"Critical Success Factors of Selecting and Implementing a New Business System"

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Introduction

One of the most challenging events in a person's business career is being faced with the task of selecting and implementing new ERP, WMS, CRM, or other business systems. In most companies, the challenge or some people may call it a nightmare, comes along only once every 7-10 years. Best-of-breed or niche market software projects seem to be coming at a more frequent rate as technology changes almost daily. This would also depend upon the scope of the software project. The infrequency of this event means that few people are truly skilled at doing it, not understanding what elements within the system project are critical and if not managed properly can cause the project to fail. This certainly can have an unfavorable impact on the business from a financial basis and can certainly impact an individual's career path within a company.

Our focus will be on the Critical Success Factors that will keep the project and your career path on course. Software systems projects have two things in common "they start off with wild enthusiasm" and "over time things will go wrong". We need to understand and try to manage both of these elements.

Critical Success Factors - "What Are They?"

These are the elements that insure your project will go smoothly and also identify the "minefields" that can invoke "Murphy's Law" when least expected.

You need to ask yourself and if appropriate your Project Team the following:

- What are the things that go wrong in my job today?
- What are the things or elements that can go wrong within the project?
- What is the worst thing that can happen?
- How have others solved or handled these situations?
- What steps or measures can be taken to minimize or reduce the risk of the problem?
- How do I develop a backup plan if something goes wrong?
- Is there a Plan B?

It's like doing a root cause analysis of a problem or issue. Keep analyzing, asking questions, and planning so the elements of surprise are minimized.

Critical Success Factors include:

- Define and Understand Your Corporate Culture and Politics
- Get Top Management Sponsorship and Their Visible Support
- Select the Best Person as the Project Manager
- Identify Project Costs and Benefits Justification
- Identify Key Performance Metrics
- Understand Information Technology's Role, Position, Strategy, and Vision
- Understand the Current System Infrastructure Issues
- Identify a Valid System Definition, Selection, and Implementation Methodology / Process
- Understand the Software Vendors' Markets and Capability
- Identify Core Competency Regarding - The Need to Seek External Consulting Assistance?
- The Degree of Reengineering and/or Process Changes Required
- Identify the Scope of Training and Education – software execution and a conceptual understanding of the business model
- Develop a Contingency Plan or Plans

Define and Understand Your Corporate Culture and Politics

You need to identify the type of management or organizational styles used by influential people within the company that can impact the software project, i.e., Attila-the-Hun, micro-management, autocratic, or dictator styles. Any of these can have an impact on the performance of the project. Remember Senior Management is part of the final approval process, defines the scope, provides immediate conflict resolution, provides direction, and provides a vision if things get muddled up. They are approving the project expenditure and will want to see results. You need to define all of this up-front of the process. Their involvement in this area needs to be managed, otherwise they may micro-manage the project. Remember you can't easily stop a train coming down the hill fast to change a wheel or its direction. Better to do that on level ground when the train stops. Also you need to understand where the sacred cows are. We have seen functional managers and VP's kill a project because the project or Project Manager got too close to their turf or comfort zone and they wanted to protect it.

Get Top Management Sponsorship and Their Visible Support

Top management forms the project Steering Committee and provides direction and vision to the project as mentioned earlier. You need their visible support and that they are part of the game to support the project team's effort in selecting and implementing the software. Grass roots project support isn't enough. A high level Champion is really an important part of this support. This individual will carry the banner into any of the battles that may start. Having senior management at key meetings and regularly scheduled status meetings are a couple of signs of interest and support. If there is "no time" for these meetings, that sends up a red flag that there is a problem. Also if they attend and look like a "deer in headlights" you then need to take the time to inform them of what's going on. Remember you are installing a business system not a computer system. This means that all people concerned with the business process should have vested interest in your success.

Select The Best Person as Project Manager

If a lottery system is used to pick the Project Leader it's time to bail out. The individual who will have the responsibility has to be someone with enough broad company experience, integrity, be firm, a planner, negotiator, have interpersonal skills, good communicator, and be respected within the business community. The individual will need all of these skills and personal traits to make the project a success. Selecting the right person is important but where the individual reports regarding the project is also a concern. Having the individual report to the champion or the President sends the message that this is an important effort. The reporting level also sets the authority boundaries of the individual. The person must be perceived as being able to make decisions without a long approval process. We also suggest that the person not be from IT/MIS but a key user of the business system. This prevents user apathy as the selection and implementation process progresses.

