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Abstract

The focus of this seminar paper is to evaluate an ERP system from the perspective of a supply chain leader so that they can understand the benefits and challenges associated with such a system that will allow them to make sound well informed decisions about utilizing an ERP. A key benefit of an ERP is giving the right people access to the right information at the time that they need it. The ERP does this by consolidating information into one system for the organization instead of several independent stand-alone systems that do not communicate with other systems. This, in turn, allows communication to be more effective internally, and externally to both customers and suppliers. While the benefits of an ERP can help the organization, it is also important to know, understand, and have a plan to deal with the challenges of an ERP system. An ERP system takes a great deal of time, money, and planning to implement effectively. It is also important when looking at the challenges of an ERP implementation to understand methods of reducing the risk of those challenges so that the benefits can be obtained sooner. Bringing all the benefits, challenges, and strategies for success together will give a supply chain leader the right information to assist them in deciding if an ERP will produce a benefit for their organization.

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Introduction

Statement of the Problem

In the not so distant past, it was common practice in supply chain management to operate utilizing homegrown spreadsheets as the source of information for making supply chain decisions. Some of the decisions made from spreadsheets were: what to order, when to order, how much to order, how much to make, when to make etc., etc. Spreadsheet planning had many limitations to it, including the fact that it was based on past order history and the thoughts and interpretation of the analyst that used them. Another major drawback to spreadsheet planning was that information sharing between other relevant internal and external parties was limited at best. Bursa (2014) demonstrates that spreadsheets are prone to errors of the user and that they can be difficult to maintain. These issues with spreadsheet planning led to supply chains spending more time reacting to problems instead of being proactive in resolving issues before they would arise and making the supply chain less efficient, which leads to issues for the customer.

An improvement to spreadsheet planning came with the development of Material Requirements Planning (MRP). An MRP system considers information such as supplier lead time, inventory levels, safety stock, etc... An MRP with accurate data will let an analyst know what to order and when to ensure that the customer requirements are met. MRP moved from the knowledge that an analyst had kept in their knowledge base to a parameter driven planning system that considered many things that spreadsheet planning did not. Wells (2017) points out that the MRP allows for maintaining a lower level of inventory and helps production planning to identify shortages before they happen. A limitation of MRP is that it operates in an unlimited capacity. This means that an analyst would still need to determine the ability to meet customer

demands based on the available capacity. This meant that although MRP was a great improvement over spreadsheet planning, there were still gaps in supply chain operational efficiency.

Another improvement to supply chain operations came with MRP II systems. MRP II does the same things as an MRP but adds the ability to factor in capacity into planning. MRP and MRP II are both driven from parameter information sent to them and highlight the need for effective parameter management as the systems are only as good as the information fed to them. Parameter management is critical for a system driven planning, which rely on accurate parameters to produce dependable results.

Even with MRP II, there are still gaps in communication between internal and external parties and systems. An example of this is that planning taking place utilizing MRP II would operate independently of execution systems, procurement systems, and sales and marketing CRM systems. An Enterprise Resource Planning (ERP) system takes all the independent systems and brings them together in one system. This allows a customer specific requirement entered into the ERP system from a salesperson would pass to the relevant people in the supply chain instantly. It also means that a salesperson with access could see when a product shipped to a customer providing real time information to them. An ERP increases efficiency in the supply chain by allowing people to access relevant information when needed without having to contact others or waiting on information that is needed to perform their functions efficiently. According to (What are business benefits of enterprise resource planning, 2016), an ERP allows a business to have real-time information available from all relevant areas of the organization. This means utilizing one system to get information to make decisions versus utilizing several systems that are not linked together.

It is important to note that ERP implementation takes a great deal of effort to accomplish and this should not be something that a business quickly jumps into. Shiner and DuPriest (2012) demonstrate that it is important to engage subject matter experts in the organization and not treat an ERP deployment as an IT only project. Another point made by Shiner and DuPriest (2012) is that utilizing strong project management will aid the success of the ERP deployment.

