take a lot of time and money for the company to sanitize the data.

To ensure data correctness, data validation should involve more than merely running list reports. Even though this is a crucial step, the company should go over and above and verify the data in other ways. To ensure that every record in the tables was converted, compare the record counts from the legacy tables with the comparable tables in the new system. Additionally, the company may contrast totals in the new system with historic totals, such as the total sales for a certain period.

Table 4.1:

Success factors of ERP

Success Factors	**Microsoft Dynamics**	**SAP**	**Oracle NetSuite**
Executive Support	High	Moderate	High
User Training	Extensive	Moderate	Extensive
Change Management	Strong	Moderate	Strong
Stakeholder Engagement	High	Moderate	High

Customization	High	Moderate	Moderate
Implementation Time	Short	Long	Medium
User Satisfaction Rating (%)	85%	75%	80%

Microsoft Dynamics has the greatest user satisfaction score (85%), according to the data in Table 1, since it places a significant focus on change management and user training. SAP's middling scores, on the other hand, are a reflection of issues with its complexity and lengthy implementation timeframes. The effects of Oracle NetSuite, SAP, and Microsoft Dynamics installation approaches on organizational performance were observed. The key findings show that although the three systems all adhere to a planned implementation process that includes planning, designing, testing, and deploying, the methods used by each system have a substantial impact on user satisfaction and the success of the project as a whole.

Table 4.2:

Common pitfalls of ERP

Pitfall	**Microsoft Dynamics**	**SAP**	**Oracle NetSuite**
User Resistance	Moderate	High	Moderate
Inadequate Training	Low	Moderate	Low

Poor Change Management	Moderate	High	Moderate
Data Migration Issues	Low	High	Moderate

One of the largest obstacles to installing a new ERP software system may be organizational reluctance. It is doubtful that the new method will be adopted and integrated into management's and staff's regular work procedures if the benefits are not clearly and fully communicated to both groups. Fighting user resistance is crucial since it can be a major factor in a new system's efficacy being hampered and its advantages not being fully realized. Spending time training users on the software is essential since it impacts not only procedures but the whole functioning of the company. As ineffective users aren't productive employees, training is a common topic among ERP installation failure reasons, even though it is frequently considered much later in the project's lifecycle. At first, a new software system may seem daunting. To increase productivity and work satisfaction, users must be informed about how their duties will be made simpler and given instructions on how to utilize the program.

The difficulties with ERP don't stop when a system is put in place. It's critical to often assess how the software facilitates corporate operations. Businesses are always changing, whether it's setting up a new warehouse or adding new requirements to their goods. For an ERP software system to continue being the useful tool you purchased, it must be continuously improved to meet the demands of the organization. Additionally, keeping your system updated will safeguard your information, preserve your present workflow, and provide you with all the additional

features, functionalities, and security upgrades that the most recent edition has to offer. Companies frequently see ERP implementation failures as a result of their workers' lack of proper training regarding the new system's modifications. Employee resistance brought on by poor management might result in several unanticipated problems.

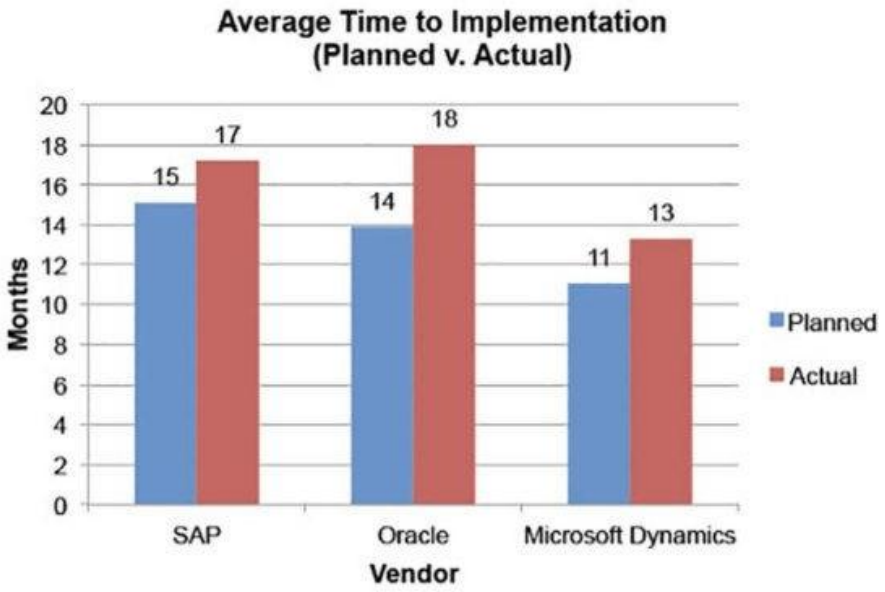

Figure: 4.1.

Time to implement ERP. Image source: Al-Dmour, 2023

Success factors for SAP

The three most important components of a successful SAP adoption were appropriate training, change management, and assistance from senior management. In addition to having outstanding decision-making abilities, the project's senior management should have a respectable grasp of the system. SAP's implementation methodology is ideal for complex, large-scale deployments since it strongly emphasizes careful planning and documentation. Businesses like Nestlé, Tata, and Amazon have successfully used SAP to standardize processes across several areas, ensuring

consistency and supervision. Since SAP implementations take a lot of time and money, effective change management tactics are even more important.

The level of communication is one of the most crucial non-organizational-strategic success elements. Consultants and clients need to communicate effectively. High levels of personalization are effective in complex industries like manufacturing and finance. For SAP projects, strong change management and senior sponsorship are beneficial because they lower the risks associated with lengthy implementation cycles. A phased implementation plan ensures smooth integration across departments, as shown by Nestlé's success story.

The flexibility of SAP's ERP provides a system that is easily adaptable to a company's expansion goals. Because SAP solutions are designed to be efficient and continuous, businesses of all sizes may optimize their systems to suit changing demands. In particular, companies may extend their ERP capabilities by adding new modules or enlarging the size of current ones to meet expansion thanks to SAP's business scalability features. We now show you how SAP's modularity and flexibility impact business growth.

Decision-makers may acquire a decisive edge with SAP's analytical skills in a marketplace driven by data intelligence. SAP helps to identify patterns, predict market trends, and accurately estimate business consequences by providing smart data analysis. Strong SAP features help with performance management and strategic planning, which basically helps a company maintain a competitive edge in the market.

Success factors for Oracle Netsuite

Oracle NetSuite's SuiteSuccess philosophy, which emphasizes speed and pre-configured solutions, appeals to companies that are expanding quickly. Promising deployments such as Starbucks, Fulton & Roark demonstrate how NetSuite's cloud-first methodology offers quick scaling and little downtime (NetSuite, 2023). Customization work is reduced by using pre-configured templates for rapid deployment. Businesses may increase operations without worrying about infrastructure constraints thanks to strong cloud capabilities. Solutions tailored to a particular industry shorten the time required to integrate ERP features with operational procedures.

One key component that propels NetSuite's broad adoption is its cloud-based design. With today's increasingly dispersed and remote workforces, this contemporary architecture guarantees that organizations may access their systems at anytime, anywhere. Because a cloud-based solution offers dependable, real-time access to their ERP system, it not only makes it easier for departments and locations to collaborate, but it also helps businesses adjust to the constantly shifting market conditions.

The real-time dashboard analytics that NetSuite offers are another essential component of its ERP solution; they give companies instant visibility into their daily operations. With data-driven dashboards that can be tailored to each company's specific requirements, these analytics tools assist decision-makers in keeping an eye on the health of their organization. Because of NetSuite's customisation capabilities, which enable businesses to grow with their systems and

provide a customized ERP experience, the platform is adaptable and scalable, making it appropriate for a variety of industries and business sizes.

