

**Open Source ERP an Advantage to Small and Medium Sized Enterprises**

A term paper by

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# Introduction to the Project

Open source software’s are becoming very popular among the industry whether it is ERP systems, telecommunication systems, personal productivity applications, inventory management software’s, operating systems, management support systems or general purpose software’s. It is slowly becoming the critical part of every organizations planning strategy in-order to keep the costs low along with the better support and accountability. It further provides the flexibility to enhance and organize the open source code for better productivity by the software by providing the stability and the reliability of the code due to involvement of highly competitive developers. The use of open source ERP software for developing further integrated and enhanced robust systems benefits the organizations in terms of further flexibility through freedom from a single vendor as well as providing the freedom to modify your ERP software as per the organizational needs. As it is known that using the Open source ERP software can drastically reduce the expense towards licensing cost, maintenance cost as well as acquiring the tools and framework, for example the difference between the support cost and licensing cost can be as good as 90%.

This is also obedient that use of open source ERP tools and technology comes with its own share of risks. So to manage the stakeholder expectation, the schedule, the finding the right resource and managing the unknown-unknown can be quite challenging.

In order to gain the strategic and operational advantages associated with the use of open source ERP software, we have done some analysis on the existing ERP open source systems which can be leveraged to create the organization wide success stories.Open Source ERP systems are often targeted to the enterprises whose requirements are not covered by the standard available ERP packages. This project analyses different ways in which an open source ERP system can be utilize effectively to turn a medium or small scale enterprise to be a profitable one. This project also discusses the efficient methods to implement an open source ERP to contribute in the success of an organization. One of the major factors is the rapid changes in the ERP systems to cope up with the changing business environments. We will be discussing on the role of open source ERP’s and what are the best practices to use them effectively and efficiently to make them strategically advantageous for any small or medium scaled enterprise.

# Brief Introduction to the ERP Systems

ERP systems are integrated software components which are responsible to support critical organizational functions. It integrates both of the organizational functions as well as the systems of its partners and suppliers which are a part of its business strategy. These systems has mostly web based interfaces to be used across the organizations on just a click of the mouse hence making it easily accessible to the employees, clients, partners and vendors from anytime and anyplace. Use of an ERP drastically enhances the visibility and the capability of an organizations different department like human resources, finance, marketing, operations etc. It provides the decision-makers of the organization to have an enterprise wide view of the information needed timely with a consistent reliability. ERP works as the backbone for an enterprise-wide information system which provides critical information related to the different departments within the organization. Most of the enterprise software’s has a central database which stores and processes organization wide data from the different departments and makes the data availability to be fed into modular applications operating on a common computing platform, thus standardizing business processes and data definitions into a unified environment. ERP system provides such a transparency and visibility across the enterprise so that the data needs to be entered only once. Some of the benefits of the ERP systems are its reliable and integrated information along with its ability of elimination of the redundant data and rationalization of the processes which results in the overall organizational cost savings.



Figure 1: Integrated Systems - ERP

# Open Source ERP Software

The term ‘Open Source’ refers to a program or software whose source code and some other rights are made available for use or modification by others, under a software license that meets the Open Source definition of the Open Source Initiative (OSI) or that is in the public domain. Usually open source software is developed with public collaboration and it is freely available in the public domain. However, there are distributions terms associated with Open Source software and should comply with the following criterion.

1. **Free Distribution** – The software license being distributed must be redistributed to anyone else without any restriction.
2. **Source Code** – Source code should be available in readable format along with the product or there should be well publicized means of obtaining the source so that source code can be modified or improved. Deliberately obfuscated code is not allowed.
3. **Derived Works** – Derived works must be allowed as per the original license conditions.
4. Integrity of The Author's Source Code – Licenses may require that modifications are redistributed as patches or carry a different name or version number from the original software.
5. **No Discrimination against Persons or Groups** - The license must not discriminate against any person or group of persons.
6. **No Discrimination Against Fields of Endeavor** – The license must not restrict the program or software from being used in a business or from being used for generic research.
7. **Distribution of License** – The license attached to the program must apply to all whom the program is redistributed to and software cannot be closed.
8. **License Must Not Be Specific to a Product** - The rights attached to the program must not depend on the program's being part of a particular software distribution or product.
9. **License Must Not Restrict Other Software** – The license must not insist that all other programs distributed on the same medium must be open-source software.
10. **License Must Be Technology-Neutral** - No provision of the license may be predicated on any individual technology or style of interface.