With the technology available today, customers are savvier and demand better supply chain service. Customers today want Amazon levels of service and utilizing an ERP system is one way that mid to large companies can remain competitive with their customers. The companies that think that they do not need an ERP system because the way that they have operated in the past is good enough should know that their competitors may adopt an ERP system. This would give a competitive advantage to the competition that will be difficult to compete against in the long run. The bottom line is that customers demand supply chain efficiency and an ERP system can be utilized as a key way to increase efficiency.

Purpose of the Study

The main purpose of this paper will be to show that the proper installation of an ERP system will allow mid to large size businesses to gain efficiency in the supply chain and should lead to higher customer satisfaction.

A secondary purpose of this paper will be to make clear that an ERP implementation is a huge undertaking that will take a great deal of time and resources. This point needs to be fully understood by leadership before deciding to move forward with an ERP implementation.

Significance and Implications of the Study

This paper will be significant in that it will demonstrate the benefits of an ERP system implementation to the supply chain and, ultimately, to the business. The paper will show what

an ERP allows a business to do and compare that to other systems that do not have the capability to do what an ERP system can. This will show the readers in a way that makes sense of how an ERP implementation can lead to success in supply chain operations and for the business.

One thing that this paper will not do is to sugar coat what it takes to implement an ERP system. An ERP implementation takes a strong commitment and a tremendous amount of work to get the system up and running efficiently. This is needed to begin seeing the benefits of the ERP. Just demonstrating the benefits of an ERP without also showing how much effort it will take upfront and the efforts to maintain the system would tell a half-truth. It is with the understanding of the pluses and the minuses that an informed decision can be made. An ERP system is not for every business, and this paper should help a leader determine if an ERP implementation is right for their business or not.

Literature Review

This Literature Review is intended to give an overview of an ERP system and will cover the history of ERP development, benefits of using an ERP, and ERP implementation challenges. This baseline ERP information is important to know and understand so that good decisions can be made for an organization considering ERP.

History of ERP Development

In the late 1880s, Frederic Taylor developed a systematic approach to improve productivity called scientific management (Mentzer et al., 2007, p. 153). The scientific management approach is a way to increase productivity, which in turn leads to an increase in profits. The assembly line used by Henry Ford was an example of using the scientific management approach (Mentzer et al., 2007, p. 153). As time went on, more ways to increase productivity were found and implemented. According to Mentzer et al. (2007), in the 1960s, the

American Production and Inventory Control Society (APICS) launched MRP, which was the first use of a system to process data to determine planning and production control. This was an important step because, according to Chapman et al. (2017), prior to a planning system that could process planning data large amounts of inventory were needed and lead times were longer to cover for the manual system of planning. MRP systems meant that an organization could be more productive and responsive to the customer.

The two goals of an MRP system according to Chapman et al. (2017) is to determine the requirements and to keep the requirements current. Also, according to Chapman et al. the MRP is used to know: what to order, when to order it, how much to order, and when to deliver it. Chapman et al. also point out that things constantly change and that the MRP needs to consider those changes and update the status so that the information stays current and relevant. A major flaw of the original MRP system was that the system assumed that each order could be produced independently of the others and did not factor in the capacity of key resources (Morse and Babcock, 2014, p. 268). This flaw brought about the next advance in what is called MRP II, which does the same things as MRP but addresses the flaw by looking at capacity as well (Morse and Babcock, 2014, p. 268). MRP and MRP II systems allowed for the planning of production to be done in a more efficient way. According to Evans and Lindsay (2017), ERP systems do all the things that MRP II does, but they do more by integrating other key systems from within the organization.

Benefits of using ERP

Krajewski et al. (2016) indicate that ERP systems integrate information from many systems and operations throughout the organization into one system. This allows the organization to view all the pieces that make up the organization in one place instead of having

to pull information from several systems. Krajewski et al. continue by making the point that with all the information of the organization flowing through one system it allows managers and leaders of the organization to have access to information that allows better decisions to happen and to happen quicker. Chopra and Meindl (2016) indicate that an ERP gives access to global transactional data that can be used by supply chain management to make better decisions. Chapman et al. (2017) demonstrate that another benefit of an ERP is in the area of purchasing that the ERP system allows for more accuracy and less information entry by the person ordering materials. Baran and Galka (2017) indicate that an ERP system is an enabler to customer relationship management (CRM) in that it provides real-time data and that data is the only source for customer information. Banta and Boldeanu (2019) find that the ERP benefits are: ease of sharing information across the organization, higher customer satisfaction, and the availability of the ERP software throughout the company. Research conducted by Moinuddin et al. (2017) indicates that ERP plays a role in improving the performance of an organization. Finally, McCrea (2019) shows that industry trends for best in practice systems in the logistics industry are moving towards ERP systems because of the growing demand for technology to accommodate their customers.