Success Factors for Microsoft Dynamics

The findings demonstrate how well Microsoft Dynamics performs in settings that call for integration, agility, and adaptability. Numerous case studies highlight the system's compatibility with Microsoft products like Office 365 and Power BI, which increases user happiness and adoption rates. Examples of these include Toyota and Trek Bicycle. Businesses like Metcash have access to scalable solutions thanks to hybrid implementation options, which enable cloud, on-premises, or hybrid deployments (Bradford, 2014). Microsoft Dynamics' success may be attributed in large part to its seamless interaction with other Microsoft products, which enhance user productivity and cooperation. Cloud, on-premises, and hybrid implementation options' flexibility enables businesses to choose configurations that best suit their strategic requirements. Pre-built templates and an easy-to-use interface can speed up training and boost acceptance rates (Monk & Wagner, 2013).

Table 4.3:

Comparison of ERP

	SAP	Oracle netsuite	Microsoft dynamics
Business type	Small and medium-sized	Growing mid-sized companies as well as	Business Central for small and

	enterprises.	large enterprises.	medium-sized enterprises and an Enterprise Edition for larger organizations.
Functionality	Accounting, inventory and warehouse management, purchasing, reporting, and analytics.	Accounting, inventory management, reporting, and analytics across enterprises of all sizes.	Financial planning and reporting, customer relationship management, logistics, and human resource management.
Hosting	Cloud-based and on-premises.	Cloud-based	Cloud-based
Pricing	User licenses for modules from $56 per month, starter packs from $1,680.	Subscription based on $999 for a base license.	Per module ranges from $50 to $1,500 per month.
System updates	Planned and deployed by your business.	Phased releases automatically installed in the Cloud.	Planned release waves installed in the Cloud.
Customization	Choose and add	Choose and add	Tailor fields, forms,

	relevant fields in the database and amend code.	relevant fields in the database and tailor forms, records, and performance indicators.	views and workflows. Synchronize and integrate with other Microsoft business applications.
Analytics	SAP Analytics component for real time reports, automatic calculations and tracking, and an Excel tool for analysis. Advanced analytics require a separate license.	Suite Analytics for real time reports, automatic calculations and tracking.	Works with Microsoft Power BI and allows embedded dashboards for reporting and tracking.
Ease of use	In-depth capabilities might be more than smaller businesses need.	NetSuite dashboard allows users to choose and view key information, based on roles.	Use built-in tools and integrate with other MS business applications.
Integration	Can integrate with	Can integrate with	AppSource provides

	SAP certified solutions.	many other Third-party solutions.	access to Microsoft and approved Third-party solutions.
Native Ecommerce Solution	Commerce Cloud. But it's more B2C oriented. For a B2B ecommerce alternative to Commerce Cloud, consider Cloudfy	Suit ecommerce. But it's more B2C oriented. For a B2B ecommerce alternative to SuiteCommerce, consider Cloudify	No native solution.

Conclusion

Point-and-click user interfaces that are consistent and easy to use are a feature of Microsoft Dynamics ERP systems' application package. Those who have used other Microsoft products should be familiar with them. Users don't need to learn new vocabulary or user interface norms, even if they might need some training to utilize these programs daily. Although Microsoft Dynamics ERP packages might take longer to deploy, their license costs are less than those of SAP or Oracle. Startup costs are increased by longer implementation cycles, and these costs might be further increased by modifications and integrations. SMBs looking for a system that can do more than their present tools and have simple business procedures can consider Microsoft Dynamics ERP solutions.

The objective of ERP With its user-friendly apps, adaptable capabilities, and easy connection options, Microsoft Dynamics 365 aims to boost customer engagement and enhance worker and system productivity. Outlook, PowerBI, and SharePoint can all be utilized with ERP with ease. Full Office 365 integration with Microsoft Dynamics 365. Switching between applications is quick and simple while using Microsoft Dynamics 365. You don't have to worry about your employees taking longer to enter customer data into other systems. Moreover, retraining extra staff members are not required. This program allows you to assess and improve your company's image in its entirety.

ERP Framework A lot of client data is gathered by Microsoft Dynamics. It can look at the brands they connect with, the kinds of websites they frequent, and the communities they join. You should expect to receive information on brand loyalty and purchase trends when you utilize the BI tool. This is beneficial for customer service representatives. With all of this information Available to them, customer service representatives will be able to interact with customers in a tailored manner. This is advantageous to the company as well as the client. It is not only simple to use, but it can also be installed on the cloud or in a hybrid cloud environment. The user The interface of MS Dynamics ERP is really simple to understand and intuitive. Activity-based workplaces are customizable and may be created by users. As a result, they may now oversee policies and resources. Its close resemblance to Office 365 will make users feel at ease with it straight away. reducing the stress brought on by the introduction of new software.

Choosing between SAP, Oracle, and Microsoft Dynamics ERP should be based on your company's specific needs, budgetary restraints, and long-term goals. Even while SAP is more costly and complex, it integrates remarkably well and is ideal for large, intricate enterprises. Although Oracle offers end-to-end solutions and scalability, it can be costly. Even so, Microsoft Dynamics is user-friendly and seamlessly interacts with the existing Microsoft settings. final analysis and choice based on a thorough assessment of the requirements of your business, a cost-benefit analysis, and the possible long-term benefits of each option.

4.2 Research Question Two: Methodologies employed for implementing Microsoft Dynamics, SAP, and Oracle NetSuite

The results of the typical approaches used to deploy Oracle NetSuite, SAP, and Microsoft Dynamics are shown in this section. The examination focuses on the unique features, benefits, and drawbacks of each approach, as well as how they affect the overall effectiveness of ERP systems. SuiteSuccess for Oracle NetSuite, ASAP for SAP, and Sure Step for Microsoft Dynamics are the approaches that are covered.

Microsoft Dynamics Sure Step Methodology

The recommended approach for implementing Microsoft Dynamics AX is Microsoft Dynamics Sure Step. To help the implementation partners, the Sure Step program offers generic and product-specific project-based templates, workflows, process maps, and tools. The Microsoft Dynamics Sure Step approach provides an organized and dependable framework that is especially intended to yield effective Dynamics solution installations. Sure Step offers an

extensive set of best practices to guarantee that projects are executed effectively, punctually, and economically, regardless of the scale of the project.