In the beginning there was only free software i.e. in the 1950s to 1960s software’s were developed by academics and researchers working in collaboration and freely exchanging it among them. Then proprietary software dominated the market and recently Open Source software came back again as an option.

It’s true that ERP deployment in itself saves nothing in an organization but it’s the people and processes which creates benefit. Therefore, Open Source ERP can clearly help an organization in following ways.

1. All business process and sub processes are integrated under a single system.
2. Produces Productivity, efficiency, effectiveness in conducting Business.
3. Reduces organization response time as the information transfer is quick and effective across the organization.
4. It allows streamlining almost all of the functions performed by an organization as a whole.
5. It aids in quick and crucial decision making in an organization.
6. It produces reduced operating costs by reducing inventory control costs, production costs and marketing costs.
7. It helps an organization in standardizing its business processes as the ERP business processes comes from industry best practices.
8. With ERP system organizations can reduce compliance issues in general or related to the industry.
9. ERP system helps reducing data redundancy in an organization as it maintains a centralized data repository.
10. ERP system enables better audit trails by monitoring every data change through logs, so persons trying to sabotage the data can be easily identified via the system.

# Benefits and Challenges of Open Source ERP

Following are the advantages of Open Source ERP.

1. **ERP Pricing:** - Open source ERP software’s are available for free and there are module or license fees involved. If the Free edition suits the organization then there are paid features which an organization can upgrade to with much lower risks compared to implementing proprietary ERP for which the cost and risks are very high from the beginning. Also, Open source ERP integration costs are transparent from the beginning but proprietary ERP vendors are good at hiding their costs on the long term. Many companies who implemented proprietary ERP have experienced additional costs over time and this can actually become double the original price. According to a study carried out by the Standish group (2000) discussing proprietary ERPs implementation, 28% of the implementations respect the budget, the time and while satisfying the needs of the enterprise, 49% are a failure in terms of budget, time and functionalities, and 23% are abandoned before they finish.
2. **Flexibility:** - The source code is made available for free which makes integration, customizations and interfacing with other systems very easy. This can give a competitive advantage to an organization in terms functionality and cost both.
3. **Ability of adaptation to the business environment**:- Client need to adapt to the business processes built into the Proprietary ERP software’s and ERP vendors justify this by saying that they incorporated best industry practices without considering the current business context but open source ERP offers clients to adapt the system to its environment and business processes.
4. **Infrastructure model that suits SME’s:**- SME’s cannot always afford to build costly infrastructure models suggested by proprietary ERP vendors. Moreover, at technical level, proprietary ERPs incur high integration costs which are not convenient for SMEs. Nowadays lots of proprietary ERP vendors are trying hard to attract SME segment by offering new solutions with lower integration costs. SAP business one is an example of similar effort.
5. **No hidden costs:** - Many proprietary ERP vendors offers ERP packages at an attractive rate but which soon turns out be limited by the number of users. Once an organization implements proprietary ERP software then soon it can find itself struggling with the additional costs to actually scale up the system. This is not the case with Open system ERP.
6. **Possibility of specific developments**: - Proprietary ERP vendors keep a tight control over the functional modules implemented in a client organization. If a client wishes to carry out specific developments or tries to upgrade the system with customizations then it might not be compatible with the vendor provided ERP system. In future, these custom developments might not allow the client to take the upgrades provided by the vendors as well.
7. **Vendor’s independence**: - By adopting Open Source ERP the client is not at the mercy of the vendor. Vendor lock in risk for a long period of time is completely eliminated for organizations who implements Open Source ERP. The support of the product is provided by community and the client is in much powerful position.
8. **Freedom for upgrade**: - Organization choosing to implement an Open Source ERP system need not wait for vendors to provide upgrades but they can choose to upgrade the system whenever they want. An organization has the flexibility to upgrade the system on their own or they can use consultants available at best market prices.