Identify Project Costs and Benefits Justification

You need to make sure all of the elements of the project are identified properly; No one likes surprises, e.g., project cost overruns or missed schedules. Make sure the numbers have credibility. You also need to determine what the basis is for the savings as the result of the systems

implementation. For most businesses this investment is a considerable amount of money and resources. Companies have spent millions without a benefit. Remember people reductions are not a valid basis for justifying a system. In many cases this is a way of making sure the project doesn't make it. Again companies realize that technology and software must be installed if they are going to stay in business and be competitive. When you look at cost and benefits you will determine very quickly where your support is. Users and management must believe that the new system will assist them in improving their job or give them tools to decrease the non-value added functions and favorably impacts the bottom line.

Identify Key Performance Metrics

Metrics allows the project Team to put the stake in the ground. It is easier to measure improvements if you know where you started. In many instances a review of what was gained from the system could not be measured because no one new where they were when they started the project. For example what are my inventory turns or what is the time to process a customer order. There should be a small number of metrics that are key to the strategic performance of the business and/or functional performance in key areas, e.g., BOM/ formulae accuracy, forecast accuracy, delivery performance, schedule performance, inventory record accuracy, and improved Customer Service.

Understand Information Technology's Role, Position, Strategy, and Vision

As mentioned earlier, the focus of a new system implementation is to install software to run the business. You are not putting in a computer system but a business system. But you need to make sure that IT/MIS is part of the Team for support, but the users, regarding definition and selection, are the real drivers. IT/MIS personnel provide the technology expertise but everyone needs to understand where they are coming from and what their vision is for the future. Technology is important but it should not be implemented if other parts of the organization are going to suffer or future costs will be incurred. Cost for technology needs to be clearly defined. There is a difference between "leading edge" and "bleeding edge" technology. One costs and hurts more.

Also an agreement will have be made as to whether the software will go in vanilla or be modified. A firm rule should be established - no software modifications until at least a year after implementation completed. Never would be a better rule.

Understand the Current System Infrastructure Issues

Everybody worries about the software and hardware but data and condition of the current data, in many cases, is overlooked until it is too late. You need to understand the quality of what is being used, entered, and length of time you need to keep the data. If the current system is non-integrated and data is being transferred many times until it is finally ingested or digested. You need to identify: How good is it? Can it pass a quality check? It is easier to find a bad part/item in a factory than it is to find bad data. For example how good are the: BOM's, inventory records, routings, process instructions, CAD drawings, chart-of-accounts, formulae, and Customer / Supplier master files. You just can't assume it's all good and needed and then just convert the data into the new system. This leads to the saying "garbage in and garbage out". This is a great opportunity to do house cleaning of the system data. Size of files has an impact on hardware needs,

system performance, and conversion costs during implementation. The project team needs to understand the issues.

Identify a Valid System Definition, Selection, and Implementation Methodology / Process

A structured methodology / process is very important regarding software projects. As part of the project there are a number of elements that will need to be defined in order to be completed properly. These include: systems requirements definition, software demonstrations, vendor short list, final software selection, testing/validation, and software implementation. The methodology must be thorough and structured but not more complicated than the overall project. The Team needs to determine the scope and depth of the methodology to be used for each area. "Remember if you don't know where you are going any map will get you there."

System requirements definition is the hardest to develop but must include input from users. It's a good idea to start the process by asking the users and management; "Why they want to change the current system?". A chosen few approach will not give you the buy in and will cause the project to fail. The definition and selection process should occur quickly and a decision needs to be made. Paralysis by analysis will certainly delay or kill the project. Indecisive action is no action. Part of the final selection is doing do diligence regarding the software Vendor and software. You have to see it work and with your information. Be careful of vaporware. If it doesn't work now, and you are told the check is in the mail is unsatisfactory. You must investigate to a level of detail where everyone on the selection team is comfortable with the software and the vendor. Sometimes gut feel is part of the process.

One must be aware of the many trade-offs between complexity and simplicity, and decide where the company culture, core competencies, and / or vision best fit within that spectrum.

Understand the Software Vendors' Markets and Capability

As part of the do diligence, you need to make sure the vendor serves the market niche or market area that your company supports; e.g., automotive, CPG, A&D, pharmaceutical, manufacturing, process, services, MRO, or distribution. They need to be a player in your niche manufacturing or distribution area. Visits to trade shows, internet research, software reference customer visits, or attending User Group conferences are part of understanding whom the vendor serves best with their software products.

Identify Core Competency Regarding – The Need to Seek External Consulting Assistance?