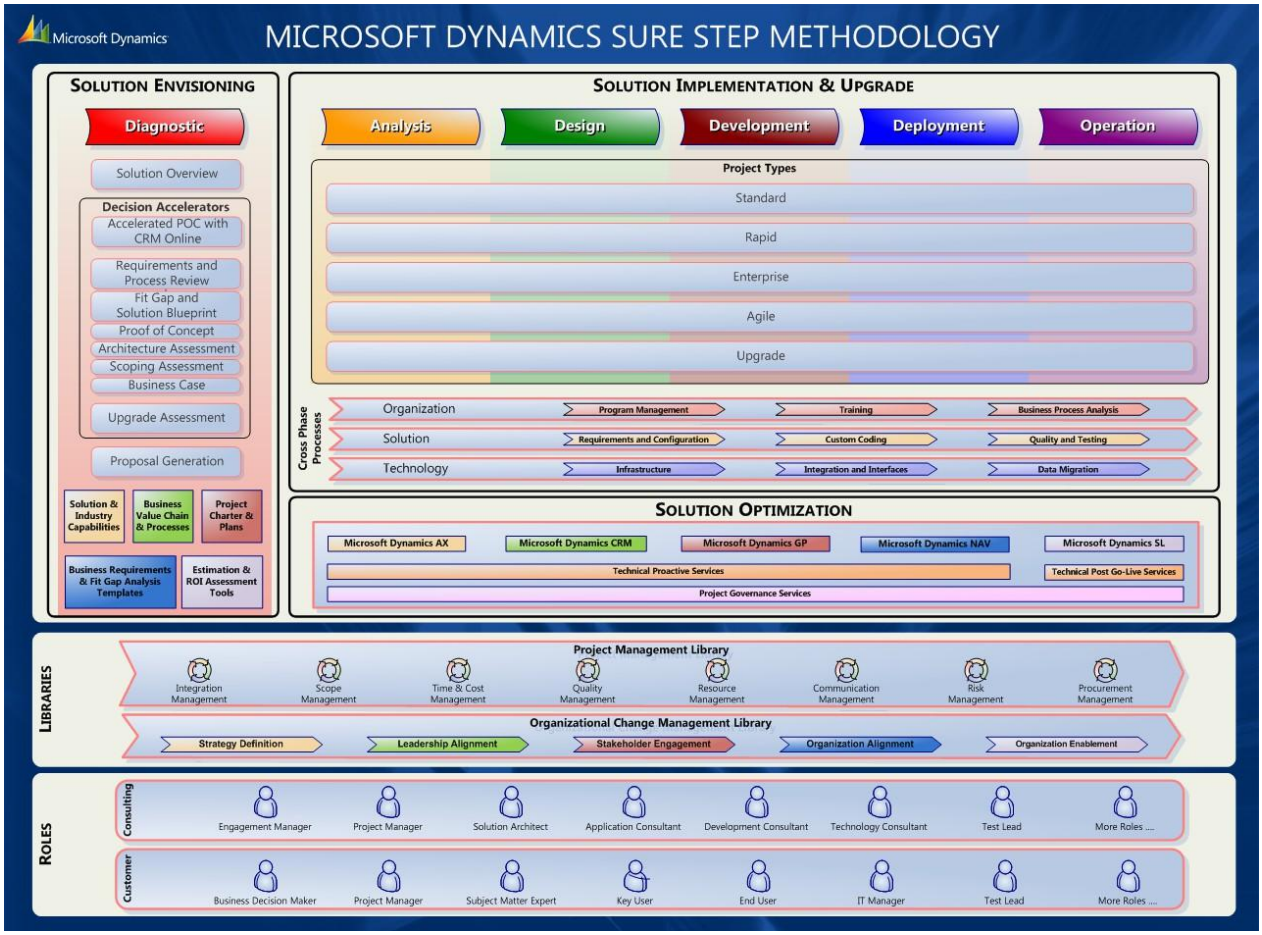

Figure: 4.2

Microsoft Dynamics Sure step methodology. Image source: Microsoftdynamics.com

The Microsoft Dynamics Sure Step method is a standardized, end-to-end framework used for implementing Dynamics solutions. It provides a logical way to manage all phases of the client's lifetime, from the first diagnostic to help after the installation. Due to the method's flexibility to accommodate projects of any size, type, or industry, businesses may tailor it to their own needs.

The approach is broken down into layers related to individual products for Dynamics 365, Dynamics CRM, Dynamics NAV, and other Microsoft solutions, as well as a basic structure that applies to all Dynamics solutions. Prescriptive, phase-by-phase instructions are included for every stage of implementation, guaranteeing that all parties involved—from consultants to project managers—have definite roles and responsibilities. The approach is intended to increase communication, reduce risk, and provide positive results.

Agile project types are flexible and ideal for companies that favor iterative development. Agile projects employ shorter sprints and don't aim for a single release date, which lets firms change requirements as required. When project requirements change, this method helps since it gives you more control over how the solution looks in the end.

Figure: 4.3

An example of agile practices using the methodology prescribed by Sure Step for Agile. Image source: microsoft.com

Many criteria in Dynamics 365 projects are met by the product's out-of-the-box features. But you must prioritize and deal with certain issues and activities in a user story backlog. An An overview of a feature or function that the user needs or desires is contained in a user narrative.

Close cooperation between those who create and own the requirements and those who build and deliver the solution is encouraged by agile. Accelerated software release, frequent early feedback, adaptation, and subsequent release are the objectives. Until the backlog is cleared or all needs are satisfied, this cycle will keep going.

Some of the benefits of agile are:

- It's flexible and adaptable to changing needs and feedback.
- It's user-centric and focuses on delivering value and satisfaction.
- It's fast and efficient and reduces waste and rework.
- It's collaborative and transparent, and fosters trust and communication.

Waterfall methodology is a methodical and chronological strategy that proceeds in stages, from conception to upkeep. Before going on to the following step, each one needs to be finished. Working in a conventional, structured manner with a well-defined phase sequence is known as waterfall methodology. It is predicated on the notion that you must know everything up front and that once a phase is completed, it cannot be resumed. It's a standard approach to putting on-premises business apps into operation. It is a one-shot, linear, noniterative method that completes the job. There is a clear definition of the stages, deliverables, and milestones, and you can only go on to the next phase after finishing the previous one. Obtaining early and frequent buy-ins from stakeholders is essential in the current cloud environment, and this calls for providing outcomes quickly and iteratively. The waterfall technique is therefore less appropriate.

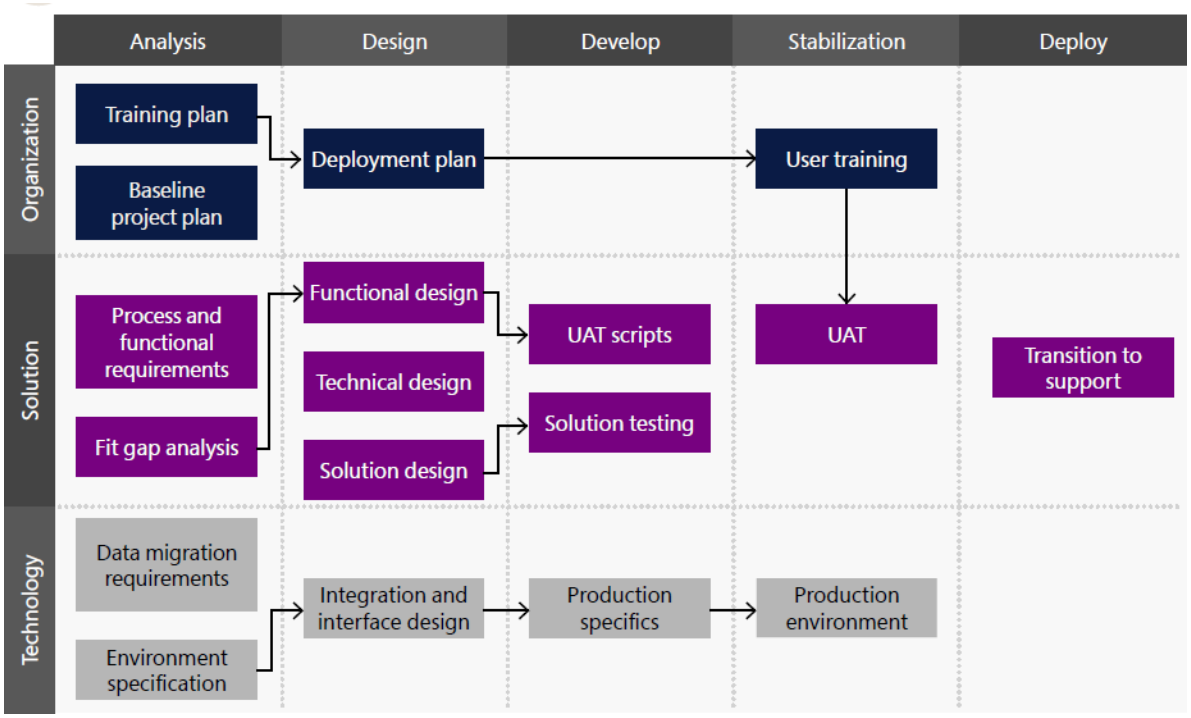

Figure: 4.4

An example of the waterfall model as prescribed in Sure Step Methodology. Image source: microsoft.com

Some of the benefits of waterfall are:

- It's simple and easy to understand and follow.
- It's predictable and stable and minimizes changes and risks.
- It's well-defined and documented and ensures quality and compliance.
- It's manageable and measurable and allows for clear planning and monitoring.

A hybrid approach combines waterfall and agile methodologies to adapt to the needs of the project. The solution is established and designed prior to the start of the sprints. After that, it makes use of sprints to develop, test, and assess the solution. This approach is well-liked and

suggested for Dynamics 365 projects. For the project's start and finish, including initiation, solution modeling, system integration testing, user acceptability testing, and deployment, a noniterative methodology is used. Iterative technique is used for the project's construction processes, which include requirement specification, design, development, and testing. You may start the project with the capacity to make changes and provide early visibility into the solution by employing a hybrid strategy. The best aspects of both waterfall and agile development approaches are combined in this project, which is advantageous for most project types and sizes.