Again if we consider the other side of the coin then there are number challenges associated with Open Source ERP system along with its benefits. Following are the ones.

1. If the organization does not have all the capabilities to implement Open source software then it will come with a cost. Consultants for Open Source software may charge significantly higher as they are not easily available.
2. Usually Open source ERP systems are not very user friendly when compared with proprietary ERP systems but this can be improved as the system evolves through the community group.
3. Requirements for ERP systems vary industry to industry. If system that tries to solve all the problems then it becomes over complex.
4. Organizations need reliable development; support & training for mission critical systems and some open source systems are not ready for production environment.
5. Big players do not have any strategic interest on Open Source ERP systems.
6. Limited marketing capabilities regarding Open Source ERP leads to low awareness and reputation.
7. Business community does not recognize open source ERP compared to the wide acceptance within technical community.
8. The documentation available could be incomplete or may not be up to date always.
9. Functionalities offered through open source ERP could be less when compared with proprietary ERP system.
10. There is vendor reputation available for open source ERP systems to shortlist the ERP software’s. So, each system needs to be evaluated judicially to make a good selection.

# Open Source ERP Implementation in Small and Medium Scale Enterprises

In today’s world, many of the most renowned companies have implemented Enterprise Resource Planning systems to gain a competitive edge in their business area because of the features, flexibility, agility provided by the software. ERP helps the companies to streamline the internal business processes as well as make them efficient. Procuring ERP software has always been the choice of big companies who could afford the amount of investment needed for this. So with emergence of small startup companies as well as medium size, now these companies need to grow and compete with the well established companies in their field by stream lining their process as well as making the process agile to adapt to changes quickly. To achieve this, these companies need software like ERP which can integrate the business process as well as fine tune their process.

ERP software have many real business benefits including –

* Improved overall management visibility to business operations
* Improved visibility to company’s financial performance in real-time
* Improved sales performance
* Improved inventory control and planning
* Consistent business policies and processes throughout your company improving customer service and profitability
* Improved on-time delivery
* Reduced procurement cost
* Reduced work-in-process inventory
* Reduced labor costs (for both office operations and manufacturing)
* Reduced overall waste

But to procure these SW from vendors like SAP or Oracle means lot of cost as well as require lot of time. Till now these companies’ processes were running by using MS-Excel or QuickBooks or Tally. So suddenly investing this big amount of money is no way making sense to the business or the stakeholders, but at the same time these SME companies understand the need for SW that can do the job of ERP at a lesser price.

Hence the emergence of OPEN source ERP that provides the benefits of ERP with a flavor of characteristics of Open source that is

#### COST is Minimal to free

No upfront cost for the SW which is available for free that you can download and install. The company does not have to pay the heavy software license fees as was the case in the traditional ERP system implementation. This makes ERP more affordable for the SMEs as there are no license fees, module fees and maintenance fees. You are the owner of the SW. Once this is taken care, rest of the things like implementation cost is very minimal.

Since ERP covers all processes starting from sales order entry, shipping/delivery, product pricing, warehousing and inventory, procurement, production, invoicing (both A/P and A/R), service, financials, and many others. IT enables improved business decisions by making information from various parts of the business available to throughout your business operations in real-time.  It posts relevant business transactions to company’s general ledger and other financial systems allowing management to see financial implications in real time.

#### Flexibility

Since the cost is low as well as code is freely available, a little more money can be spent to fine tune the SW as per the need of the company and time can be spent on the core services like accounting, material management etc.

#### Implementation

In traditional ERP, lot of time is spent during implementation and sometimes this phase become the most expensive phasse due to very tight coupling architecture, where as in Open source ERP, due to open architecture where the modules are loosely coupled, it becomes very easy to implement.