There is a great deal of literature available about the benefits of using an ERP system. The sources chosen for this Literature Review were taken from a broad spectrum of business (marketing to logistics) to demonstrate there are benefits of an ERP for the entire organization and not just the area of supply chain operations.

ERP Implementation Challenges

In this section of the literature review the focus is on the challenges that are encountered when implementing an ERP system. The discussion of how to overcome the challenges will take place later in this paper and for the most part will not be covered in this literature review.

Krajewski et al. (2016) caution that a company should fully examine all of its processes when designing an ERP system for its organization. Krajewski et al. also note that an organization that has complicated information flows or other similar complications may need to completely redesign its processes before it will get the rewards of the ERP system. Krajewski et al. conclude that successful ERP deployments happen when they are kept simple and work with a small number of software vendors. Failing to do so leads spending more time and money to implement an ERP that will difficult to use and expensive to maintain.

An article by Miller (2019) indicates that implementing an ERP takes a lot of time and money to do. Miller goes on to state that one reason for cost overruns of an ERP is from making changes to the system during implementation. As Miller points out, this can lead to failure or the project stalling out, which consumes more time and money. However, as pointed out by Waters (2019) often there is a need to customize the ERP system so that it will work for the organization that is planning to use it. Another ERP implementation challenge discovered by Banta and Boldeanu (2019) to be considered for global deployments is a language barrier between ERP consultants and the organization implementing the ERP. This according to Banta and Boldeanu makes training much more difficult. Shiner and DuPriest (2012) indicate that an ERP will affect each aspect of the organization in a different way and that all aspects and functions of the organization need to be considered and understood. Frost (2016) indicates that a cause of ERP implementation trouble is not having a leader assigned to implement the system,

and this leads to each area doing what they think is best instead of focusing on what is needed to implement the system across the entire organization.

Another ERP implementation problem according to Potts (2019) that is important to consider is that there are multiple ways and systems that can be utilized to run an organization and that failing to understand this and just picking any ERP system may lead to a system that is not a good fit for the organization. This leads to problems during implementation. Hasheela-Mufeti and Smolander (2017) conducted a study that identified implementation issues encountered by small and medium size companies. In that study, Hasheela-Mufeti and Smolander found that smaller companies specialize at what they are good at and do not realize that they need to bring in or contract with people that have the skill set needed to implement an ERP system. The literature demonstrates that an organization needs to consider their needs as well as their abilities to determine what they want the ERP to do. Having this information is important in deciding if an ERP is a right choice for the organization.

The ERP implementation challenges that were covered in this literature review were not intended to scare leaders away from selecting an ERP system, but rather they were included so that a leader understands the issues associated with an ERP so that informed decisions can be made. As mentioned earlier, ways of overcoming the challenges presented here will be covered later in this paper.

Methodology

The method used for gathering data related to this project was an analysis method that was conducted by a review of current literature related to ERP. The literature reviewed was selected to show the history of the ERP, the benefits of using an ERP, and the implementation challenges of an ERP. The articles selected help to demonstrate that an ERP has many benefits

but to also show the challenges of an ERP so that a supply chain professional can make an informed decision about selecting an ERP for their organization.

Discussion

An important question that a supply chain professional must ask when faced with a business-related decision is, what are the benefits of the decision? Therefore, it is important to begin looking at the benefits that an ERP provides the supply chain and the organization. After all, if there were not any benefits to using an ERP there would be no point in investing the time or effort into installing an ERP system. However, the benefits should be looked at in terms of what is the net benefit of an ERP for the supply chain and the organization? To answer that question the risks and challenges of an ERP need to be understood and then subtracted from the benefits to determine what the gain will be with all things considered for utilizing an ERP system. The challenges of an ERP will be covered in detail after covering the benefits so that a well-informed decision can be made if an ERP is the right choice for an organization. The discussion will conclude with a strategy for success by looking at ways to mitigate some of the risks and challenges associated with the utilization of an ERP system.

