ICT System Analysis Report

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 I chose to read the book **Why Systems Fail: An Insider's Guide to Successful IT Projects** (Simon 2011) because of recent experience dealing with a system evaluation and re-implementation. In the case studies that are gone though in the book, the author deals with many of the common questions concerning businesses today, and what happens when there is a drain of employee knowledge on legacy systems. I found this book very insightful around key areas which could save money during an implementation pitfalls that are often fallen into.

**Software Selection.**

 Most companies choose to evaluate a new enterprise resource planning system (ERP) usually when it comes to three key crossing points in the business cycle. One of the most common is that their current legacy system no longer can support the business or the vendor no longer supports the system which would make it more cost effective to consider a new system. The other most common is to replace the current ERP with another vendors offerings. The book then talks around the edges about re-implementation of a current system, but briefly.

 When evaluating a new system an intensive audit of business processes should take place before hand because depending on the size of the project you do not want to find yourself picking a system and then "tailoring the business to the software" (Sheriff 2013). This being said the organization needs to see if what the ERP can offer is good enough for their business. If it can do 90% of the tasks needed, can the business practices adjust the last 10%? "ERPs are not all things to all people. They are most things to most people." (TechRepublic 2001). To make it a requirement to fill 100% of business process will doom any implementation to failure from the onset.

 Once the business has set the goals needed from a piece of software, it begins the evaluation process. When dealing with a legacy system or an ERP that is no longer supported by its current vendor it makes sense to engage the vendor's representatives to take a look at their offerings. During this may decrease the likelihood of any data conversion loss as the vendors support structure will typically have access to vetted conversion software, and have experience with common problems. If it is decided to go with a different vendor, keep in mind the cost of converting older legacy data, and it may make more sense to start fresh with only recent information.

 At times an organizations software is up to date but is bogged down by what is known as bad data which can have many sources. Some of the most common tend to be overlapping business practices, incorrect manual processes, or that specific departments have a mentality of which they "own the data" (Radadia 2010). Often during the analysis of the ERP these bottlenecks will be found out and at times it will take intervention from management to fully resolve the problems. The book has a reoccurring theme where one employee can derail an entire project, and often states that replacing a key employee early in a process can be crucial to the success of the implementation

**Sources of Concern When Picking a Software**

 An ERP vendor's sales representative will rarely say that their software cannot do what you want it to do. The book goes into a few cases where the client committed to a project and signed a contract only to find out that the processes they wanted would be either paid add-ons or expensive customizations. Many ERP vendors will make outrageous claims (TechRepublic 2001) but when asking for a demonstration will not be able to produce one using the product "out of the box". In the end the sales persons job is to sell you the product, not make it work for you. They will leave that to the implementation team to deal with any trouble down the road. To help prevent this from happening always see if they are willing to demonstrate functionality, and if possible use the companies sample data. Never sign a contract before evaluation if the software even works for your type of business.

 The often overlooked portion of any software purchase is the support costs. The standard in the ERP industry is typically 20% of the cost of the project annually. This gives you access to upgrades, support forums, knowledge bases, and often critical incident requests. These will be glossed over during the sales negotiations, but they must be reviewed to see if support is what is expected. Many do not include report generation, training, or support of any conversion programs from other systems. Ask the sales representative to provide reference clients for you to contact, talk with them to see what their experience is with the software's support platform.

 Always review the number of consultants that the vendor wishes to bring on to aid in the process. Often an implementation team's management will only look at the cost of such a consultant, but at times the consultants that garner higher premiums have the experience to keep the project on track. Look to see if these consultants have backgrounds in multiple disciplines. One that knows the ERP report generation and has experiences in accounting can resolve many issues at the start thereby reducing time for the project. Always be aware of the knowledge transfer from these consultants to the employees, and plan to make sure that these are happening. (Barker 2012) The worst thing to happen is when the project is over, having to bring someone else back in often to support. The consultants are good at what they do, but will only be at your company during the project.

**Planning an Implementation**

 In order to realize significant benefits from *ERP* systems a considerable amount of training is required (Wortmann 1998). The cost of training individuals can be multiplied by strategic training. Allowing key individuals to submit to intensive training and then allowing them to do a period of application exploration can often provide opinions that were not even considered during the initial planning phase. Having these key power users in place and often working with the consultants, to field questions from those employees going through less intensive training will allow the expensive consultants to focus on providing support for the implementation rather than tying up their project time.