#### Excellent documentation and availabilities of case studies

Since these ERPs are from open source, these are tried and tested at many places, and hence there are documentation as well as case studies available for different scenarios with the learning, but in-case of traditional ERP, the failure data is not very well provided by the vendor, there the picture is always very attractive.

## Pre-evaluation Screening

Arguably the most important step in any ERP project is choosing the right ERP SW that will be good fit for the company with less customization and within the budget. Looking for instances where the same ERP SW has been implemented in the market with high success rate and less failure rate will help in finding the right vendor. Even if the ERP SW implementation failed there would be best practices that would have been learned from the failure.

A through rigorous ERP SW selection process reduces the risk of choosing a solution that would not be fit for the business process. Since in SME, the budget is tight, the scope is more or less limited to the core process of the business related to Accounting, Manufacturing, Ordering, Procurement and delivery, so doing a through homework on the requirement and business process, will always help in finding a solution that is close to the need of the company.

#### Questionnaire

Though a questionnaire is important but just creating a simple questionnaire and looking for answer to the question to be Boolean (True/False) will not reveal much about the software vendor company. Options should be given to answer the questions that would be descriptive with references given at relevant section.

#### Business Process and requirement

Since ERP helps in streamlining the business process and reducing the cost of ownership of the process, simply defining the current business process and to be new process will help to a great extent in finding the right ERP SW as during evaluation, the selection team can understand the process defined by the ERP SW and match whether it justifies the needed process required by the business. If not, how much customization will it require to define the new process?

#### Request for Proposal - RFP

Once RFP is received from the vendor and after short selection of the vendor, during the subsequent meeting with the vendor, a MOM must be published and it must be signed by all the participants in the meeting and this will create a sense of accountability within the vendor, so this process will reduce the chance of falsifying any information by the vendor.

#### MOM – Minutes of meeting with Accountability

Once a series of meeting is done, the selection team should be in a position to downsize the number of vendors to just N and after that a demonstration of the product must be carried out to all the relevant stake holders covering operation management, technology management and all the process owners.

## Package Selection

### Proof of concept – POC

Based on the current business process and new business process, a case scenario must be chosen by consulting the entire above key stakeholder and making sure that the scenario covers multi business process to make sure the data is integrated. The scenario must cover performance indicators, key measures, setting base lines and targets for those measures.

Once the POC is done by these vendors the result should be quantitatively as well as qualitatively validated and verified by the key stakeholders.

### Ranking of Vendors

Based on the above result, the features provided by the SW, the credibility, reliability of the vendor, the market capitalization of the vendor, the number of installation done by the vendor and availability of support service providers for the SW, a finalized ranking must be done. So all these results are fact based rather on perception or only marketing. So by doing this the company is just minimizing the risk of failure.

Once the ranking is done based on the cost negotiation, the most suitable ERP SW can be chosen that would fit the three constraints of the project that is cost, scope and schedule.

## Project Planning

Now that we have selected one ERP SW from Open source based on the ranking, it is time to implement the same. To implement we need to devise a project plan.