Benefits of ERP

One large benefit of an ERP system is seen through increased communications in three different areas. In the first area, there is increased communications from within the organization as all systems send information to and receive information from the ERP. With an ERP there is no longer a need to have stand-alone systems for sales and marketing, production execution, warehousing, transportation, and so on as the ERP consolidates those systems into one. Krajewski et al. (2016) make this point by indicating that a benefit of an ERP is the consolidation of information from many separate systems into one system. This increases communication

within the organization because it is easier for people within the organization to access information that they need. An example of the type of internal communication increase is that a salesperson in an organization with an ERP may be able to see when an order is in production and being staged in the warehouse all from their computer without having to get answers from anyone else. In a legacy environment the same salesperson would most likely need to speak with someone on the shop floor to find out when an order is in production and would need to speak to someone in the warehouse to find out when the order is being staged for shipment, because they would not have access to the different systems. Each instance of communication to different areas for status updates result in productivity loss as the time to answer the questions is time that could have been spent on other activities.

Another aspect of internal communication within an organization that an ERP system can help improve is it keeps all locations globally operating within the same system. Banta and Boldeanu (2019) indicate that it is a benefit of an ERP to have the same software installed throughout the organization. This means that an ERP system can help to reduce some of the time zone communication issues when dealing with locations in other countries. With an ERP since it is the same system used throughout the organization someone working in Japan may be able to get the information, they need from a location in Europe without having to wait for someone to be in the office meaning they could get the information right away instead of waiting a full day to get a needed response. When conversations and other correspondence do need to take place, all sides operate in the same system and transactions are called the same things, which makes communication clearer. This means that more time can be spent dealing with issues instead of taking time to explain what information is needed. An ERP system is a way to get all people in

the organization to speak a common language as it relates to business transactions, which makes communication more effective.

The second area of communication that is improved with an ERP is the communication with the customers of the organization. As indicated by Baran and Galka (2017), an ERP provides the one location that contains all customer information. This much like the internal communication benefit means that the information for each customer is contained within the system allowing other people to access the information to communicate with the customer. With an ERP there is no longer a need to access a file locked in a desk drawer of someone that is on vacation as the information is in the system for all with access to obtain. This also means that the customers would receive a more consistent and clearer message as each person obtains the data in the same system.

A supply chain professional would benefit from the increase in communication to the customer as it helps create more certainty in the supply chain, which reduces the variability, which helps to reduce inventory and costs. ERP means one system contains the information needed, so when a customer places an order they know what the lead time is and when to expect their product. This gives certainty to the customer by giving them the information that they need. The customer would not need to order extra to cover the uncertainty provided by other systems that do not provide them with more accurate information. Another benefit of increased communication with the customers is that less time can be devoted to providing answers about order status to customers that are inquiring because they do not get the information that they are looking for. Finally, when the customers get the information that they need with ease or without having to ask for it they will be happier customers, and happy customers are more likely to be return customers versus unhappy customers.

The third area of communication that an ERP system can help improve is with suppliers. According to Chapman et al. (2017), an ERP helps to reduce errors in purchasing by removing the need for data entry, which is prone to error. The ERP can automatically suggest an order and quantity when component inventory drops below the reorder point. This reduces the need for someone to notify a person that purchases material that more is needed. The time saved to notify someone to purchase the item could help to reduce the item replenishment time as well. More importantly, this allows for more accurate information to be transmitted to the supplier. This, in turn, means that less time is spent correcting mistakes and will build a stronger relationship with the suppliers.

