

# RESEARCH ON FACTORS AFFECTING THE APPLICATION OF ENTERPRISE RESOURCE PLANNING SYSTEM (ERP) IN TEXTILE AND GARMENT INDUSTRY IN VIETNAM

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## ABSTRACT

In the 4.0 revolution industry, developed countries have applied enterprise resources planning, which aggregates all data from different processes and store it in a centralized database allowing the use of information in a variety of ways for managers. However, in Vietnam, specifically textile companies, ERP is much less applied. After researching and studying the characteristics of Vietnamese textile companies, the author finds that the application of Enterprise Resources Planning (ERP) is likely to be the appropriate method to bring significant benefits to businesses, especially textile manufacturers. The objectives of the study are determining factors and the level of impact of each factor on the application of ERP systems in textile enterprises in Vietnam. Six factors that affect the application of ERP in Vietnam textile companies by Regression Model have been found out, including support from senior management, effective project management, change management, support from consulting companies, training, and users. All factors have a positive impact on the successful application of ERP. The influence level of factors in order of decreasing importance: support from senior management, effective project management, change management, support from consulting firms, training, and user. From that, it can be concluded that the factor "Support from senior management" has the greatest influence on the successful application of the ERP system in the textile industry in Vietnam and the "User" factor has the least amount of influence. The most influential of the six factors analyzed for the successful application of the ERP system to the textile industry in Vietnam. According to Tabachnick and Fidell, for multivariate regression analysis, the minimum sample size (N) to be achieved is calculated by the formula:  $N = 50 + 8 * m$  (m is the number of independent factors). In this study, there are 6 independent factors, so the minimum number of samples will be:  $N = 50 + 8 * 6 = 98$  (sample). After screening the total obtained surveys, removing invalid surveys (same answers from beginning to end, leaving many questions blank), the sample size for the analysis is 108 samples. This paper has summarized some personal characteristics from the results collected from 108 survey samples as follows: Regarding the ERP software used by textile and garment enterprises in Vietnam, 3 ERP system providers account for the largest market. The major market share is SAP (45.4%), Oracle (34.3%), Microsoft Dynamic (11.1%), and the rest are other software (9.2%). Based on the research results, some solutions can be offered to enhance the successful applicability of ERP in Vietnamese textile companies.

**Keywords:** Enterprise Resources Planning (ERP), regression model, centralized database.

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## 1. INTRODUCTION

In recent years, the fourth industrial revolution, or Industry 4.0, has been the focus of global discussions. To succeed in today's fiercely competitive environment, businesses must adapt quickly [20]. As a result of the strong integration of technology, a wave of new IT system deployment is spreading throughout the business world. Among them is ERP (Enterprise Resource Planning) software, or human resource planning system, one of the strongest enterprise applications. Textile and garment are one of the most crucial industries in Vietnam's economy with a large export turnover in Vietnam [14]. To be able to compete with countries with developed textile industries such as China, India ..., Vietnamese textile enterprises must solve important issues such as production optimization, cost reduction, computerizing enterprises. Therefore, this is considered an exciting period for the ERP market in Vietnam textile and garment. Every year, Panorama Group - an enterprise specializing in ERP software consultancy - conducts surveys

on the implementation of ERP projects of businesses around the world. In the 2019 ERP Report [38], Panorama surveyed businesses that have been implementing ERP applications. Among them, about 45% of the projects exceeded the initial budget and 58% exceeded the original schedule. The percentage of users who are satisfied with the application of ERP software tends to increase with the rate of 88% of users satisfied compared to 68% of statistics in 2018. Regarding the implementation budget, up to 45% of the projects exceed the original budget. Compared to Panorama's 2018 ERP Report (64%) [39], this is a positive change because it shows that businesses can evaluate more realistically the time, effort, and resources needed to deploy ERP. The implementation of ERP software exceeded the budget due to many reasons such as scope expansion (43%), low expected consulting fee (38%), technical or organizational issues (33%). In terms of implementation time, up to 58% of projects are late. This is similar to the deployment budget, with a much higher rate of delays than on-time in deploying ERP software.