1. **Formation of the PMO** – This will constitute people from many key areas including people from finance, technology, people from the SW company and key sponsors. They will be responsible for defining the scope, cost and schedule. While defining the scope and schedule, they must develop a change management plan that would be used for any changes to scope, cost and schedule. They will be the people who will be responsible for governance as well as the spokesperson for the project and keeping the team intact, motivating the people to work on schedule, promoting openness within the team.
2. **Goal Setting** - Once the scope is finalized, and then the formation of the infrastructure team who will be responsible for sizing of the HW, the number of the environments required (Dev, QA, Test, Pre-Prod and Production) as well as the DR site. This team will also select the DB, the security SW, reporting SW, data movement tool, the operating system etc that will make the system to run smoothly. This team will also be responsible for storage requirement needed for the next 5 years and will also be responsible for performance metrics needed as one of the KPI for the project.
3. **Audit Team** - Formation of QA/Audit team who will be responsible for the quality check, monitoring of the key performance indicator like process improvements, cost reduction, better quality deliverables from the people, integration of the process.
4. **Strategy Plan and execution** - Formulation of a plan that would decide which requirement will be released to production at what phase. This will also decide on whether the releases will happen as BIG BANG or Phase approach or it could be a mix of both the approaches. Decision is to release one set of requirements related to Accounting as big bang approach in the 1st phase then run the new process with the old process in parallel. Once this stabilizes, the other set of requirements will be released in the next phase as a big bang approach and follow the same practice that was followed for 1st phase. Once in the 2nd phase is ready to run in parallel, we expect the 1st phase would have stabilized and in that case retire the old process from the 1st phase. At the same time develop a plan B as the contingency plan in case of failure requiring rolling back without hampering the business as usual.
5. **Development Team** – Based on the requirement and release plan, form a team of high performing dedicated, self-motivated people from the current organization from functional side as well as from the non-functional side, a set of consultants who have implemented this ERP solution earlier. This team should be cross functional as well. This people will be responsible for day to day operation and delivery covering the certification process which is nothing but validation and verification of the current process and new process.
6. **Communication Method** - Devise a method for communicating to the outside world including the stake holders at regular interval and the method could be email campaign or a newsletter or poster communication.
7. **Integration** - Test and Integrate Design different test cases that need to be executed at different intervals and the process can be a Test driven design.
8. **Parallel Run** – Run in parallel the old legacy system with the new system for a quarter for that phase.
9. **Support Structure** – Define and design a set of process and train the people on how to support the system. Develop real champions as go to persons in case of issues.
10. **Retiring Legacy** – A plan in place to retire the old legacy system after given approval by the Audit team, quality team as well as the key stake holders. A plan to archive the old data as well as the system to be in place.

## Gap Analysis

This is the process to identity the gaps by mapping the expectations of the company with the capabilities of the ERP product. Results of Gap Analysis

* Directly Supported
* Workaround suggested
* Extension required
* Change in business process – suggested
* Not full supported
* Manual – not under the scope of ERP

## ReEngineering

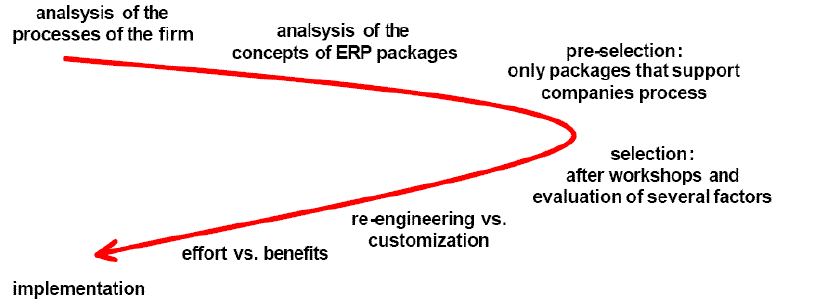


Figure 2: Stage of ERP Project

It is especially suitable for small and cost-sensitive enterprises to use an ERP system out of the box. Basically SMEs can adapt its processes to the ERP system, which generally uses best-practice processes, and use it out of the box. This is called the re-engineering approach (adaption to ERP processes in this context).

## Customization

Out-of-the-box ERP systems should be used in areas that are not the core competency of an enterprise. In core competency areas your unique processes usually are a competitive advantage and better than best-practice processes provided by ERP systems. The out-of-the-box features of an ERP system are usually of importance for small and medium sized organizations. Indeed, SMEs are usually on a tight budget and will attempt to keep the system's customization at a minimum and take advantage as much as possible of the default features of the system.

## Implementation Team Training

* Few employees are selected for training and it takes place during the process of ERP implementation.
* To be cost effective, SMEs trains its employee to implement and later, run the system without the help of external consultants. This is possible because of open source ERP as source codes are in control of SMEs
* Employee becomes self-sufficient to implement the software after the vendors and consultants have left.

