



Major Success and Failure Factors During the Online ERP Implementation Process

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Abstract

Enterprise resource planning (ERP) technologies are becoming more popular among businesses working toward dynamic growth. Enterprise resource planning, sometimes known as ERP for short, is a centralized software system that makes it simpler for all departments to work together and share data in real time. This might result in decisions being made more quickly and procedures being simplified directly.

Only two of the numerous factors determining how long it takes to establish an ERP system are the size of the company and the number of SKUs that need to be connected. There are still many more factors that play a role. Many distinct factors are considered when determining whether or not an ERP implementation is effective. It has been determined via study that various strategies and criteria are pertinent. Using these strategies decreases the likelihood of encountering issues and increases the possibility of successfully deploying an ERP system.

Implementing enterprise resource planning (ERP) is seen as a significant undertaking by the customers and the service providers deploying ERP systems. Customers may incur considerable money and time costs if the method is unsuccessful. This is because several departments are often involved in the process. Suppose an ERP provider's project is unsuccessful. In that case, it may have a detrimental effect on their reputation and future commercial possibilities.



To ensure their ERP deployments are successful, firms implementing ERP systems seek to develop efficient and smooth processes. Despite this, problems inside the implementation team remain the root reason for some efforts' failure. Issues such as these can arise when an individual does not have appropriate knowledge of the subject matter or does not have a good understanding of the product. This demonstrates how important it is to have skilled and knowledgeable employees about the ERP system and the organization they work for.

The effectiveness of an enterprise resource planning (ERP) system may be affected by a wide variety of stakeholders, both internal and external to the organization. Through the whole ERP installation process, the firm's internal environment, including its culture, traditions, and readiness to change, is given significant consideration.

Keywords: ERP, Implementation, case study, CSF, CFF, SOW

Introduction:

Understanding the critical success and failure factors during ERP implementation is essential for organizations planning to adopt a new ERP system. ERP implementation is a long-term project with several prerequisites for both the customer and the implementation provider.

Critical Success Factors in ERP Implementation

Team Mobilization and Selection:

The first step is mobilizing a skilled, knowledgeable team. This involves selecting motivated individuals from each department within the organization who understand departmental processes thoroughly.

On the implementation side, the team should include functional experts from all relevant areas and members from the product, development, and report development teams.

Top Management Support:

Support from top management is crucial from the decision-making phase to Go-Live, ensuring alignment with business goals and providing authority to address challenges.



Clear Definition of ERP Goals:

To guide decision-making and maintain focus on the intended objectives, it is crucial to establish the purpose and goals of the ERP system before commencing the implementation process.

Requirement Documentation:

Collaborate with department heads to create detailed requirement documents that capture the needs of each area, as ERP systems link all departments.

Team Collaboration:

ERP implementation is a team effort, requiring input from all members to ensure a balanced and well-rounded approach to deployment.

Key Critical Success Factors Include:

Team Support and Involvement

Clear ERP Scope Definition

Well-Defined Business Processes

Willingness to Embrace Change

Effective Project Management

Comprehensive Discovery Sessions

Ongoing Communication and Training

Hands-On Support (Handholding Sessions)

Industry Expertise from Implementation Partner

Timely Project Reviews

Formal Project Closure



Critical Failure Factors in ERP Implementation

Product Misalignment:

Selecting a product that doesn't align with organizational requirements can lead to inefficiencies, costly customizations, or eventual failure.

Resistance to Change:

User resistance can impede adoption. Early engagement and clear communication on the new system's benefits are essential to ease the transition.

Inadequate Knowledge Transfer:

Effective knowledge transfer between the customer and ERP team is vital. Poor knowledge exchange can lead to misunderstandings and misaligned expectations.

Insufficient Testing:

Without rigorous testing, issues that disrupt operations and lower user confidence in the system may arise after Go-Live.

Lack of Support from the ERP Team:

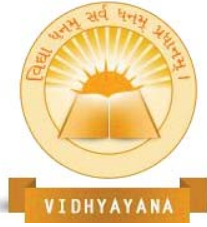
A lack of proactive support from the ERP team can lead to delays and hinder resolution of critical issues.

Excessive Customization:

Extensive customization can complicate future upgrades, increase costs, and deviate from the system's core functionalities.

Poor Project Management:

Ineffective project management can lead to miscommunication, missed deadlines, and budget overruns, reducing the chances of a successful ERP implementation.



Key Critical Failure Factors Include:

Product Misfit with Requirements

Resistance to Change

Ineffective Knowledge Transfer

Insufficient Testing

Lack of ERP Team Support

Excessive Customization

Weak Project Management

By identifying and proactively addressing these critical factors, organizations can significantly improve their chances of a successful ERP implementation, achieving efficient integration, user acceptance, and long-term benefits across departments.