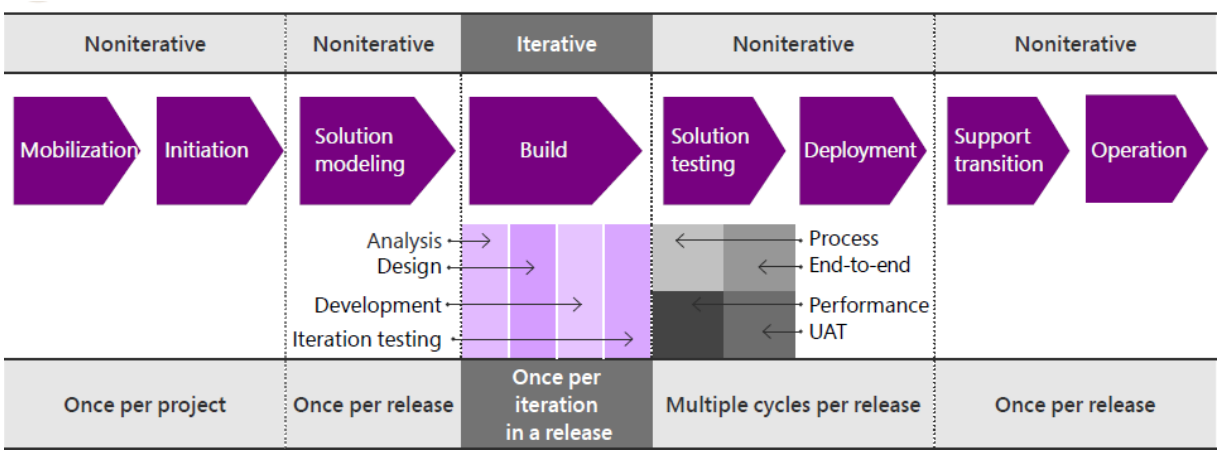

Figure: 4.5

An example of the hybrid approach, based on Dynamics Sure Step 365. Image source: microsoft.com

Some of the benefits of hybrid are:

- It is flexible and sensitive to input and changing requirements.
- It prioritizes providing value and happiness and is user centric.
- It cuts down on waste and rework and is quick and effective.

- It encourages trust and communication and is transparent and cooperative.

Implementing Microsoft Dynamics products, such as Dynamics 365, successfully requires the use of a solid, well-organized foundation. The Microsoft Dynamics Sure Step method has shown to be an invaluable tool for fulfilling requirements, financial constraints, and timeframes while reducing risks and challenges that businesses often face while bringing new software online.

Table 4.4:

Overview of Implementation Methodologies

ERP System	**Implementation Methodology**	**Key Characteristics**	**Advantages**
Microsoft Dynamics	Sure Step	Agile and Waterfall approaches, incremental testing	Flexibility, strong risk management
SAP	ASAP	Pre-configured templates for rapid deployment	Quick installation, industry-specific templates
Oracle NetSuite	SuiteSuccess	Modular deployment, cloud-based flexibility	Fast scalability, user-friendly

SAP ASAP Methodology

The Accelerated SAP (ASAP) methodology is a project management approach that provides a structured, phased framework for planning, constructing, setting up, and executing SAP systems. It is applied in SAP installations. SAP's ASAP approach helps companies reduce risks, expedite the implementation process, and ensure that SAP projects are completed successfully and on schedule. In order to help organizations reduce project risks, expedite the SAP implementation process, and make sure their SAP solutions align with critical business goals, the Accelerated SAP (ASAP) Methodology is a comprehensive framework and set of best practices.

Businesses may implement SAP software solutions at a lower total project cost, expedite time-to-value, and make sure that their business processes are customized to each project's specific requirements thanks to the scalable features and stages of the ASAP strategy. In order to guarantee that the SAP solution satisfies the demands of the business and that users are ready to utilize their new SAP system effectively, the ASAP method also highlights the necessity of including important stakeholders and end users throughout the implementation process.

Benefits of SAP's ASAP Methodology

- Organized method: In accordance with the SAP Methodology, which offers a precisely defined and organized method to implementing SAP, project teams may divide the work into several stages, each with distinct objectives, activities, and deliverables. The methodical approach facilitates efficient planning and management of complicated projects.

- Risk Reduction: Organizations may reduce the possibility of costly errors, scope creep, and project delays by identifying and addressing risks early in the project by utilizing a tried-and-true technique. Risk assessment and business process management are critical components of the ASAP approach, which ensures that project objectives are met and organizational goals are achieved throughout the project lifecycle.
- Effectiveness and Velocity: The goal of the ASAP Methodology is to provide predefined templates, best practices, and tools to speed up the process of configuring and customizing SAP systems. Faster time-to-value, more cost savings, better aligned project management practices, and more efficient system management are the outcomes of this.
- Alignment with Business Goals: To guarantee that the SAP solution is in line with the particular business objectives and procedures of the company, SAP's ASAP methodology places a strong emphasis on effective cooperation and communication between business stakeholders and end users. It increases the accuracy of planning for upcoming business operations and helps avoid mismatches between technology and business demands.

The ASAP technique places a strong emphasis on a planned, staged rollout that guarantees comprehensive documentation and risk reduction. Although this technique works well for large-scale businesses, it presents a challenge for firms that want quick deployments due to their waterfall nature (Bradford, 2015). The disadvantages of speeding through stages without enough planning and testing (ERP Research, 2023).

Oracle NetSuite SuiteSuccess Methodology

SuiteSuccess uses pre-configured templates for quick cloud-based installations while adhering to agile principles. In a matter of months, SuiteSuccess deploys its ERP system, guaranteeing seamless growth across several sites (NetSuite, 2023). SuiteSuccess is designed to address specific industry problems that have traditionally made it difficult for businesses to expand, scale, and adjust to changing conditions. The majority of ERP providers have attempted to use templates, quick implementation techniques, and bespoke code to address the issue of industry solutions. Using a comprehensive strategy, NetSuite productized domain expertise, industry best practices, KPIs, and an agile approach to product uptake. Time to value is accelerated, company efficiency is raised, flexibility is enhanced, and client success is boosted.

Figure: 4.6

Example of the stairway approach for the wholesale distribution industry. Image source: terillium.com

Suite Success is a product and delivery approach that combines tens of thousands of worldwide deployments from all sectors into a single cutting-edge platform to streamline NetSuite installs. SuiteSuccess equips organizations with cutting-edge best practices to accelerate their time to value and an exceptional foundation for agile innovation by incorporating two decades of expertise into their product. In order to guarantee that there is a solution for each of their clients, regardless of their stage of growth, NetSuite has further divided the product by market sector and industry. Suite Success expedites the return on investment for your company. The strategy is applied gradually to accommodate all the capabilities your company will require in the near and

far future. beginning on the first day with what matters most to your organization. Industry-specific templates are used by SuiteSuccess to improve the chances of a successful deployment. Pre-defined elements specific to your sector and the responsibilities of users, such as dashboards, charts of accounts, and forms, are included with SuiteSuccess accounts. Built-in process processes and KPIs specific to your company are included in SuiteSuccess.

Benefits of using SuiteSuccess include:

- Accelerated ROI
- Reduced business risk
- Faster time to go live
- Improved business visibility
- Reduced reporting time and resources
- Reduced time to close financial books
- Reduced IT support costs

Microsoft finds risk indicators by analyzing logs from Microsoft Graph and Microsoft 365. Additionally, Microsoft provides enterprises with a Risk Management Solution to help them recognize, assess, and analyze risks. The solution aids in the implementation of a risk-reduction strategy by enterprises.

To evaluate and aggregate risks, improve resilience, and get a single source of truth for risk assessment, Oracle uses risk management software. Oracle provides capabilities for risk management and compliance as well, such as ongoing security, configuration, and transaction

monitoring. SAP evaluates the scenario, determines the project's needs and obstacles, and addresses any possible problems. The project risk management strategies employed by each methodology are:

Table 4.5

Risk management strategies

ERP System	**Risk Management Strategies employed**
Microsoft Dynamics	● Incremental testing, stakeholder engagement ● Raise issues from the timesheet ● Issue management ● Period close risk review ● Issue severity statistics ● Issue workspace management ● Issue group statistic
SAP	● Rapid implementation with predefined templates ● Systematic identification of project requirements. ● Identification of challenges that could impede the project operations. ● Assessment. ● Mitigation of possible challenges.