 As soon as possible setup an environment with or without company data to test the implementation steps, and to allow employees to become familiar with any interfaces before a 'go live" date. This can also allow the employees to 'play' with any installation on their own time, as often they will be required to continue their daily tasks as well as the implementation steps. Finding out as many problems as early as possible will reduce time overruns and therefore reduce costs to keep consultants on the project longer. Have a developed routine for data validation in place for several weeks to months to prevent what could be a costly data error months after going live.

 The book recommends a Mid-Implementation audit to allow for any course corrections before a project can spiral out of control with costs. A recent example is the Air Force's 1 billion dollar ERP disaster (Kanaracus 2012) where they had to pull the plug after 10 years not realizing any of the stated goals. Often times these situations show warning signs early in the implementation and the course can be corrected. Sometimes, though, management or the organization cannot incur the office political capital to shut down a project and continues to push forward. These situations are often met with higher costs if they are successful, but more often than not they are unsuccessful and are very costly in the end. The mid implementation audit provides any leadership team with a pulse for a project.

**Going Live**

 Rarely does your legacy data fit neatly into a new implementation (Kimberlin 2010) and often requires a form of cleanup to be effective. Hopefully the initial planning stages and testing caught many of the data validation errors and they were corrected. Remember that this is not normal and expect to have long hours dealing with the initial issues when cutting over to a new system. Depending on when the training took place, and a users access to a test environment there may be a need to field several questions from employees. This is expected and should be planned for.

 Plan to have requests for information that should have been caught in the preparation stage. Many times because of a users busy schedule they do not fully test a business process and will only know of an issue once a new system goes live. If these are planned for during the initial project scope then the threat of going over a deadline and incurring additional costs are minimized. There will be talk about accessing the old software, but this should be at a read only status. No new information should be entered.

 During this phase there should be an expectation of documenting known issues for further follow-up. These will often have to be evaluated and determined if it is critical for project success. These reality checks will often quickly help decide if elements can be phased in at a later date(Wtirek 2002). It might not look well with management to do a limited implementation so far into the project, but it will lead to the ongoing success of the implementation. Use consultant's experience if additional details are needed for management to make a decision.

**Post Mortem - Reasons Implementations Fail**

 After an implementation there is time for reflection on how or why things went wrong. If the project failed management will often try to assess blame, but they should be looking at themselves for not heading warning signs, listening to their consultants/project manager, and sometimes setting unrealistic expectations. There is rarely one single individual that brings down an implementation, but failures across the entire spectrum of an organization. The time should be used to identify areas of improvement to help guide the new system, and to aid those individuals who helped make the project successful.

 There is often a point during a project called the point of no return (Wikipedia 2013) of which the cost of cutting the project, or not going live is to costly in terms of cost and/or political capital. During any audit during the testing phase it should be determined what issues are present, what issues can be addressed within the initial scope of the project, and if it would be better for an organization if it were to postpone the project in it's entirety. The further along in a project the closer to this point of no return the implementation is. Most organizations do not get a second attempt to resurrect a failed ERP project.

 The mid implementation audit results are a good metric to determine if the project will be successful or if a course correction is needed to prevent hitting the point of no return. Often by that point if there are employees who may have a secondary agenda in seeing the implementation fail, or employees who are able but not willing to learn a new system will be identified. These employees should be addressed by management and if needed removed from the project to prevent its failure. To quote Lord Chesterfield "Aim at perfection in everything, though in most things it is unattainable." Companies who think they cannot move forward without 100% of the system customized the way they want are only fooling themselves.

 Often overlooked after an implementation is the need to retain key employees. Sometimes users stay for the training of common ERP systems and then use that knowledge to obtain different employment. A company would do themselves good to work with employees to keep the knowledge within the organization, to help with their development. Often times it isn't the job but more of a need for an individual that is not being met. After the consultants leave the business should rely on internal support and vendor paid maintenance rather than brining in expensive consultants. If employees are turned over quickly after a implementation project then there might not be a choice, and will only add to resentment toward the project (SAP 2013).

**Conclusion**

 An ERP implementation is no small task for an organization of any size, but shouldn't be doomed to failure as many are. Careful analysis of the business, picking the right vendor and project management can lessen any dangerous warning signs from even appearing. Carefully work with consultants, and auditing the project can prevent missing deadlines and running over costs. Doing a hard look at key employees during the project will help the final long-term effectiveness of the project. In the end there isn't one person who can manage it all. Implementations are an organization wide endeavor which will bring out the bests and worst in people. This type of project should only be implemented if an organization can mitigate problems, and has a good understanding of their own business practices ahead of time.

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