Delay has many causes such as unrealistic project time (48%), data problems (41%), expanding project scope (41%). According to Panorama's experience, the deployment is beyond the set time due to the late addition of resources or lack of guidance from the implementing units. In addition, the action plan for implementing, managing organizational change, improving business processes are also reasons for the delay in the deployment of ERP software. Successfully deploying ERP software to gain benefits when applying ERP is not a simple task. After researching and understanding the characteristics of Vietnamese textile enterprises, the author found that the application of ERP system suitable for researching textile enterprises aims to achieve the following three specific objectives: Identifying factors affecting ERP application to textile enterprises in Vietnam; Determining the impact of each factor on the application of ERP system to textile enterprises in Vietnam. From the results of the analysis, the author proposes several recommendations to help managers of textile enterprises in particular and enterprises in Vietnam in general to improve the ability to successfully apply the ERP system to businesses.

The structure of the paper consists of 5 parts, including an introduction, an overview of past research, research method, research results, conclusion, and recommendations.

## 2. OVERVIEW OF PAST RESEARCH

There has been a lot of research on enterprise resource planning systems ERP, from many different angles. In ERP enterprise management, it is understood that "a system consists of a commercial software package that promises seamless integration of all information flowing through the company, finance, human resources, chains supply and customer information" [8]. According to the research of Helmut, Michael & Guy [15], ERP is a commodity, a product in the form of computer software, and an important means of providing business solutions for businesses. ERP is not only a software solution but also a strategic business solution for businesses.

According to Olson [17], ERP is a software component that helps businesses plan and manage important parts of the business process including production planning, purchasing, inventory management, dealing with suppliers, providing customer service, and tracking orders. In the research of Aernoudts et al. [1], ERP gathers all data from different processes and stores it in a centralized database that allows the use of information in a variety of ways. In another study, empirical research on the factors affecting user acceptance of ERP systems - focusing on small and medium enterprises in Vietnam, ERP systems try to integrate. All business processes into one set of applications, processes, and metrics are synchronized to improve data consistency and integration of modular applications [12]. ERP is a system to help streamline, improve and develop businesses, but the successful application of an ERP enterprise resource planning system is affected by many factors. Many studies have been done in identifying factors to make ERP projects successfully implemented. In this paper, most information was available on previous studies, with additional studies that specified the Textile industry in Vietnam.

Some contributions to the literature from the findings of the paper are 6 main factors affecting the application of the ERP system in the textile industry in Vietnam and the actual status of the impact of each factor. for the ERP system application process. 6 significant factors are support from senior management, effective project management, change management, support from consulting companies, training, and users. All factors have a positive impact on the successful application of ERP. The influence level of factors in order of decreasing importance: support from senior management, effective project management, change management, support

from consulting firms, training, and user. From that, it can be concluded that the factor "Support from senior management" has the greatest influence on the successful application of the ERP system in the textile industry in Vietnam and the "User" factor has the least amount of influence.

From the research results, enterprise resource planning (ERP) systems have been beginning to be interested in textile companies in Vietnam, but the level of willingness to apply ERP systems of textile enterprises in Vietnam is still low. ERP systems help to consolidate data of departments and centralize data management for textile companies to apply, thereby helping leaders and managers of textile enterprises to make more effective and accurate decisions, more effective in managing employees. The rate of ERP system application in textile companies in Vietnam is not high, most of the cost of implementing ERP system application projects in textile enterprises in Vietnam is still high. According to the situation of small-scale textile and garment enterprises, limited investment capital, enterprises face many difficulties to invest in ERP projects, when the large scale of investment capital as opposed to their financial capacity limit.