Oracle NetSuite	• A modular approach allowing phased implementation • Automating the monitoring and control of user access • Continuously monitoring user activity with AI • Auditing transactions to identify fraud, error, and policy violations • Calculating risks using analysis and context models

One may manage risks in your SAP Activate implementation by using the Sample Risk Register. Its purpose is to help an organization or project identify, classify, and monitor risks that have previously been recognized and might potentially cause delays in project deliverables and schedules. The project is exposed to unknown potential dangers in the event of an unidentified pitfall. When danger becomes apparent, the project team is ill-prepared to handle it.

All the ERP vendors follow the Project gathering phase but when compared to all the other Methodologies used by SAP, Microsoft Dynamics and Oracle NetSuite, one of the best practices used here is the Revere Sales to PS KT session. In this session, the delivery team is well-prepared prior to meeting the client. Since the sales team is also involved. It gives them a higher overview of the customer expectations. In the other methodology, the sales team is not involved. This bridges the gap between what was sold to the client and promised and that of what is expected to be delivered. This methodology, followed by Oracle NetSuite, tells us that they give a lot of importance to customer engagement and their business. By preparing the delivery team for

At the next meeting with the client, it sets the preparedness and strong effectiveness to know the customer and set expectations and framework for successful implementation. This practice is only followed by Oracle NetSuite. The Getting Started session used by the Oracle NetSuite is the formal way to introduce an ERP application to the client. This is one of the best methodologies as the client confirms administrators' access to Oracle NetSuite, Data Migration Templates, Introducing Support, Suite answers, and Suite ideas. In the Enable Stage, The Process Walkthrough 2 is conducted. This session is between the customer and the delivery team, and in this session the customer will lead, and the customer will showcase the process to the delivery team. This is one of the best practices, as it will let us know how well the client has understood the application and how user-friendly he is with Suite. This methodology pays the highest success factor as in this methodology used, it will help the end user to familiarize themselves with the ERP, and any apprehension will be cleared during this session.

The cause of many of the ERP implementation failures is end users not being able to comfortable with the use of the new system, and they go back to using the old system. Oracle NetSuite Management takes the responsibility to transfer the knowledge to the end user, making him comfortable with the use of the system, and then marking the end of the project, unlike other ERPs. When we did the case study of LIDL, which was the failure in implementing SAP, the main reason for the project's late completion was the excessive amount of user adaptations that were needed. In this case, Oracle NetSuite methodology would have been a right proposal. Where in the Enable Stage, The Process Walkthrough 2 would be conducted, and adaptation would have been easy. In Microsoft Dynamics 365, the Success by Design phases and their relationship to Success by Design the desired outputs and outcomes with a user-friendly

approach. In Oracle NetSuite, following the best practices suggested by Suite Success for the customer's business combined with customer engagement brings customer success.

In SAP, Process and Sustainability is the Economics to bring the process and application technology integration of all the departments like Sales and Marketing, Finance, Production Planning, and so on. All three ERP vendors are pioneers in their own way, and the methodology used determines the success of the project implementation.

4.3 Research Question Three: Challenges and Risks in Implementing Microsoft Dynamics Compared to SAP and Oracle NetSuite

ERP systems have the potential to be revolutionary, but they also come with difficult integration, change management, and governance issues. Because SAP (ASAP), Oracle NetSuite (SuiteSuccess), and Microsoft Dynamics (Sure Step) employ distinct approaches, these difficulties may change between systems.

Customization is frequently cited as one of the biggest obstacles preventing SMEs from adopting and using cloud ERP. Since cloud-ERP products are frequently standardized, customizing them can be challenging, expensive, and time-consuming. Therefore, in the process of adopting an ERP, flexibility is crucial for all parties involved, including the cloud service provider and the SME (Haddara, 2022). Two of the enterprises involved in the case study saw software as a service (SaaS) ERP as a long-term option, but a case study revealed a divide in SMEs' perceptions of this technology (Seethamraju, 2015). Two other firms, on the other hand, saw it as

A stopgap measure until a tailored on-premises solution was eventually implemented. Thus, SMEs may be discouraged from deploying cloud-ERP systems due to customization constraints, particularly if their expansion plans call for more intricate ERP procedures. Negligence in choosing a cloud-ERP package has an impact on timelines, finances, objectives, and the effectiveness of the adoption process as a whole. The implementation is vulnerable to extensive alterations if a package that is not suitable for the needs and requirements of the SME is selected. Offering a uniform cloud-ERP platform to all SMEs puts the system providers at a disadvantage when it comes to customisation.

Vendor lock-in and switching costs stem from worries about cloud ERP suppliers' moral character. Since the vendors have access to a wealth of crucial data, trust becomes an essential component of their success. Furthermore, if a business is dissatisfied with the program, it may be challenging for them to switch cloud-ERP providers because the cloud-ERP vendor has access to the personal information and data of its users. Negotiating a service level agreement (SLA) might assist the two parties in bringing their expectations and understanding of the agreement together if there is a predicted risk that this would occur. SLAs, however, frequently leave out confidentiality-related provisions, which raises the risk of disagreement (Duan, 2013).

One key success element is compliance—how well the cloud-ERP software fits and conforms with the adopting enterprise. The system must benefit the business and provide seamless support for its operations (Seethamraju, 2015). High-quality data must be migrated from legacy systems or business operations; this means that it must be accurate, timely, and in a consistent format. SMEs must also determine, in light of their geographic location, which jurisdictions and rules

they must comply with (Haddara, 2022; Gupta, 2017). Companies using cloud-ERP may be at risk of violating rules due to the variety and often ambiguity of legislation (such as GDPR) and jurisdiction norms (Usman, 2016).

According to a number of published research studies, data integration is one of the major obstacles to SMEs' adoption of cloud-based ERP systems, as it can lead to delays and implementation issues (Gupta, 2017). When talking about customization-related difficulties, bring up relevant integration problems that have an impact on the cloud-ERP provider as well as the adopting company. According to Ganesh (2016), research conducted on Indian SMEs that intended significant adaptations resulted in a difficult project situation where the ERP package was deemed unsuitable for the firms' needs. The complexity of the company's current Infrastructure is not the only factor that influences customisation issues; organizational culture also plays a role (Duan, 2013). This issue was demonstrated by a corporation that took part, where change management concerns pertaining to the organization's culture might account for a two-and-a-half-year delay in cloud-ERP integration (Seethamraju, 2015).

Microsoft Dynamics: Implementation Challenges and Risks

Governance and Project Oversight: Even though Microsoft Dynamics systems are flexible, they encounter project governance issues when businesses depend significantly on outside consultants. Weak governance processes in the Metcash project resulted in delays, scope creep, and budget overruns. This emphasizes that regardless of outside assistance, firms must continue to have internal control over ERP programs.

Not Choosing the Correct Partner: One of the biggest problems with installing Microsoft Dynamics is picking the wrong partner. Microsoft Dynamics does not sell directly to customers; instead, the corporation depends on partners to market the product and help with solution rollout. Selecting the ideal partner to comprehend and address your specific Microsoft Dynamics issues might be difficult because there are several partners with varying skill sets. The perfect partner should not only be well-versed in Microsoft Dynamics 365 but also be able to tailor the implementation to your specific set of business needs. Furthermore, Microsoft Dynamics 365 is improved through the use and creation of unique features by independent software suppliers (ISVs). Receiving industry-specific solutions from these partners might be really interesting. The disadvantage is that they are the only ones who can provide help and solutions. If you are unhappy with their practices or services, it might be challenging to find another ISV with similar features and support.

Strictly screening potential partners is essential to lowering these Microsoft Dynamics implementation difficulties. Look for businesses who have a history of success in your industry, a loyal customer base, and the ability to offer full Microsoft Dynamics implementation solutions. Verify if they can provide long-term support and adapt to your evolving business demands.