## Testing

Testing of Enterprise Resource Planning (ERP) system comprises various activities which are used to validate the existing or future business processes and the business rules that affect them, it helps reducing the operational risks associated with the effective and efficient functioning of the overall business operations within available resources and time schedule constraints. First step for the testing is to develop a comprehensive test plan, in-order to perform an effective testing; we must test the individual components and their interactions with the other components of the system. Below diagram shows the effective testing methodology which should be followed by the ERP system development teams to make it impressive and robust.



Figure 3: ERP Test Life Cycle

## End-user Training

Every organization follows a typical ERP implementation life cycle which often extends from 5-20 years based on the size of the organization. Training and getting familiar with the implemented ERP systems is a must for an organization to increase its productivity and profitability. A typical ERP training life cycle has following stages:

*Product Evaluation* – This phase talks about reducing the dependency costs by ensuring that the in-house teams has the knowledge to independently configure, test and run the ERP systems. This may include bringing outside expertise in house as employees and proper training of the support team members and the target audiences.

*Implementation Phase I* – This is the time when any organization goes live for the first time after the ERP implementation. This is one of the most crucial phases in terms of the variability and variety of audiences and an urge of system learning that must be done.

*Implementation Phase II and Beyond* – This is the phase when ERP reaches to different departments within an organization. These stages usually need more advance knowledge on modules that have been live for a while.

*Extending Value* – This phase is mainly considered for additional value additions to the existing ERP system and needs a lot of overall system understanding and additional training needs.

*Maintaining Value* – This phase mainly concerns about existing systems maintenance and support, needs timely reviews and new trainings has to be introduced for the effective maintenance by knowledge sharing of the existing systems across the teams.

*Declining Value* – This basically comes in existence for very old or declining value systems which needs to be replaced with the new ones to add competitive advantages to the existing ERP systems or business processes.

## Going Live

This is the phase when an ERP system is being made available across the organization after its successful implementation. Basically here the employees go live or gets directly involved with the usage of the system for organization wide gains. It is advisable to decide on measurements of success for the system before going live by use of the defined success criteria’s along with the defined success metrics. It’s also advisable to come up with the “Center of Excellence” ideas to reduce the dependence on the consultants who leads to the overall cost overruns.

## Operation and Maintenance

Operation and maintenance is the typical phase in ERP system which starts after the system ‘Goes Live’. This is the longest phase in ERP life cycle and this is the phase which determines the real value of the system to business over the years i.e. this is the phase which can be used to maximize profits for the organization. Therefore, we will look into the factors which make the operation and maintenance of an ERP system beneficial over the years.

***User Training***: -This post implementation training enables users to fully understand the system and what are the implications for the usage of the new system on their day to day business operations. Additional training on the new functionalities enabled by the ERP system. Another type of user training could be periodic meetings of system users which encourage exchange of information based on experience and familiarity with the system. Training needs to be ongoing process for existing and new employees. Web based FAQ files, printable Help files which provide the end to end functionality, training documentation, videos describing system functionality should be considered for continuous training process so that the system is used correctly to gain maximum value.

***Support*:** - Apart from the training materials organizations can arrange support personals for users needing assistance using the system or related to any mistakes or defects encountered in the new system. Help desk plays a key role in this area. Tracking and resolution of issues also can actively contribute to the knowledge management system.

***Knowledge Management*:** - Knowledge transfer is a key process which should actually start from the ERP system implementation phase. Over the ERP lifecycle there are continuous changes in internal or external resources and organizations should have proper process in place to capture the knowledge. Implementation team members, key users, vendors those who have different knowledge bases need to transfer knowledge by formal or informal communication. Documentation is another process of knowledge acquisition in ERP systems i.e. documentation in the form of process descriptions, operating guides, system manuals etc. If an organization can implement a proper knowledge management system then it may see impressive benefits such as reduction in learning time, information overload and search effort.

***Process Optimization*:** - Recent studies proved that the way to obtain greater productivity and business performance from ERP systems over long term is process improvements. Initial fit between the processes and ERP will not represent the sustained fit for organizations as organizational process will change over time. Thus optimizing processes needs to be continued once the system is live and organizations need to see how the system can evolve to cope with these changes.