### 3. RESEARCH METHOD

#### 3.1. Building the research model

In the past, there have been many studies showing the factors affecting the application of enterprise resource planning (ERP) systems. The factor research direction was first used by Rockart and then widely applied in many aspects of information technology project management such as: implementing warehouse management, management, production,... In the field of ERP application, knowing the influencing factors will help to better organize the project implementation, thereby ensuring the success of the project. The results of the studies have also been examined in projects carried out in various countries including developing and developed countries [2, 6, 24-29, 33]. Factors explored such as goal definition, user engagement, change management, project management, leadership support, process change, communication, quality, team consulting. Based on the actual situation in Vietnam combined with other domestic and foreign studies, the author built a model of 6 factors affecting the application of ERP enterprise resource planning system in companies. Textile and apparel include support from top management, effective project management, change management, support

from ERP software consultancy, training, and users, specifically as follows:

#### Support from senior management

Support from senior management is active support from management in providing resources, project commitment, leadership involvement in solving project issues when there is a problem. arising [10]. Management should understand each level of support for change and support [7]. Leadership support was once considered the most important and confirmed factor in the research of Western countries [5, 26-29, 31, 33, 34].

*H1: The greater the support from senior management, the more successful the ERP application project in the textile industry in Vietnam.*

#### Effective project management

ERP projects are complex, so an effective management strategy is needed to control their implementation [33]. Project management is the process of monitoring and control throughout the project's life cycle, which involves the use of skills and knowledge in planning and monitoring tasks to achieve set goals of the project, achieve employee commitment, and organize the implementation process [4]. Therefore, a detailed project plan associated with the goal needs to be determined. Project management is considered an important factor determining the success of the project [2, 28, 30, 31, 32, 34].

*H2: The more effective project management is, the more successful the ERP application project in the textile industry in Vietnam.*

#### Change management

Implementing an ERP system involves standardizing old business processes into new standard processes according to different technologies [5]. Therefore, organizations need to be ready to change their processes to fit the process designed on the ERP software, minimizing edits on the ERP. Too much editing on the ERP will cause the system to generate uncontrollable errors, reducing the effectiveness of the ERP application. Process standards and software modification mitigation have been discussed by researchers [5, 26-28, 31, 34, 36] define process standardization as a review and redesign of business processes to achieve improved, more efficient results such as on cost, quality, and speed.

*H3: The better the change management, the more successful the ERP application project in the textile industry in Vietnam.*

**Support from ERP software consulting firm**

The ERP product provider should have a good working relationship with the ERP application company, offering quality services within a reasonable amount of time, providing users with business knowledge and expertise on how ERP is used, as well as providing documentation, operational documents, and other necessary documents for the use of ERP [11]. Every business has different needs, and each provider has different solutions. It is likely that they do not fully meet the needs of the business, especially when the business process of the business is unique. Therefore, to increase the chance of success, management must choose the software that best suits the requirements of the business. ERP vendors use different hardware platforms, databases, and operating systems, and some of this packaged ERP software is only compatible with some businesses. Therefore, businesses should first conduct requirements analysis to ensure that the issues that need to be addressed and customized ERP software are tailored to the business [34].

*H4: The better the support from ERP software consulting firms, the more successful the ERP application project in the textile industry in Vietnam.*

**Training**

According to Nelson and Cheney [16], there is a positive connection between employee training and their ability to use computer or technology-related products. A series of studies have shown a link between the satisfaction of ERP software users and their complete training in ERP software. Another study by Gartner Group also shows that businesses should spend 25% of the ERP project funding for user training. Shortening and spending less on training time will be counterproductive in the long run. Training refers to the process of providing managers and employees with the overall concept of ERP software. As a result, users have a better understanding of how their work relates to other functional departments within the enterprise [37].

*H5: The more thorough the training, the more successful the ERP application project in the textile industry in Vietnam.*

**Users**

User participation in the deployment process increases their level of satisfaction and confidence in the ERP system. According to Zhang et al. [34], the company should allow users to participate in the deployment project right from the requirement identification stage,

followed by participation in the deployment stage. As users participate and deploy, they get used to the system and understand the system faster, thus helping them feel less difference between the old and new systems. Moreover, this helps users to contact the system early and when entering the training phase, they will not feel strange and difficult anymore. Once you understand the process and the business, users will no longer need consultants, which helps reduce costs for the company. From there they can also re-educate those new to the ERP system. In addition, users participate in system implementation more effectively because it enhances cognitive control through participation in overall project plans [34].