Lack of Compatibility: Another major problem in Microsoft Dynamics implementation is dealing with the complexity and incompatibility of Microsoft Dynamics 365. It will need expert counsel to implement this incredibly complicated scheme successfully. While it might seem possible to depend on your own IT staff to complete the installation, it is unrealistic to expect

them to do so. They would have to manage the intricate details of the process, which might be time-consuming and error prone. A lack of knowledge of the system may result in Microsoft Dynamics issues that can significantly hinder implementation and lower the chance of a positive conclusion. The complexity of Microsoft Dynamics 365 might overwhelm the IT team, diverting their attention from other crucial tasks and lowering overall productivity.

Overcoming these Microsoft Dynamics implementation issues requires hiring or working with a Microsoft Dynamics consultant who specializes in your industry. These experts will be better able to understand the workings of your business and create a strategy that will ensure Microsoft Dynamics 365 is implemented successfully. The IT team may then assist the Subject Matter Expert (SME) in strengthening this plan.

Not robust: There is also the possibility that Microsoft Dynamics 365 is not as dependable as some other ERP suppliers, which might be an obstacle to Microsoft Dynamics deployment. While this would not affect many industries, Microsoft Dynamics 365 could not be able to deliver the level of resilience that some specialized enterprises or sectors require to continue their operations effectively. For example, companies in the industrial sector may find that Microsoft Dynamics 365 may not offer all the capabilities and functions necessary to support their operations if they have specific or highly specialized needs. This lack of robustness might make it difficult to handle complex processes and integrate with specialist third-party solutions. Additionally, it may lead to Microsoft Dynamics issues that impair efficiency and productivity.

To allay these concerns, organizations need to thoroughly evaluate their particular needs and compare them to Microsoft Dynamics 365's capabilities. In certain cases, more customization or interaction with other specialized tools may be required to achieve a comprehensive Microsoft Dynamics installation solution. In order to avoid creating an overly complex system, it is crucial to find a balance between customization and the previously listed potential drawbacks. By being aware of Microsoft Dynamics 365's limitations and creating the necessary strategies, organizations may lessen the problems associated with using Microsoft Dynamics and find ways to enhance the platform's capabilities to match their unique requirements.

4.4 Conclusion

The dangers and difficulties involved in installing SAP, Oracle NetSuite, and Microsoft Dynamics have all been thoroughly examined in this findings section. The results show that although the approaches for each ERP system—Sure Step for Microsoft Dynamics, ASAP for SAP, and SuiteSuccess for Oracle NetSuite—are different, each poses a different set of difficulties that enterprises need to overcome. Microsoft Dynamics' primary issues are data transmission and user resistance; yet, because of its flexible approach and emphasis on user training, satisfaction levels are higher. However, SAP's complexity sometimes necessitates greater customization and lengthier installation times, which may lower user adoption. Oracle NetSuite is scalable and easy to set up, however it has drawbacks with regard to customization options and internet dependence.

Executive support, appropriate training, and effective change management are critical success factors in all three of the systems, according to the comparative study. In order to enhance the

probability of a successful ERP deployment, it is important for firms to recognize common hazards such as insufficient training and subpar change management. Ultimately, understanding these challenges helps companies develop more effective risk-reduction strategies for the ERP systems they have chosen.

CHAPTER V:

DISCUSSION

5.1 Discussion of Results

The study's findings show that although Oracle NetSuite, SAP, and Microsoft Dynamics are all well-known ERP systems, user happiness, project outcomes, and implementation problems are all greatly impacted by the implementation strategies used by these companies. The comparative study demonstrates how the distinct advantages and disadvantages of each system's technique might impact overall performance.

The results are consistent with previous research that highlights the significance of executive assistance and user training as essential success elements in all three systems. Nevertheless, Because it places a strong emphasis on adaptability and user interaction, the Sure Step technique from Microsoft Dynamics may provide a more flexible framework for businesses going through major transformation, according to this study. An ERP system is used by most organizations to increase productivity. Nevertheless, organizations find it challenging to realize the projected advantages due to the high implementation failure rates. As a result, ERP adoption has received a

lot of attention from academics and practitioners, and they continue to be very interested in doing research on it. The majority of earlier research on ERP installation concentrated on the elements that make practices successful.

5.2 Discussion of Research Question One

Driven by market features including worldwide commerce, broad digital use, and massive volumes of data that need to be monitored, preserved, and analyzed, ERP is a vital solution for many enterprises. In order to successfully adopt ERP, businesses need to have a clear understanding of what is needed. The likelihood of a project succeeding is increased by selecting the appropriate partner and allocating an internal implementation team. ERP installations can be difficult, yet facts and statistics indicate that many businesses meet or even exceed implementation efficiency targets.

The investigation found a number of crucial elements affecting the ERP implementation success in each of the three systems:

- Executive Support: Encouraging project buy-in and guaranteeing resource allocation require strong executive support. Success rates were greater in organizations where the backing of the leadership was evident.
- User Training: Extensive training initiatives greatly raise adoption and user satisfaction levels. Organizations that engage in comprehensive training for Microsoft Dynamics users see fewer resistance concerns, as mentioned in the results section.

- Change Management: In order to overcome employee opposition to new systems, effective management techniques are essential. According to the findings, companies that use structured change management procedures have better results.
- Customization Requirements: The degree of customisation necessary may influence the effectiveness of the implementation. While SAP requires substantial modification, Microsoft Dynamics allows for more customisation, which frequently results in longer implementation periods and more complexity.
- Stakeholder involvement: By encouraging a sense of ownership among users, high levels of stakeholder involvement help projects succeed. Microsoft Dynamics had the top score in this category, according to the data.
- Strong executive support: Across all platforms, a constant essential component was identified as having strong executive support. Executive buy-in made ensuring resources were distributed effectively and project objectives complemented company strategy in successful initiatives.
- Flexibility and customisation: SAP and Microsoft Dynamics offer a great deal of flexibility in customisation, but there is a greater chance of scope creep. Failure demonstrates how project delays were driven by overdependence on consultants for Dynamics modification. However, Oracle NetSuite's pre-configured templates reduce the risk of customisation, although at the expense of flexibility.
- User involvement and training: Good user engagement and training are correlated with successful deployments. Because of their complicated interfaces, SAP projects frequently have high learning curves. In contrast, Microsoft Dynamics benefits from user familiarity

with Microsoft technologies, which increases adoption. These results are consistent with the body of research emphasizing the value of change management initiatives.

- Impact of Methodology and implementation Speed: Rapid cloud deployments are made possible by SuiteSuccess (Oracle NetSuite), satisfying the demands of rapidly expanding enterprises. The Sure Step technique from Microsoft Dynamics is perfect for businesses that require hybrid solutions because it strikes a balance between speed and flexibility. On the other hand, because of its structured waterfall methodology, SAP's ASAP methodology, albeit strong, tends to cause project timeframe extensions.

These components align with previous research demonstrating that an ERP installation's Effectiveness depends on a mix of technology and human factors. The ongoing emphasis on user training and executive assistance emphasizes their crucial roles in achieving positive outcomes. In summary, the success of an ERP implementation depends on matching platform capabilities to business goals as well as providing appropriate governance, training, and support for change management.

5.3 Discussion of Research Question Two

The influence of each ERP platform's methodology on implementation results is covered in this section. The results indicate that different approaches are used by every ERP system:

Microsoft Dynamics: Sure Step Methodology

- What sets the Sure Step process apart is its phased approach, which includes stages for analysis, design, development, deployment, and operation in addition to diagnostics and diagnostics.
- Businesses may focus risk control through incremental testing and yet be able to adapt as changes occur during implementation because to its versatility.
- Organizations using this technique reported higher levels of user satisfaction as a result of their emphasis on training and change management.
- Agile and waterfall approaches are blended in the Sure Step hybrid methodology, which allows flexibility based on project objectives. Because of this flexibility, organizations have more control, but skilled project managers are also required to avoid scope creep. Given that project delays were caused by inadequate oversight, it emphasizes the necessity of governance.