Literature Review:

Critical Success Factors (CSF) for ERP Implementation

From this research, it is clearly understood that information is a crucial aspect of the system. It should be shared among all team members via management (Burns & Turnipseed,1991)

Aligning current business processes with the new enterprise resource planning (ERP) system is an essential effort, as this study shows. (Holland et al. ,1999).

From this research, it is clearly understood that successful ERP implementation is not limited to standard processes. Some time enhancements are also required, which adds value to the company. (Hong & Kim, 2002)

This study's authors offered many ERP implementation Critical Success Factors that, if followed, may lead to a successful ERP rollout for enterprises. (Leopoldo & Otieno, 2005)



According to the findings of this study, researchers have proposed a few novel phenomena that may be of assistance to others during the practical application of ERP. (Nadhakumar, 1996)

As a result of this study, it is abundantly evident that if any customization is needed during the Implementation of ERP, it will either be customization in the code or modification in the interfacing, which will be necessary for connecting with other vendors' modules. (Nandakumar et al., 2005)

The research shows a correlation between environmental and organizational demands and ERP adoption. Hence, before arranging the ERP installation, the business should ensure it is prepared. There is no doubt in anyone's mind after reading this report that ERP implementation is a massive, intricate, and expensive undertaking. (Umble et al., 2003)

As a result of our study, it is evident that during the last ten years, many ERP providers have been concentrating their efforts on adopting ERP systems for midsize firms. (Ahmad et al., 2013)

The findings of this study make it abundantly evident that the researchers identified eleven elements that contribute to the successful deployment of ERP. From the perspective of ERP adoption, these variables are generated from an examination of ten separate essential success factors. (Fui-Hoon Nah and Lee-Shang Lau ,2001)

According to this study, organizational culture is a critical component in determining the success or failure of ERP installations. It is crucial to include all parties involved. (Krumbholz and Maiden ,2001)

This study has made it clear that several important factors impact ERP implementation. These include an ERP system, a competent project team, appropriate package selection, software development, implementation strategy, and support from upper management. (Veena Bansal, 2013)

The study's findings clarify that the researcher identified seventeen critical criteria for ERP deployment. Here are some factors to consider: project management, teamwork and composition, communication, user involvement, education and training, vendor support,



appropriate hardware and software, user acceptance, data analysis, degree of customization, support from top management, performance monitoring and evaluation, organizational fit, package selection, business process re-engineering, business plan and vision, organizational culture and readiness. (Rizkiana, Adjeng & Ritchie, Hamzah & Adrianto, Zaldy. ,2021)

ERP Implementation Critical Failure Factors

According to this research, ERP deployments may fail in the post-implementation period, even after a successful installation. This is because the Implementation team's focus naturally diminishes after a successful implementation. (G. C. Peng et al. ,2010)

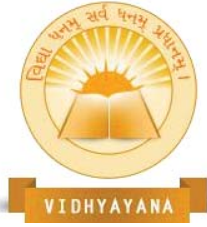
The results show two sections of the investigation. The first component uses a root-cause analysis to look into what went wrong. Pareto analysis is used to identify the most significant factors that lead to ERP implementation failure in the industrial sector. (Archana Sar and Poonam Garg,2012)

The findings of this study make it abundantly evident that the researchers used the FEMEA methodology to determine the Critical Failure Factor of the ERP deployment process. (H. Shirouyehzad et al., 2011)

Through the findings of this study, it has become abundantly evident that the success or failure of an ERP implementation will be contingent upon the selection of the appropriate ERP package and the appropriate ERP implementation partner, as well as the proper planning of the Implementation and the mapping of the business process. Increasing the likelihood of failure will occur if something goes wrong. (Wilson et al., 1994)

This research clearly shows that the authors have used a secondary data research technique of multiple case study analysis to know why, i.e., “why” and “how”, the ERP implementations have not been implemented successfully. (Ada Wong et al. ,2005)

This research clearly shows that the researcher found the Vendors who implement ERP in China. The study focuses on the significant reasons why international Vendors of ERP systems cannot dominate the Chinese ERP market. (Yajiong Xuea et al., 2005)



Methodology:

A case study and interview technique determined the significant success and failure criteria throughout the ERP deployment process. The selection process consisted of selecting five businesses, all of which had previously deployed an ERP system of a comparable kind using the same ERP vendor and implementation partner. Choosing a representative sample of companies allowed us to examine how factors like company size, business style, and geographic dispersion affect certain traits. A set of standardized interview questions was created and sent to all groups to ensure uniformity and allow for meaningful comparisons of answers.