The ability to access real-time data instantly is another key benefit to those that utilize an ERP system. According to Krajewski et al. (2016), access to real-time data speeds the decision-making process and makes the organization run more smoothly. This means that if a change is made to a specific customer order, the change would be updated instantly so that all affected by the change could see. Having access to real-time data helps those that are making decisions do so with the most up to date information available. This helps those in the supply chain by having the data available that gives a current situation of inventory, available capacity, and machine loading information. If, for example, the inventory of an item drops below the safety stock level an ERP system is updated with this information as it happens instead of waiting for an update to take place after the material was consumed. This then allows a replacement order to be generated sooner, which also reduces variability in the supply chain. Real-time information also helps people in supply chain to know when they have a capacity issue, which allows them to take corrective action sooner and react quicker to meet the demands of the customer.

One final benefit of an ERP that will be covered here is that utilization of an ERP promotes consistency throughout the organization. In an organization with multiple locations, this means that a person could transfer from one location to another without the need to learn new systems because the ERP would be the same in all the locations of the organization. It also means that the best practice discovered in one location could be shared and replicated in other locations of the organization with ease.

There are many benefits available to an organization that makes the decision to utilize an ERP system. Some of these benefits are that an ERP allows an organization to communicate more effectively internally and with customers and vendors. This is due to the ERP being the one system that contains real-time data that helps decision-makers to make more accurate decisions happen faster. All of this helps the supply chain by removing variability, which makes the information more valuable.

Challenges of ERP

As we have just seen, there are many benefits associated with utilizing an ERP system, but it is also important to understand what challenges are associated with an ERP as well. The literature reviewed for this project all seem to indicate that the biggest challenges of an ERP system happen during the implementation of the new system. Therefore, the focus here will be on those challenges as they are the ones with the biggest impact.

One challenge with a transition to an ERP system is that an ERP may require changes to current processes as information will be handled differently. This makes an ERP much more than just a new software to install as it will fundamentally change the way that information flows through an organization. According to Krajewski et al. (2016), an organization that has complex information flows or other complexities may need to change their entire process before

transitioning to an ERP system. This means that an organization with complexities will be faced with two options. One option is to change their process/processes prior to transitioning to an ERP so that customization of the ERP will not be needed. The second option is to leave the process/processes as is and to customize the ERP. The second option will be covered in detail later, so the focus will be on the change of processes for now. When a process needs to be changed the organization needs to decide when it is to make the changes, with the option of changing immediately, or waiting until the transition to the ERP. Changing immediately may cause disruption to the business as people need to learn a new way of doing things. Changing at the time of transition to the ERP can make the transition more painful and take longer to accomplish. However, both ways will result in challenges that the organization will need to understand in order to make a well-informed decision about utilizing an ERP system or not.

If the choice is made to not change current processes and information flows to align with the new ERP system, then the challenges will come from customization of the ERP system. According to Miller (2019), a large contributor to ERP implementation taking longer than and costing more than what was planned is due to customization of the ERP system. Miller also points out that some of these delays can lead to the project stalling out, which means that the organization would not get to experience the benefits of the ERP system. This is an important challenge for a leader to understand, because as indicated by Waters (2019) there may be a need to do some customization of the ERP to make it fit the organization. The question of how much customization does the organization need to do will determine how big of a challenge that this is. As the customization goes up so does the complexity of the transition to an ERP, which leads to the time and cost overruns (Miller, 2019).

Even in an ideal situation where there would be no need to change processes and or customize the ERP system for an organization there still will be changes to each area of the organization. According to Shiner and DuPriest (2012), each area of the organization will be affected by an ERP in different ways. This means that the challenges need to be understood in each area within the organization to know and understand what is changing and how to perform its functions in the ERP system. Another important aspect of this challenge that needs to be considered is that with an ERP all functions are linked to one system. This is important because what one process area does will affect other process areas within the organization. This means that each individual area cannot make changes to the system to make things work for their area without understanding what issues the change would create to the other areas downstream. This is very different from stand-alone systems for each area that does not interact with other area systems.

Another challenge associated with the transition to an ERP system is that an organization considering an ERP is most likely not ERP experts. Another way of saying it is that an organization has key elements that make them successful and those elements are what the organization focuses on. This means that unless the company is an ERP company chances are understanding an ERP is not a key element of their success. According to the study conducted by Hasheela-Mufeti and Smolander (2017) found that smaller companies focus on what they do that makes them successful and fail to realize that they need resources that know and understand what it takes to implement an ERP system successfully. The article by Frost (2016) also points out that a common cause of problems for organizations encountered during a transition to an ERP system they do not have a project leader in place that understands what needs to happen and when. All of this means that an organization will most likely need to add resources to assist with

the transition period, which is a challenge that needs to be understood so that not only an informed decision can be made but allow time to plan for the additional resource adds.