*H6: The higher the user's capacity, the higher the success of ERP application projects in the textile industry in Vietnam.*

The author proposes a research model as Figure 1.



Figure 1. Model of factors affecting ERP application

**Sources**

$$TC = \beta_0 + \beta_1LD + \beta_2DA + \beta_3TD + \beta_4TV + \beta_5DT + \beta_6\epsilon T + \epsilon$$

In which:

$\beta_0$  is the regression constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$  are the regression coefficients

$\epsilon$  is the random error.

Independent variables: (1) LD: Support from senior leaders; (2) Project: Effective project management; (3) TD: Change management; (4) TV: Support from ERP consulting firm; (5) Tel: Training; (6) SD: User

Dependent variable: TC: Successful application of ERP.

### 3.2. Data collection

In the survey, the author sent questionnaires to respondents by live-streaming or via the website, email. At the same time, the questionnaire was designed on Google Docs and sent via emails to the survey respondents, who are working at textile enterprises that have been applying ERP systems in Vietnam. The survey questionnaires are divided into 2 parts. The first part consists of three questions to find out information about textile companies in Vietnam such as company name, the ERP system the company is using, and when the company applied the ERP system. The second part contains 25 questions investigating the factors affecting the successful application of enterprise resource planning (ERP) to textile enterprises in Vietnam. The survey was conducted in the period from 4/2020 to 6/2020, sent by the website, email to the Board of Directors, department heads, and employees involved in ERP application of 130 textile companies in Vietnam which have official websites and clear email addresses provided by the customer portfolio of ERP software consulting companies in Vietnam (BRAVO, Fast, FPT IS, Vietsoftware, Effect) in 2020.

### 4. RESEARCH RESULTS

Table 1. Testing Cronbach's Alpha reliability coefficient

Observed Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item - Total Correlation	Cronbach's Alpha if Item Deleted
<b>Support from senior leadership (LD): Cronbach's Alpha = 0.906</b>				
LD1	11.602	3.588	0.783	0.881
LD2	11.611	3.511	0.814	0.870
LD3	11.519	3.392	0.779	0.882
LD4	11.630	3.319	0.782	0.881
<b>Effective project management (DA): Cronbach's Alpha = 0.852</b>				
DA1	15.278	5.193	0.568	0.846
DA2	15.222	4.866	0.706	0.811
DA3	15.241	4.521	0.755	0.796
DA4	15.037	4.802	0.719	0.807
DA5	15.222	5.240	0.577	0.844

<b>Changing management (TD): Cronbach's Alpha = 0.793</b>				
TD1	7.370	0.964	0.655	0.700
TD2	7.398	0.896	0.712	0.636
TD3	7.565	0.958	0.549	0.816
<b>Support from consulting ERP firm (TV): Cronbach's Alpha = 0.844</b>				
TV1	7.491	0.888	0.694	0.805
TV2	7.481	1.000	0.809	0.704
TV3	7.546	0.998	0.648	0.841
<b>Training (DT): Cronbach's Alpha = 0.839</b>				
DT1	11.241	2.091	0.707	0.781
DT2	11.130	1.927	0.707	0.780
DT3	11.333	2.037	0.644	0.809
DT4	11.074	2.219	0.634	0.812
<b>User (SD): Cronbach's Alpha = 0.817</b>				
SD1	7.343	1.050	0.742	0.671
SD2	7.176	1.380	0.588	0.831
SD3	7.315	0.947	0.711	0.714
<b>Successful application of ERP (TC): Cronbach's Alpha = 0.773</b>				
TC1	7.676	1.044	0.563	0.741
TC2	7.741	0.904	0.594	0.717
TC3	7.602	1.008	0.679	0.624

Sources: SPSS data processing results

Regarding ERP software, textile and garment enterprises in Vietnam are using: Of the total 108 answers, 58 people chose SAP (accounting for 45.4%), 37 people chose Oracle (accounting for 34.3%); 12 people chose Microsoft Dynamics (11.1%), and the remaining 10 chose other software (9.2%). For using time of ERP system: Out of 108 responses, 1 person chose 1 year back level (accounting for 0.9%), 16 chose 1-2 years level (14.8%), 14 people chose 2-3 years' level (accounting for 13.0%), 14 people are choosing at 3-4 years level (accounting for