Case Study Methodology

Case Selection:

Case 1: Large manufacturing company located at a single site

Case 2: Large manufacturing company operating across five locations

Case 3: Small manufacturing company functioning as an Original Equipment Manufacturer (OEM) for larger companies

Case 4: Large trading and services company with operations across seven locations

Case 5: Small trading company with a single location

Questionnaire Design:

The interview questions focused on critical areas influencing ERP implementation, including:

Challenges Faced During Implementation

Team mobilization and involvement from different departments

Level of top management support

Training and knowledge transfer efforts



Customization requirements and impact

Change management strategies

Testing and data migration processes

Communication and ongoing support from the ERP partner

Review of Existing Case Studies:

Before designing the questions, existing ERP case studies from various ERP websites were reviewed. This included studying successful and failed ERP implementations to pinpoint common themes that could influence the implementation outcomes. The reasons for failure were especially noted to refine the questions around critical failure factors.

Interview Process:

Interviews were conducted with representatives from each company, focusing on project managers, department heads, and key users involved in the ERP implementation. Each interview followed a structured format to capture detailed insights into the ERP project's successes and challenges.

Comparative Analysis:

Responses were systematically compared across cases to identify patterns in critical success and failure factors. The analysis considered:

Company size and scale of ERP implementation

The geographic spread and the complexity it added to the coordination

Specific industry requirements, such as manufacturing vs. trading, and how these influenced the customization needs and change management



Identification of Key Factors:

We identified the leading causes of success and failure using information gathered from interviews and case comparisons. The elements were arranged into categories, which included things like the mobilization of the team, the administration of the project, the customization of the system, customer acceptance, and the transfer of knowledge. With the use of this organized method, we were able to identify significant factors that regularly led to the success or failure of many businesses.

Through this case study and interview technique, an in-depth and comparative knowledge of ERP implementation aspects was achieved, as well as the identification of practical insights that can be used to influence best practices and risk mitigation methods for future ERP projects.

Success Factor	Case 1	Case 2	Case 3	Case 4	Case 5
Choose the right product which fits your business requirements	Y	Y	Y	Y	Y
Required customization in the Traction screen	Y	Y	N	N	N
Required Customization in Reports	Y	Y	Y	Y	N
The implementation period under the tolerance	Y	Y	Y	Y	Y
Implementation Budget under the tolerance	Y	Y	Y	Y	Y
Support from the Entire Team	Y	Y	Y	Y	Y
Involvement of the Entire Team	Y	Y	Y	Y	Y
ERP scope definition	Y	Y	Y	Y	Y
Business processes should be defined.	Y	Y	Y	Y	Y
Adoption of new change	Y	Y	Y	Y	Y
Project management	Y	Y	Y	Y	Y



Detail discovery sessions	Y	Y	Y	Y	Y
Communication and Training	Y	Y	Y	Y	Y
Hand holding session	Y	Y	Y	Y	Y
A partner that knows your industry	Y	Y	Y	Y	Y
Project Review on a timely basis	Y	Y	Y	Y	Y
Project Closer	Y	Y	Y	Y	Y
Critical Failure Factor					
The product does not fit the requirement (wrong selection of product)	N	N	N	N	N
Users' resistance to change	N	N	N	N	N
Poor knowledge transfer Both Way	N	N	N	N	N
Lack of Testing	N	N	N	N	N
Lack of support from the ERP Team	N	N	N	N	N
Huge customization needed	N	N	N	N	N
Poor Project Management	N	N	N	N	N

Results:

1) The Most Important Factors That Determine Success or Failure in ERP Implementation

2) Implementing an enterprise resource planning (ERP) system may be effective or unsuccessful based on various individual conditions. Included in the following is a list of significant elements that have the potential to influence the final result:



Critical Success Factors

Choosing the Right Product: Selecting an ERP product that aligns with the organization's specific business requirements is crucial. A suitable product increases the likelihood of successful Implementation.

Limited Customization: While some customization is often necessary, excessive customization can indicate that the chosen product does not fit the organization's needs. It's essential to limit customization to what is required.

Customization in Reports: Customizing reports is generally acceptable, as reporting needs can vary significantly from one organization to another.

Adhering to Implementation Period: The implementation period should remain within an acceptable timeframe. Exceeding this timeframe can lead to complications and potential failure.

Staying Within Budget: The implementation budget should be maintained within acceptable limits. Overspending can be a significant indicator of impending failure.

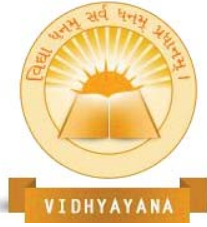
Support from the Entire Team: Full support from all team members throughout the ERP implementation process is essential for success.

Involvement of the Entire Team: Active involvement from all departments ensures that each member's responsibilities are addressed, contributing to the project's overall success.

