Implementation of ERP For An Educational Institute Deployed on Cloud

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Abstract- *Use of ERP has exponentially grown in various corporate and financial sectors in past few years. Emergence in cloud boosted the utilities of ERP making it reliable and scalable by providing various economic and technical services. SaaS based infrastructure is popular amongst many small scale as well as multi- national companies. Making an ERP for an Educational Institute focuses on many sectors involved in general learning process. Making these processes automatic and integrating them as one system is the goal of this ERP. Implementation of a successful ERP revolves around many aspects like performance, functionality, reliability, security and availability of the system.*

Keywords- Information Systems, Database Machines Database Administration Database Applications, Predunt.

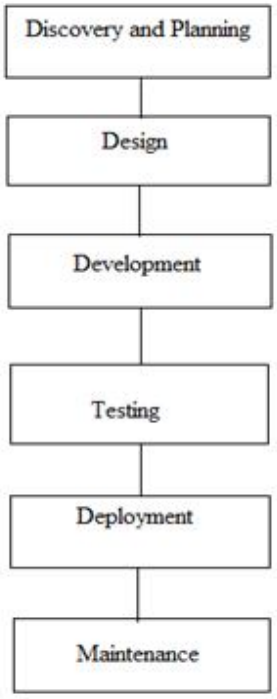
I. INTRODUCTION

As we know due to advancement in technology, every field is striving to reap its benefits. Education remains the backbone of every individual and everyone wish to get the best out of it. Current Education lags in understanding the rapidly fostering technology, and is clung to the conventional methods of teaching and learning process. Hence an effort for automating the traditional methods involved in education have become a necessity and ERP helps to solve them. ERP also provides integrating these functionalities and provided a platform to a secure reliable and a fun way in Learning process. The paper concerns on the implementation of ERP, challenges involved and the Process that makes it successful.

II. IMPLEMENTATION OF ERP

Implementation requires a thorough knowledge of the domain and understanding the requirements of the customer and the targeted users of the system. A robust system can be implemented only by rigorous efforts of designing the architecture and constant monitoring of the process. Success factors depend upon the severity of the system that is to be developed. Improving performance, security and usefulness of the system is the major goal. Implementing not only involves developing a system, but also involves testing, verification, validation, maintenance and adding new features to the existing system. Some ERP system involves training the client party about the technicalities and usage of the system as it may involve some advanced and brand new features which may be alien to the user.

Following are the general phases any ERP system implementation goes through : [10]



1. Discovery and Planning:

Discovery refers to identifying a problem and understanding the need to solve it. Once the problem domain and why to solve this particular problem is specified, what solutions would be possible to solve it, can be defined. In case of ERP the need to integrate and automate few of the tasks and there could be a software developed to solve this issues is understood. Which all modules the ERP would posses and which services needs to be orchestrated is decided at the very early stage. Implementing and ERP requires a lot of capital and hence changing requirements in an ongoing project gives

rise to ballooning cost. Hence freezing the requirements at the start of the project becomes mandatory but merely possible.

Planning refers to many aspects like creating a team, efficient to build this ERP System. Identifying the roles of each individual and designating each person its task There will be meetings conducted and documentation developed as the team works on identifying the issues and potentials of the project.

Software and Hardware requirements will be identified and a strategic plan will be plotted in accordance to the development of the project which will prove to be guideline throughout the rest of the project. This will ensure successful completion of the system before the deadline of the project mentioned by the client.

2. Design

Design Phase is the most crucial phase in constructing a successful ERP. As changes after the system is implemented becomes tedious and affects the cost and the time required to modify the system. Hence designing the system architecture must be done meticulously and each module design must be scrutinized.

Designing refers to a broad concept, about how the system will look like and how will behave.

The interaction of the system with the targeted users and its usefulness to them is what most designers are concerned of. The detailing of the system is also done in this phase once the broad concepts are cleared. Detailed Design [8] focuses on modules of the system, their interaction with other modules, interdependency and collaboration. How each module will behave individually and as a part of the system? More technical details and specific software architecture is designed in this phase.

3. Development

Development phase involves actual implementation of the system. Coding and implementing the design that was created in the previous phase. Customization may take place in this phase, as some requirements may not be technically valid and finding alternatives to it can be possible. The purpose of the development phase is to prepare the entire system to go live. This phase usually goes in an iterative manner, so as to accommodate changes at early stage of development and verify and validate the system in accordance to the specified requirements. System is in tuned with similar projects to understand risks and opportunities for improving performance and other financial factors.

4. Testing

Testing Phase plays a vital role in ERP development as changing the system after complete implementation and deployment is devastating. Hence to reduce efforts, time and cost, the ERP system goes through iterative and rigorous testing phases. Verifying the system according to the requirements is done. Finding defects, causes for the defects and loopholes is carried out. Performance and security check is done. The behavior of the system under certain circumstances too analyzed. All these processes ensure accuracy, reliability and usability of the ERP system. No system can be completely error free, but the effort is to make it most efficient based on the customer requirements.

5. Deployment

Deployment focuses on the environment in which the system is to be used. The ERP which is SAAS based is deployed on cloud platform [3] with specifications of the users and resources it will need. As the users of the system grows the ERP owner has to pay charge to the cloud service provider. In this case the user will get the url to the system and it must use a standard browser to connect to the system. On-premise ERP[2] are generally used by large companies who can afford huge capital for ERP systems. SMEs(Small and Medium sized Enterprises) [1] have been fortuned by the emergence of cloud services. Training the Client about the usage and maintenance of the system is also the part of the deployment phase. Providing the detailed Documentation and a user help is involved in this phase.

6. Maintenance

Once the ERP system has gone live, the purpose of the project team will shift. Over time, as the way the users work within the system evolves, adjustments and changes to the system configuration may be needed.

Risks Involved in ERP Implementation :

- Every Software project comes with a risk factor package. ERP systems especially those with critical financial tasks involve large sets of risk. Following are some risks that needs to be considered while planning and implementing ERP systems: [5]
- Not Understanding the domain and the problem statement correctly usually leads to huge misinterpretation of the system.
- Performance factors should be known before designing the system. Some system do not care about the security of

the system but needs high speed. Hence knowing these before implementing the project is a must.

- Referring to the reference models of pre-existing systems, but not customizing the new features in the current system.
- Applying services that maybe of no use to the system.
- Not scrutinizing the system design and little focus on overall system architecture and configurations.
- Improving the system performance but compromising the functionalities and usability of the system.
- Testing and development should be parallelized and iterative so as to accommodate early changes.
- Considering the deployment environment and making the system suitable for it.
- Modular system with less adherence so as to make it scalable and flexible for new features.Understanding the total budget and planning the ballooning cost, as ERP systems need high capital and expensive resources.

III. CONCLUSION

ERP system implementation is an onerous task and needs extra efforts to accomplish. Hence adhering to the strategies of the ERP system implementation phases and perfection in every phase becomes imperative. Prudent attention to each and every minute detail is a requisite.

As the system requires huge capital, no task can be considered facile. Any ERP system done with utmost perfection can accomplish desired aim and outcomes that bid by the customer's requirements. Hence perpetuating the accuracy, entailing efficiency and adhering to the plan can lead to a successful implementation of an ERP system.

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