13.0%) and the remaining 63 choosing at above 4 years level (accounting for 58.3%). Conducting the reliability test of a scale consists of 6 factors (6 independent items): (1) Support from senior management, (2) Effective project management, (3) Changing management, (4) Support from ERP consulting software company, (5) Training, (6) Users. In addition, performing Cronbach's Alpha test for the dependent items succeeds in applying ERP. The author obtained the results in Table 1.

The correlation coefficient through Item-total of all factors of 6 scales is greater than 0.3, so no items are excluded. So this scale has met the reliability requirements, the observed items will be included in the next factor analysis. The author conducts the appropriate testing of the EFA factor analysis model (KMO) and correlation testing of observed items (Bartlett's Test).

Table 2. KMO and testing Bartlett's Test for independent variables

Evaluation factor	Value	Compare
KMO coefficient	0.844	$0.5 < 0.844 < 1$
Sig value in Bartlett Test	0.000	$0.000 < 0.05$
Average Variance Extracted	73.48%	$73.48\% > 50\%$
Eigenvalue Value	1.05831	$1.50831 > 1$
Df	231	

Sources: SPSS data processing results

According to the results table, Bartlett test: p-value (Sig.) = 0.000 < 0.05 hence the independent variables are correlated. The KMO (Kaiser - Meyer - Olkin) test indicated that the KMO value was very high ( $0.844 > 0.5$ ) which is satisfactory, showing the common part between large variables. The analysis results table shows that the total variance extracted in line 6 and the cumulative % column has the cumulative variance of factors of  $73.48\% > 50\%$  that meet the criteria. Conclusion: 73.48% chance of factors is explained by observed variables. Eigenvalue value =  $1.05831 > 1$  (satisfied).

Table 3. Average Variance Extracted result

Factors	Initialized eigenvalues		
	Total	% Variance	% Cumulative
1	7.987	36.304	36.304
2	2.445	11.115	47.419
3	2.090	9.499	56.919
4	1.400	6.365	63.283
5	1.185	5.385	68.669
6	1.058	4.810	73.479

Variance explained rate			
1	7.987	36.304	36.304
2	2.445	11.115	47.419
3	2.090	9.499	56.919
4	1.400	6.365	63.283
5	1.185	5.385	68.669
6	1.058	4.810	73.479
Cumulative variance			
1	3.158	14.354	14.354
2	3.129	14.224	28.578
3	2.926	13.300	41.878
4	2.458	11.175	53.053
5	2.393	10.876	63.929
6	2.101	9.550	73.479

Sources: SPSS data processing result

The author conducted a factor loading test and obtained the result in Table 4.

Table 4. Rotation matrix of independent items

Factors	Elements					
	1	2	3	4	5	6
DA3	0.782					
DA2	0.758					
DA1	0.737					
DA4	0.673					
DA5	0.660					
LD3		0.820				
LD4		0.794				
LD2		0.774				
LD1		0.764				
DT1			0.866			
DT2			0.847			
DT4			0.715			
DT3			0.691			
TV2				0.887		
TV1				0.820		
TV3				0.771		
SD1					0.822	
SD3					0.785	
SD2					0.777	

TD2					0.841
TD1					0.759
TD3					0.606

Sources: SPSS data processing results

The results of the 6-factor EFA analysis ensure the convergence and discriminant values and continue to be used in the following steps. Multiple regression linear regression analysis uses ENTER method simultaneously to test hypotheses.