Clear ERP Scope Definition: Defining the scope of the ERP implementation before starting the project is vital for setting expectations and boundaries.

Defined Business Processes: All business processes should be clearly defined before initiating the ERP implementation to ensure the system aligns with existing workflows.

Adoption of New Changes: A willingness to embrace necessary changes is critical for a successful ERP implementation.



Effective Project Management: Strong project management throughout the implementation phases is crucial for keeping the project on track.

Detailed Discovery Sessions: The discovery phase should be thorough, as it lays the foundation for a successful implementation.

Communication and Training: Effective communication and comprehensive training for users are essential for ensuring smooth transitions to the new system.

Handholding Sessions: Providing support and guidance to users during the implementation process enhances user confidence and helps address challenges early.

Industry Knowledge of Implementation Partner: The success of the Implementation often relies on the knowledge and expertise of the ERP implementation partner. A partner familiar with the industry can offer invaluable insights.

Timely Project Reviews: Regular reviews help identify potential issues early and align the project with its goals.

Project Closure Documentation: A formal project closure document is essential to signify successful completion and to provide a reference for future evaluations.

Critical Failure Factors

Mismatch of Product and Requirements: Selecting an ERP product that does not fit the organization's needs can lead to failure.

Excessive Customization: A high degree of customization requirements indicates a lack of compatibility between the product and the company's needs.

Inadequate User Adoption: Users' Resistance to change might be a barrier to the successful adoption of the ERP system.

Poor Knowledge Transfer: Insufficient knowledge transfer during Implementation can lead to operational difficulties post-launch.



Inadequate Testing: Failing to conduct thorough testing can result in unresolved issues that negatively affect system performance.

Lack of Support: Insufficient support from the ERP implementation team can lead to delays and problems throughout the project.

Over-Customization Needs: The need for extensive modification often indicates a mismatch between the enterprise resource planning system and the firm's business operations.

Poor Project Management: Ineffective project management may lead to missed deadlines, financial overruns, and the project's collapse.

Organizations may improve their chances of a successful ERP deployment by understanding and addressing the crucial success and failure factors involved. This will ensure the system successfully serves their requirements and promotes their development.

Conclusion:

The outcome of this research highlights effective practices that can significantly enhance the success rate of ERP implementations. By following these steps, customers and implementation teams can reduce the likelihood of failure, maintain control over implementation costs, and achieve desired outcomes. The three significant benefits of adopting these practices are:

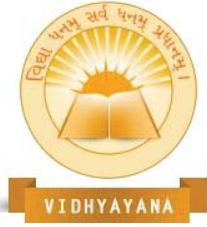
Increased Ratio of Successful Implementations: By adhering to best practices, organizations can improve their chances of successfully implementing ERP systems.

Timely Completion of Implementation: A structured approach ensures that projects are completed within defined timelines.

Budget-Conscious Implementation: Effective planning and execution help keep the Implementation within budget limits.

Best Practices at Various Stages of ERP Implementation

ERP implementation is a step-by-step process that requires careful attention to detail at each stage. Below are essential steps to ensure successful and cost-effective Implementation:



Selection of the Right Product and Implementation Partner: Choosing an ERP product that aligns with the organization's specific needs and an experienced implementation partner is crucial for success.

Define Implementation Scope Before Starting: Clearly defining the scope of the Implementation ensures that all parties have a shared understanding of objectives, deliverables, and boundaries.

Identify Gaps During the Discovery Phase: Conduct thorough discovery sessions to identify gaps in processes or system requirements. This helps in addressing potential issues early on.

Map All Business Processes Before Proof of Concept (POC) Sessions: Comprehensive mapping of current business processes before POC sessions allows for better alignment of the ERP system with organizational workflows.

Establish and Maintain a Defined Team: A dedicated team comprising representatives from all relevant departments should be established and available throughout all implementation phases to ensure effective collaboration and support.

Involve All Internal and External Stakeholders: Engaging all stakeholders, including internal users and external partners, fosters collaboration and ensures that diverse perspectives are considered.

Conduct Training at All Levels of Users: Comprehensive training programs tailored to different user levels will facilitate smooth transitions and enhance user adoption of the new system.

Encourage Adoption of New Changes: Cultivating a culture that embraces change is vital for successfully integrating the ERP system into everyday operations.

Create a Detailed Phase-wise Project Plan: Developing a structured project plan that outlines tasks, timelines, and responsibilities at each phase of the Implementation will help maintain focus and accountability.



By following these best practices, organizations can significantly improve their ERP implementation outcomes, ensuring that the new system effectively meets their operational needs and contributes to overall business success.

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Conflict of Interest:

No Conflict of Interest



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