Do you have the capable resources to support the project? An assessment must be made of your internal resources. We are talking about people who have the body of knowledge to make the definition, selection, and implementation a great success. For example, do they understand: current technology, MRP, ERP, JIT, warehouse management, SCM, CRM, e-commerce, logistics, flow manufacturing, product configuration, or MPS? If these people don't exist then consider using external assistance. Consultants, if managed properly, can make the project run smoother. Remember "tribal knowledge" isn't always the best or only way of doing a function. You need another perspective, vision, or new ideas to make the selection and implementation project a success. What you don't want to do is hire an external person to run the project -- a real major mistake. You can't replace internal experience with a hired gun. Plus all of the knowledge they

gain leaves with them after the project is completed. The body of knowledge must grow through the selection and implementation process. Remember this should be part of your continuous education process. It is a blend of both that insures success.

The Degree of Reengineering and/or Process Changes

The following questions are asked many times by Project Teams:

- Should we reengineer now or wait later after implementation of the software?
- Should we change our internal business processes?
- Do we know what to change?

The real question is, do you understand your current business processes? It all depends upon where your company is coming from and what is the vision as to where it wants to go? This project offers an opportunity to look at internal processes and determine if change is required and to what degree. Many new ideas will surface as your Team goes through the selection process, software demonstrations, and start into implementation. But remember, your company will be going through a traumatic experience with the implementation and can it take a double shock by doing reengineering? This needs to be talked out and at least flowed out in critical business areas. If you use a structured methodology to define your requirements, the "key/critical" business processes will come to the forefront. These are your focus points as to change or not? Slow change or phased change may be easier to handle and not drive people from wild enthusiasm to panic. But remember change will happen, because as soon as it was agreed to find a new business system you already agree to make the first step of changing the way you are going to conduct business.

Identify the Scope of Training and Education

Users, IT/MIS, and Management training and education are the most critical part of this whole process. One of the major reasons system implementations fail is that people short circuit this part of the project to save time or money and then pay a big price later -- a costly poor implementation and worse yet a re-implementation. Senior Management on down to all levels within the organization need to be educated as to what is going on and also trained on how to execute the new processes within the software. You must cover the Why am I doing this? and How do I do it?. Many times people understand the execution part but have no clue as to why they are doing the transaction or the impact of a mistake or omission.

Education for Senior Management provides them with a top-level understanding of the impact of the new system and what they can achieve with the added functionality and information. As part of the education and training process you need to identify who and what each person involved needs to know and what will fill the information void? The Vendor has this information and can assist in this area. You must also determine if conceptual education is required? APICS, NAPM/ISM, Buker, Inc. and other professional organizations can assist locally or nationally in this area. The Implementation Team needs to understand the many facets of the new system and may play a role as part of the train-the-trainer way of educating personnel. This again continues building the core competency within the company.

Develop A Contingency Plan or Plans

As mentioned in the beginning, something always goes wrong. Seems it must be a rule of life. You have to plan for the obvious and cover for the rest. These may include uncovered software bugs, business condition changes, bad data conversion, system modifications, third party software interfaces, hardware issues, or people problems in not wanting to change or understanding what seems to be the obvious. This also includes determining where the point-of-no-return is? If required, what is the last date you can still kill or delay the project for whatever the reason. These may include labor unrest, people out, business declines, etc. Some of theses are a major reason to delay the implementation. So pulling the plug has many major issues to reconcile. Also remember if you wait to long to restart the project, it's considered a new implementation and you probably will have to start over. The last point-of-no-return is switching over to the new software. Once the conversion is executed that's it! You can't go back. The first hours, day and week can be a period in your life you may want to forget. This is the test of your plan. Make sure resources are available including coverage by the Vendor if you are going to do this on the weekend. An answering machine message doesn't help at your software Vendor's office. You also can't forget that the project has a schedule and budget. Did you allow enough time and money to cover the unknowns?

Conclusion

Remember the Critical Success Factors assist you in making sure all of the bases are covered during the selection and implementation part of the software project. We talked about Understanding Corporate Culture and Politics, Getting Management Support, Picking the Best Person for the job, Identify key performance metrics, IT/MIS support and vision, What are the current system infrastructure issues, Follow a methodology, Understand the Vendors strengths, Identify internal core competency, Reengineer or not?, Train and educate till it hurts, and Plan for Murphy. So understanding the risks, making a plan and following it plus having something extra if things go wrong will make your selection and implementation project a success! A little bit Luck doesn't hurt either.