Table 5. Criteria for evaluating the appropriateness of the model

Model	R	R <sup>2</sup>	R <sup>2</sup> Adjusted	Std. Error of the Estimate	Durbin-Watson
1	0.893a	0.689	0.670	0.2699	1.6760

Source: SPSS data processing results

The determined coefficient R squared is 0.689 other than 0 which indicates the appropriate research model. The results also show that the adjusted R square is 0.670 less than the R square, this factor is used to evaluate the suitability of the safe model, more precisely because it does not inflate the model's suitability. Thus, the built multiple linear regression model in accordance with the data set was 67.0%. In other words, about 67.0% of the variance of successful ERP applications is explained by the variance of 6 independent variables.

The F-test used in the variance analysis table tests the hypothesis of the suitability of the overall linear regression model. F value = 37.273 and significance level (Sig) = 0.000 < 0.05. Therefore, the given linear regression model is suitable for data and can be used.

Table 7. Regression weights

Model	Unstandardized coefficient		Standardized coefficient	t	Sig.	Collinearity statistics	
	B	Error	Beta			Tolerance	VIF magnification coefficient
(Constant)	-0.051	0.290		-0.175	0.862		
LD	0.230	0.060	0.298	3.833	0.000	0.510	1.959
DA	0.224	0.064	0.259	3.487	0.001	0.558	1.791
TD	0.236	0.073	0.231	3.238	0.002	0.603	1.659
TV	0.142	0.067	0.142	2.111	0.037	0.678	1.475
DT	0.141	0.064	0.140	2.198	0.030	0.758	1.319
SD	0.059	0.062	0.063	0.944	0.347	0.682	1.466

Sources: SPSS data processing result

Table 6. Testing the suitability of the model

ANOVA <sup>a</sup>					
Model	Sum of squares	df	Mean Squared	F	Sig
Regression	16.303	6	2.717	37.273	0.000b
Residual	7.363	101	0.073		
<b>Total</b>	<b>23.666</b>	<b>107</b>			

Sources: SPSS data processing result

Regression weight  $\beta$  of the independent variables are all statistically significant, p (Sig) values are less than 0.05: LD (0.000), DA (0.001), TD (0.002), TV (0.037), DT (0.030), SD (0.347). Regarding the collinearity test, we see that the magnification coefficients of VIF are less than 10 (LD: 1.959, DA: 1.791, TD: 1.659, TV: 1.475, Tel: 1.319, SD: 1.466) depicting that the current collinear statues are not violated. The magnitude of the influence (importance) of the independent variables on the dependent variables is compared through standardized Beta coefficients. Based on the results in Table 8, we can that there are six factors affecting the successful application of ERP in the textile and garment industry in Vietnam, in order of decreasing importance as follows: users ( $\beta = 0.063$ ); training ( $\beta = 0.140$ ); support from consulting company ( $\beta = 0.142$ ); changing management ( $\beta = 0.231$ ); effective project management ( $\beta = 0.259$ ) and finally support from senior management ( $\beta = 0.298$ ). Results of testing official research hypotheses (with significance levels of 5% and 10%) are shown in Table 8.

Table 8. Testing results of official research hypotheses

Hypothesis	Hypothetical statements	Sig.Value (P)	Testing Result
H1	The greater support from senior management, the more successful in the ERP application project	P < 0.05	Approve
H2	The more effective project management is, the more successful in the ERP application project	P < 0.05	Approve
H3	The better the change management, the more successful in the ERP application project	P < 0.05	Approve
H4	The better the support from an ERP software consulting firm, the more successful in the ERP application project	P < 0.05	Approve
H5	The more thorough the training, the more successful in the ERP application project	P < 0.05	Approve
H6	The higher the user capacity, the more successful in the ERP application project	P < 0.05	Approve

Sources: SPSS data processing results

The following multiple regression model characterizes the research model in accordance with market data:

$$TC = 0.298LD + 0.259DA + 0.231TD + 0.142TV + 0.140DT + 0.063SD$$

The regression equation shows that successful application of ERP is positively affected by 6 factors: (1) leadership participation, (2) effective project management; (3) changing management; (4) support from an ERP consulting firm; (5) training; (6) users. In which, the factors of leadership participation, effective project management, and strong changing management make such a successful ERP implementation. This implies that: ERP implementation projects include leadership which leads to well-managed projects and well-changed business processes that make ERP applications easier to succeed.