SAP: ASAP Methodology

- Quick execution the primary objective of the ASAP approach is to employ pre-configured templates that are appropriate for specific sectors.
- Despite the benefit of an easy installation, its complexity often leads to issues with user approval.
- Project schedule extensions may result from the various customization needs that SAP users must manage.
- A major focus of the comprehensive waterfall approach employed by the ASAP methodology is on careful planning, comprehensive documentation, and phased rollouts.

While this ensures dependable systems, it might lead to resource-intensive processes and longer lead times.

- As the SAP project ERP disaster illustrates, moving quickly through stages without enough preparation may cause operational disruptions.

Oracle NetSuite: SuiteSuccess Methodology

- Suite Success prioritizes industry's best practices and modular implementation for quick value realization.
- Its cloud-based architecture may limit customisation options while permitting higher scalability as compared to on-premises solutions.
- Organizations lauded its user-friendly design, but concerns about internet reliance were expressed.
- SuiteSuccess respects agile principles and makes use of pre-configured templates for speedy installation. It is feasible to get a faster time-to-value, but customization is restricted.
- This strategy works well for businesses who are growing swiftly and have benefited from the instant scalability of cloud deployment. Nevertheless, businesses that require significant process modifications may find SuiteSuccess to be overly restricted.

The comparative study shows that while all three strategies aim for an effective ERP deployment, they diverge significantly in terms of customization needs, flexibility, and user

engagement strategies. These variances may have an effect on user satisfaction levels and overall project success rates. In conclusion, each strategy has certain advantages and risks. The strategy employed must consider the organization's size, industry, and flexibility needs, keeping a careful eye on user training programs and project governance.

5.4 Discussion of Research Question Three: Challenges and Risks in Implementing Microsoft Dynamics Compared to SAP and Oracle NetSuite

Issues of Governance Regarding Microsoft Dynamics Use:

Microsoft Dynamics provides a lot of flexibility with its cloud, on-premises, and hybrid installation options. But this adaptability also poses challenges for governance and project management. Microsoft Dynamics projects frequently rely on outside consultants throughout critical phases. This can result in scope creep, cost overruns, and unrealistic expectations if internal control isn't strong enough. Teams that attempt to make too many changes at once often experience scope creep in implementations since Microsoft Dynamics allows for a high degree of customization. Uncertain project limits make controlling budgets and timetables difficult. This emphasizes how important governance frameworks are for effectively managing vendor relationships and monitoring advancement.

SAP, on the other hand, encourages comprehensive documentation and staged rollouts utilizing the ASAP approach due to its more organized governance architecture. Although this approach reduces the likelihood of mismanagement, it also comes with a high cost, time, and managerial

oversight, which might make the project take longer to complete. It may be challenging for companies without the necessary resources to strike a balance between efficiency and control. As evidenced by governance difficulties in Microsoft Dynamics ventures, internal oversight teams need to have expertise with project management. Without them, even the most versatile platforms may have unanticipated costs and delays in implementation.

Issues in managing change on various ERP platforms:

Change management is crucial to the success of ERP programs, despite their numerous challenges. Resistance to change is a problem shared by all three ERP platforms, particularly when new systems replace older ones or obstruct established workflows. SAP implementations are notorious for their complexity, high learning curves, and frequent need for extensive user retraining. SAP's structured approach makes it ideal for companies that need strict process control, but its technical complexity may make it difficult for users to adopt, especially in the lack of efficient management strategies.

When compared to SAP, Microsoft Dynamics has a more user-friendly interface, which often results in higher adoption rates. Still, when businesses move away from legacy systems that staff members are accustomed to, opposition happens. Transitioning to new processes can be difficult for employees, even if the new system has more capabilities. In order to reduce resistance, it is
It is imperative to guarantee early participation and thorough training during the transition process.

Oracle NetSuite's SuiteSuccess approach strongly emphasizes speedy installations, which provide users with little time to interact and adapt. Even while the speedy implementation is important for meeting corporate deadlines, employees could feel unprepared for the change, which raises the possibility for user resistance. This illustrates the need for a balance between implementation speed and effective change management strategies to ensure smooth transitions.

The outcomes derived from these platforms highlight the necessity of early and continuous user participation, tailored training programs, and open communication of the new system's benefits for successful change management.

Complexity of Customization and Risks of Scope Creep

Customization in ERP systems may be beneficial yet challenging, particularly for SAP and Microsoft Dynamics. Microsoft Dynamics' moderate-to-high degree of customisation makes it a viable choice for companies looking for specialized solutions. However, over-customization might lead to scope creep since teams might desire to make changes to the system that goes beyond what is necessary. This was a big part of the Lidl ERP fiasco since the company sought to modify Microsoft Dynamics to fit its own pricing structure, which resulted in delays, overspending, and the project's eventual cancellation.

SAP's ability to handle complex, highly customized workflows is one of its advantages. However, this complexity requires extensive planning, testing, and validation to ensure alignment with business processes. Over-customization during SAP installs can lead to upgrade

delays and issues, as shown in some failed projects where an excessive number of bespoke modules were developed without considering long-term maintenance.

Oracle NetSuite provides pre-configured templates as part of its SuiteSuccess concept to lower the risk of change. Although this approach lessens scope creep, it lowers flexibility for businesses with intricate business structures. Companies that use NetSuite should evaluate if the trade-off between speed and customization is in line with their strategic goals.

In general, scope management frameworks are essential to preserving congruence between customization efforts and project objectives, particularly for systems like Microsoft Dynamics and SAP. Businesses must strike a balance between the need for customization and out-of-the-box functionality in order to reduce delays and budget overruns.

Implementation challenges and time overruns

ERP success depends heavily on implementation efficiency and speed, yet there are particular implementation timetable problems for every platform. Due to its various implementation options, Microsoft Dynamics outperforms SAP in terms of speed, although there are concerns about governmental concerns. Lack of effective management over scope increase might lead to implementation delays. These stages were mishandled, which led to excessive cost and deadline misses. The ASAP methodology from SAP emphasizes the importance of carefully planned and tested deployments spaced out, which extends project timelines while ensuring robustness. It is challenging to complete SAP projects on schedule when planning with a large number of people,

which results in delays and higher costs. Businesses that underestimate the time required for process reengineering and testing may face challenges at go-live, as was the case with Hershey's ERP implementation. Oracle NetSuite is well known for its quick installations, which are typically completed in six to eight months, thanks to its SuiteSuccess methodology. On the other hand, rapid rollouts could complicate data transfer and older system integration. After going live, businesses who utilize SuiteSuccess without allowing adequate time for testing and adjustments may have problems with inconsistent systems.

In conclusion, the effectiveness of implementation is determined by how well the chosen methodology fulfills the organization's project management capabilities and operational requirements. Strong governance, risk management, and adequate testing are essential for avoiding implementation delays and disruptions.

CHAPTER VI:

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

6.1 Summary

This thesis looked at the implementation procedures of three popular ERP systems: Microsoft Dynamics, SAP, and Oracle NetSuite. The goal of the study was to identify the broad tactics used in these implementations, assess the advantages and disadvantages of each approach, and look at specific challenges that arose throughout the Microsoft Dynamics implementation process. Each ERP system takes a distinct strategy, which has an impact on user satisfaction, project outcomes, and overall effectiveness, according to the research. For instance, SuiteSuccess is used for Oracle

NetSuite, Sure Step is used for Microsoft Dynamics, and ASAP is used for SAP. Executive support, stakeholder engagement, change management, user training, and customization needs were all included in the list of essential success factors.

Microsoft Dynamics stated an 85% customer satisfaction rate based on quantitative data, whereas SAP and Oracle NetSuite reported percentages of 75% and 80%, respectively. The analysis also revealed that while all three systems aim for successful implementation, there are significant variations amongst them with respect to user engagement strategies, flexibility, and complexity. The poll also revealed that the two biggest implementation challenges for ERP are user resistance and inadequate training. Businesses may improve the chances of a successful ERP implementation by putting in place thorough training programs and effective change management.