***Informate*:** - This means transforming ERP systems data into information and supplying it for business analysis and decision making. Organizations need to learn from the information developed by the ERP system and deriving how it can best support its business. Organizations must stay with the ERP system so that managers and users learn what data is available and how it can best support the business. That is Organizations should provide right information to the right people at the right time.

***Enrich the use of system*: -** Usage of ERP system is the critical factor once the system is operational. Studies show that majority of organizations underutilize the potential of an ERP system i.e. employees only exercise low level features and rarely use technology related extensions of the available features. Also, survey data shows that majority of post implementation issues are related to people and technology is quite mature and stable. So, Organizations need to pay close attention to post implementation adoptive behaviors to induce and enable users to enrich the use of ERP system.

***Monitoring and evaluation of performance*:** - Post implementation, the positive impact of the new ERP system on the business performance needs to be shown to drive the enthusiasm and motivate users to use the new processes and system. Reports should be regularly generated with a set of measurements designed to follow up the effect of ERP on the business performance. Continuously act on the performance results to improve the business.

***Data Validation*:** - Organization should ensure data entered is valid and data entry processes are followed. This should be checked periodically so that the system is used correctly otherwise incorrect data will flow into the system to impact the other functional area processes. This can be accomplished via detailed reports that identify data problems in the system and through standard check points.

***Data correction*:** - Post implementation of the system, data may not convert correctly or automated interfaces may update the system incorrectly. This needs to be identified and fixed via separate batch update process so that the system does not operate on incorrect data.

*New features***:** - Businesses continuously change and any system must evolve along with these changes. It is very important to ensure the resources are available to incorporate the evolution of the system that was implemented. This also increases the system user confidence.

## Change Management

Companies over time develop their own culture, values, processes, habits etc., so naturally any attempt to change those are met with resistance. Change management includes a strong commitment from management to use the system to achieve business success. It is only normal for people to resist change which they were following for ages. Therefore, for any big new system communicating, preparing, and training are crucial to the overall successful implementation of ERP. Organizations need to show the clear business value achieved by using the new system. Research has shown that many projects fail due to lack of communication between technical stuff and customers. It is imperative that users of the system are able to appreciate the system fully as ERP systems rarely fails because of technology (Open Source or Proprietary). Best way to handle the change of this magnitude is to roll out an aggressive training plan for system users to gain their confidence. ERP systems involves change i.e. this system initiates change in processes, hardware, software, human resources to organizational structure. So, clearly ERP system does not have a defined start and end point for its continuous change process and suggests that change management is critical factor in beneficial ERP implementation and use.

# Conclusion

We can see that Open Source ERP has its share of advantages and disadvantage when compared with Proprietary ERP system. Today, Open source ERP is drawing lot of interest and it clearly gives a choice to SME’s to compare against costly & closed proprietary ERP system before making a selection. SME’s with flexible business processes can definitely utilize this new opportunity with Open Source ERP as they will be able to adapt to the system processes very quickly. We have also seen that acceptance of Open Source ERP is increasing day by day which could be because users of proprietary ERP are facing challenges post implementation. Another reason could be maturity of Open Source ERP solutions as it evolves through years. With Time Open Source ERP systems maturity and reliability increased significantly. Open Source ERP also gave flexibility in enterprise computing area with its downsizing cost and increased customizability. SME’s perceive following are top most factors in Open Source ERP selection.

* Reduced Total Cost
* Functionality
* Increased Adaptability & flexibility
* Ease of Use
* Business Process Re-engineering
* Best fit with the current Business processes
* Customization
* Supplier Support
* Support from the community

The importance of motivating factor to select an Open Source ERP could be different from organization to organization. It might depend on the size, geographic location or other factors but there are some driving factors (discussed above) in OS ERP which proves to be very lucrative option for SME’s where companies continuously look to reduce cost and increase profits.

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