The final challenge area to cover here is regarding change and training. As indicated earlier, there may be changes made to current processes that will require training for those affected by the changes. However, even if there are no process changes that occur everyone that conducts system transactions in the organization will need to be trained on the new ERP system. To add complexity to this challenge the training on the new system usually needs to take place while the affected people still conduct transactions in their legacy systems. This creates potential issues. First, is finding time for people to learn and practice the new system while still performing their current duties. This may mean offering overtime or bringing in temporary help to allow the training to happen, which is added costs that need to be considered. Second, training people on the new ERP system too soon can be confusing and could lead to affected people forgetting what they have learned. However, on the flip side waiting too long to train people will lead to people not having the proper skill set and knowledge to function in the ERP when they need. Another point to consider is that positions that require more transacting in the system utilizing different transactions will require more training than those that utilize a small number of transactions.

In addition to the need for training of people, an additional challenge that needs to be considered is what training resources will be needed to conduct the training? This may require the need for an extra server that is used for training. It may include the need for creating a training area that needs additional computers, monitors, keyboards, and so on. These are all things that need to be considered when looking at training needs as these items all have a cost

associated with them and the cost is a challenge that needs to be understood so that an informed decision can be made.

It is important that an organization considering an ERP system knows and understands what challenges they will face and compare the challenges to the expected benefits of the ERP to determine if the ERP is the right decision. To be clear, many challenges have been covered here that need to be understood. The reason for highlighting these challenges is so that a leader knows what the implications will be, but just as important is to allow the leader to develop a plan to overcome and or mitigate some of the challenges.

Strategy for Success

With the benefits and the challenges associated with an ERP system better understood, we can now shift the focus to what thing can be done to mitigate the challenges and to find ways to increase the benefits. This will be done by learning from what others have discovered during their transition to an ERP system. The goal here is to establish methods or a strategy that a leader can use that will allow them to have a smoother transition to the ERP system that they select.

One of the first things that should be done to assist in the transition to an ERP system is to know and understand how the processes that are in place prior to selecting an ERP system. This will help to determine what if any processes will need to change. According to Krajewski et al. (2016) an organization should conduct a self-examination of their current processes to understand what areas will need to be changed. This is a key piece of information to have when selecting which ERP system is the best fit for the organization, because there are different options available. According to Potts (2019), there are more than one way to run an organization and finding the right ERP for the situation can make the transition more successful. It is

important for the success of the organization to understand their current processes and information flows. With the current processes and information flow of the organization understood different ERP systems can be evaluated to help determine which one would be the best fit to the organization. This would help to reduce the need to change current processes and or customizations of the ERP.

With the knowledge of the current processes and information flows in hand, another strategy for success is to look at making changes to the processes and information flows prior to implementing an ERP system. The reason for this as indicated by Krajewski et al. (2016) is that a transition to an ERP is easier to do when there are fewer customizations that are needed to the ERP. This indicates that the practice of changing the way things are done prior to the transition to an ERP will make the transition go more smoothly. The reason for this is that if the process is changed ahead of time to match the end state process with the ERP then the ERP becomes just a new system to use. This is much easier on an organization than learning not only a new system but a new process as well. Therefore, the recommendation to a leader is to change the processes when possible and customize the ERP only when the processes cannot be changed.

Another strategy to use when moving to an ERP system is to utilize a project leader that understands all of the pieces that need to come together for the project to be successful. According to Frost (2016), the leader of this type of project should be able to evaluate the needs of different functions but will make the best choice for the entire organization. This most likely means that the leader selected will be at a higher level that will make choices on what is best for the organization and not just focus on a particular area. However, with that being said it will still be important for lower level leaders to be involved to lead certain areas of the transition as all areas will be changing to some degree. A strong project leader with authority to make decisions

for the good of the organization is a strategy recommendation that will help to overcome some of the challenges associated with an ERP transition. The project leader and their team can also be utilized to drive the process changes that are needed prior to the ERP transition.