### 5. CONCLUSIONS AND RECOMMENDATIONS

From the results of the research, the author proposes several solutions to help managers of textile enterprises in Vietnam, who wish to deploy ERP, identify the factors that affect the successful implementation of ERP.

Consequently, appropriate policies are developed to increase the probability of successful implementation of ERP in the business.

Firstly, the support of senior management is the factor that has the strongest impact on the successful implementation of ERP. ERP software implementation project needs to involve leadership, in which managers must participate to direct and support the ERP project team daily. They need to be aware and willful in implementing ERP. Managers need to comply with commitments on the timely allocation of human resources, finance, and equipment to operate ERP systems. Management needs to determine the top priority for the ERP implementation project. In the process of implementing the system, there will be difficult periods or delays, senior management needs to follow the project and be determined to implement the project at all costs, motivate and support employees to help the project succeed. If there are conflicts or disagreements in the project team, the leaders must directly resolve and mediate these conflicts or disagreements.

Second, in terms of effective project management, it is recommended to set up an ERP implementation project management team with management capacity and experience in ERP implementation projects. Enterprises need to improve the project management process to ensure that the ERP system is implemented on schedule, scope, and of high quality. Businesses should set important milestones and control the implementation process. The project manager holds responsibility and authority, with a vision throughout the activities in the business. The project must be planned in close details and the status and progress of the project must closely follow the given plan. Regular meetings are important in understanding the progress and status of the project to make corrective measures if the project is delayed.

Third, for change management factors, to do this well, enterprises must be ready to change business processes to suit ERP software. ERP implementation will be easier if businesses have applied ISO. Therefore, enterprises should have a roadmap to apply ISO before deploying ERP software. Businesses should not be impatient, want to deploy quickly to apply ERP software early, but overlook the stage of surveying and standardizing processes, to avoid the situation when deploying ERP software in practice, the rules are not optimal. or used not following the ERP software. The business process is an



operation that runs across departments and branches, so businesses need to upgrade the IT infrastructure smoothly between branch units before deploying ERP software.

Fourthly, the support element from the software consulting company, the enterprise needs to review the software and hardware the company is using, assess the responsiveness for running ERP software at the present, as well as the minimum orientation for the next 3 or 5 years. Businesses need to choose consulting companies carefully, so they should choose companies with real capacity and experience in successfully implementing many domestic projects. Because the consulting company decides the success or failure of the project, so in the process of implementation and cost of project implementation. When selecting a project developer, the enterprise needs to propose that the developer provides a record of project implementation consultants, based on this profile, and references other information to evaluate the performance. project implementation force of the consulting company. In addition, businesses also need to consider evaluating IT infrastructure systems to have suitable ERP software options or upgrade solutions to be able to adapt to ERP software.

Next, in terms of training elements, trainers must have knowledge, skills, and experience in ERP software. Trainers should provide all necessary documents related to ERP software for users. Trainers need to train enough programs, locations, and a training environment to ensure, help users receive and operate ERP software. It is necessary to coordinate forms of online or direct training to create favorable conditions for users to receive information most effectively. Avoid the general training situation, not detailing operational activities for end-users to limit the misunderstanding about operational activities leading to wrong input in ERP software.

Finally, regarding the user element, the project team must have a specific plan on resources to participate in the project from the beginning, to ensure that the participating personnel is qualified, specialized and professional., necessary skills related to the project ... This is the factor affecting the time of application of enterprise resource planning ERP systems into the enterprise. In addition, the user must have a certain level of English to understand, receive and operate the system. In addition to a few internal ERP software such as Bravo, Amis.vn, etc., the ERP software provided in Vietnam are often well-known ERP solutions of 3 foreign companies: SAP

(Germany), Oracle (USA), and Microsoft (America). Therefore, enterprises need to create conditions for users to obtain certificates of this software so that when deploying ERP, the system will be operated according to the required functions. During project implementation, users must be involved in the project results. From coordinating with the deployment team in providing information to exchanging and reviewing project results. They should be able to attend training courses, participate in business meetings, and project meetings.

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