6.2 Implications

The findings of this study have significant implications for scholars and professionals involved in the ERP implementation sector. Practitioners who are aware of the minor variations between various methodologies may assist organizations in selecting the optimal ERP system based on their specific needs and operating situations. The emphasis on executive support and user Training as critical success factors demonstrates the need to spend in these areas to maximize user acceptance and enjoyment. From an academic perspective, this article contributes to the current literature by providing comparative analysis of ERP installation methodologies. Unlike past research that concentrated only on certain systems or processes, this study offers a broad viewpoint that highlights the connection between technique selection and project success. This

study highlights the gaps in the body of information about implementation challenges and success factors, laying the foundation for future investigations.

Furthermore, the study's quantitative data provides factual backing for the assertions made about implementation difficulties and user satisfaction rates. For businesses thinking about implementing ERPs, this data may act as a benchmark. It can also guide future research endeavors that attempt to enhance implementation strategies.

- While previous research mostly concentrated on SAP, this thesis offers a fairer comparison by including information on Oracle NetSuite and Microsoft Dynamics. This fills in a vacuum in the literature about the usage of hybrid ERP implementations (such as Dynamics' cloud-hybrid models).
- Future studies should focus heavily on post-implementation ERP performance. The installation phase is the subject of most of the literature, including this thesis, but system optimization, user feedback loops, and ongoing improvement are essential to ERP systems' long-term success. To make sure ERP systems continue to provide value, industry practitioners should give post-go live audits and continuous training programs a priority.
- The significance of internal governance for ERP performance has been understated in earlier studies. This report underscores the significance of internal supervision in ERP systems by emphasizing the governance shortcomings of the Microsoft Dynamics project.

- By relating platform familiarity and training programs to user satisfaction indicators, this thesis expands on the body of research currently available on change management. In particular, it validates those platforms with greater adoption rates—like Microsoft Dynamics—are those that make use of well-known products (like Office 365).
- SAP should be given priority by businesses with complicated processes (such as those in manufacturing) because of its customizability. On the other hand, Oracle NetSuite's quick implementation via SuiteSuccess could be advantageous for quickly expanding businesses that need speed and scalability.
- Companies are adopting multi-platform ERP methods, such as integrating SAP or Oracle modules with Dynamics, and this study emphasizes the significance of governance frameworks that can handle cross-platform integration. Best practices for these hybrid systems and the difficulties with data interoperability should be the main topics of academic study.
- With the growing integration of AI and machine learning technologies into ERP platforms, enterprises need to get ready for novel difficulties and prospects. AI-driven analytics may improve decision-making and streamline corporate procedures. Examples of these analytics are available in Microsoft Dynamics' Power BI. Future studies should examine the effects of AI technologies on user satisfaction and ERP performance after installation.
- Businesses using Microsoft Dynamics should improve internal control to reduce the danger of scope creep and consultant reliance. This emphasizes the necessity for thorough project management frameworks and is consistent with the lessons acquired from Metcash.

- Training initiatives and user engagement strategies that work are essential, particularly for SAP projects with long learning curves. Businesses may overcome reluctance by using change management tactics early on, as seen in the installations of Oracle NetSuite and SAP.
- Risks to data security must be addressed in Oracle NetSuite deployments, and seamless legacy system interoperability must be guaranteed. To prevent interruptions throughout the transition phase, this calls for meticulous preparation and testing.

6.3 Recommendations for Future Research

The results of this investigation allow for the following recommendations for further study:

- Longitudinal Studies: Longitudinal studies that monitor the long-term effects of various ERP installation strategies on organizational performance may prove beneficial for future studies. These kinds of research may shed light on how user happiness changes over time and how early problems are resolved. Studies using a longitudinal design can monitor changes in user satisfaction over time and the ways in which businesses get over initial obstacles in the post-implementation stage. These kinds of research would provide light on the long-term viability of ERP systems and provide a more precise image of ROI and CRI tactics. For instance, monitoring SAP implementation over a five-year period may show how the company responds to new issues by upgrading its systems and offering retraining.
- Industry-Specific Analyses: Although this study compares three ERP systems, future research may concentrate on industry-specific implementations to see how various industries modify these approaches to address their own set of difficulties.

Industry-specific ERP issues are different. For instance, supply chain integration is a top priority for manufacturing enterprises, whereas HIPAA-compliant technologies are necessary for healthcare organizations. Research with a sector emphasis may highlight trends in ERP modifications, industry-specific training curricula, and implementation schedules. Research may examine how non-profits utilize Microsoft Dynamics to handle donor connections or how e-commerce platforms employ Oracle NetSuite for quick scalability.

- Investigating Emerging Technologies: As technology develops further, there are more opportunities and difficulties when it comes to integrating cutting-edge technologies like artificial intelligence (AI) and machine learning into ERP systems. Future studies might explore how these technologies affect user experiences and implementation strategies. Future research might examine the effects of AI-driven insights on operational decision-making as well as the effects of predictive analytics tools like Microsoft's Power BI on user productivity and engagement. While AI-enhanced ERP solutions can reduce labor costs and streamline processes, businesses must also handle new concerns like algorithm bias and data privacy. Understanding how AI impacts business might aid firms in creating more adaptable ERP models, particularly in sectors like finance and logistics that see rapid change.
- User-Centric Studies: Studies that concentrate on the experiences of users during ERP installations may offer more profound understanding of the ways in which certain elements (such as job positions and previous experience) affect users' acceptance and satisfaction. Although a lot of ERP research examines organizational or technological results, user-level insights are still not well understood. The experiences of employees at

various phases of ERP implementation can be captured through qualitative research that include questionnaires, interviews, or ethnographic techniques. The results may offer practical suggestions for creating change management frameworks and user training initiatives that are customized for various user groups.

- Global Views: Broadening the scope of the study to encompass worldwide viewpoints on ERP deployments may provide insights into cultural variations in user acceptability, training requirements, and change management approaches. Studies might look at regional differences in user acceptability, governance frameworks, and training requirements. Conducting comparative research across several regions can yield significant insights for multinational corporations in search of ERP solutions that are culturally sensitive. Examining ERP implementations in Southeast Asia may provide novel approaches to reconciling cloud implementation hazards with regional data protection laws.
- Although the focus of this study was on established businesses, future investigations may look at ERP systems in developing fields, including non-profits, e-commerce, and healthcare. Furthermore, an analysis of ERP performance across various geographic locations is required, especially in the Asia-Pacific market, where the use of ERP is expanding quickly. This study may shed insight on how various industries modify ERP features to address certain operational and legal requirements. Non-profits could concentrate on donor management and compliance, but healthcare firms can require ERP systems with patient data management features.
- As artificial intelligence (AI) and machine learning technologies become more integrated into ERP providers' systems, future studies should look at how AI-driven insights

enhance ERP decision-making and operational effectiveness. The utilization of Power BI analytics by Microsoft provides a foundation for this study.

- Although this study and the majority of others concentrate on the implementation stage, post-implementation performance is still not well studied. Subsequent studies have to examine how businesses sustain ERP functionality and calculate ROI over an extended period.
- As more businesses use multi-platform ERP strategies (such as merging Microsoft Dynamics with Oracle modules), more research should look into the best ways to combine various platforms and the governance frameworks that enable these hybrid models.

6.4 Conclusion

To sum up, this thesis has offered a thorough examination of the implementation strategies used by SAP, Oracle NetSuite, and Microsoft Dynamics. The results show that although every system has advantages and disadvantages, enterprises hoping to use ERP successfully must comprehend the subtleties of their approaches. Critical success factors, including executive backing, change management, user training, and customization requirements, have a big impact on project outcomes. The quantitative evidence, which illustrates how user pleasure differs between systems, supports these results.

Organizations may increase the chances of successful implementation of ERP by managing common issues like user resistance and insufficient training with effective change management strategies. Through providing a comparative analysis that emphasizes the importance of methodological choice in achieving successful outcomes, this study fills in gaps in literature

and provides practitioners with valuable insights. In order to effectively utilize technology and foster operational excellence, companies need to be aware of these characteristics while navigating the complex ERP installation process and the dynamic business environment.

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