Another aspect of the transition to an ERP that a project leader and their team can drive is to develop a training plan. The best way to develop a training plan is to take the knowledge and understanding of the current processes and information flow and to compare it to what the processes and information flows will be with the ERP system. Then the team can determine what training needs to occur and when. This will help the organization to understand what resources will be needed for the training and to determine who will need it. This will allow the team to engage those needing extra training earlier in the transition process and will ensure that they are properly trained in the new ERP system at the right time.

When a training plan is considered, a good strategy is to determine not only what training needs to occur but also to consider what is needed for the training to take place. This means ensuring that there is a location for the training to take place and making sure that the right people are available to train. According to Banta and Boldeanu (2019), something else to be considered is language barriers between those conducting the training and those receiving the training. This may mean translators will be needed in addition to the trainers. Hasheela-Mufeti and Smolander (2017) determine that bringing people in with the right skill sets to teach the new way of things with the ERP is critical to the success of the transition. Another critical piece that is needed for a good training plan is to make sure that the people that need the training have the time available to be trained. This is another reason why it is a good strategy to have a project leader with authority as they can ensure that time is allowed for the training to take place and that the training is done by those that need it.

With the leadership team in place and a training plan developed and in place, it will assist the organization in illustrating the changes that the organization will go through. Then those changes should be discussed with the affected people so that have a better understanding of what will be coming. The project leadership team should then help those affected to understand why there is a need for the changes and to help them see the benefits that will come from the change.

Although there are many challenges and obstacles that need to be overcome for a successful transition to an ERP system, there are ways to at least mitigate some of those challenges by adopting the strategy recommendations covered here. It all begins by having the knowledge and understanding of current processes and information flows that determine the conditions prior to an ERP. Then a strong project leader that makes a decision based on what is best for the organization can build a team that can determine what changes need to happen to current processes and information flows prior to an ERP transition. The project team could then formulate a training plan and determine what resources are needed to execute the plan. In addition, the project team can educate those affected by the change to the ERP system which should ease some of the fear that people have of the change.

Conclusion

The decision to utilize an ERP system has many factors that need to be considered as there are many benefits to an ERP system, but there are also many challenges that need to be understood to determine if the ERP is best for the organization. The benefits of the ERP allow for increased communication with more accurate real-time information to flow internally throughout the organization, to the customers, and other suppliers in the supply chain. Another benefit is that the data and transactions are linked to one system, meaning that critical

information is passed as events occur without delay which allows for actions to be taken sooner. This results in more accurate decisions being made sooner throughout the organization.

The challenges that must be considered for an ERP system are the changes that need to occur for the ERP to be effective. This may require changing current processes and information flows before transitioning to an ERP. Another challenge is to determine what resources will be needed to conduct the transition. Additional resources always have a cost associated with them that also need to be understood and for a successful ERP transition there could be a large resource need meaning that there will be a large cost. Knowing these costs can help to determine if the organization would receive a benefit from transitioning to an ERP in the long run.

There is more to determining if an ERP is the right choice than just weighing the pros and cons. It is important also to consider the ways to offset the challenges associated with the transition. This gives the organization the opportunity to learn from others that went through a similar journey and to experience greater benefits. The strategy recommendations given here demonstrate that the challenges can be at least somewhat overcome by having a strong project leader that can effectively drive needed change within and throughout the organization.

After weighing the benefits, challenges, and mitigation strategies, the recommendation given here is that an ERP system is most likely a good choice for mid to large size organizations. This is because the benefits of the ERP will reduce variability in the supply chain and thus benefit the organization. The reason that an ERP system may not be the best choice for a small organization is that the challenges of the ERP transition, even with the mitigation strategies will outweigh the benefits of an ERP for an organization with limited resources. Adding resources in a small organization is more difficult to do versus a mid to large size organization. Therefore, mid to large sized organizations have more flexibility to overcome the challenges to experience

the benefits of an ERP and that is why the recommendation for them to move to an ERP system was given here.

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