ENTERPRISE RESOURCE PLANNINGFOR INTEGRATING CORE BUSINESS PROCESS

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Abstract: This whitepaper is targeted to provide basic idea of software available for Enterprise design. It explains about the best qualities of an ERP solution and the right modules available to implement for an enterprise to the entrepreneurs. This paper provides the details of standard IT project implementation methodology steps (Project preparation, Blueprint, Realization, Final Preparation, Golive & Support). New entrants and aspirants will get benefited by knowing the details of various modules and the implementation steps of a project to select the module of their interest as their career.

Keywords: ERP, Project Preparation, Enterprise Entrepreneur.

I. Introduction

Enterprise resource planning (**ERP**): is the integrated management of core business processes of an enterprise, by a software and technology.Enterprise system software is a multibillion-dollar industry that produces components supporting a variety of business functions. IT investments have become the largest category of capital expenditure in United States-based businesses over the past decade. Though early ERP systems focused on large enterprises, smaller enterprises increasingly use ERP systems.

The ERP system integrates varied organizational systems and facilitates error-free transactions and production, thereby enhancing the organization's efficiency. However, developing an ERP system differs from traditional system development. ERP systems run on a variety of computer hardware and network configurations, typically using a database as an information repository.

Enterprise systems can also audit the data for any duplicate transactions from upstream systems and can maintain error status to such transactions.

ERP systems will allow to set up security access to the relevant transactions to the concerned users.

II. Expectations

Expectations of an ideal ERP are:

- Effective tool to register transactions in real time
- User friendly applications
- Easy access to data reports
- Better interfacing options with upstream and downstream systems
- Strong analytical structure to access the reports

- Should be accessible on Mobile, Tablets etc
- Should have inbuilt repository mechanisms to store documents and configurations
- Strong enough to accommodate complex requirements of an enterprise preferably with in standard functionality
- A common database that supports all the applications
- Standard info system to provide reporting options

III. Different ERP's

Various ERP software's are,

- SAP (Systems Applications in database processing)
- JD Edwards
- BAAN
- Microsoft Dynamics
- Oracle E-Business Suite Financials and PeopleSoft Enterprise

IV. ERP Modules

An ERP system covers the following common functional and technical areas. In many ERP systems these are called and grouped together as ERP modules:

- **Finance and Accounting**: General Ledger,Fixed Assets, payables including vouchering, matching and payment, receivables Cash management and collections, cash management, Financial Consolidation.

- **Management Accounting:** Budgeting, Costing, cost management, activity based costing.

- **Human Resources**: Recruiting, Training, Rostering , Payroll, Benefits, Retirement and Pension Plans, diversity management , Separation

- **Manufacturing:** Engineering, billof materials, work orders, scheduling, capacity, workflow management, quality control, manufacturing process, manufacturing projects, manufacturing flow, product life cycle managementworkorders, scheduling, capacity, workflow management,

- **Order Processing:** Order to cash, order entry,creditchecking, pricing, availableto promise, inventory, shipping,sales analysisandreporting, sales commissioning.

- **Supply chain management:** Supply chain planning, supplier scheduling, product configurator, order to cash, purchasing, inventory, claim processing, warehousing (receiving, putaway, picking and packing).

- **Project management:** Project planning, resource planning, project costing, workbreakdown structure, billing, time and expense, performance units, activity management.

- **Customer relationship management:** Sales and marketing, commissions, service, customer contact, call center support — CRM systems are not always considered part of ERP systems but rather Business Support systems (BSS).

- **Data services :** Various "self–service" interfaces for customers, suppliers and/or employees.

- **Master Data:** Setting up customers, vendors, Materials, Hierarchies, Price and cost conditions, Print conditions.

- **Transportation Management:** Inbound and outbound transportation mode and transportation provider selection, Management of motor carrier, rail, air and maritime transport, Real time transportation tracking.

- **Programming:**Additional functionalities can be defined by using customized code for new functionalities and reports. In SAP, this module is called ABAP (advanced business applications programming).

V. ERP Project Implementation Methodologies

Usually there are 5 steps in any Implementation Project:

1. Project Preparation

2. Business Blueprint

3. Realization

4. Final Preparation

5. Go Live& Support

Figure 1

1) **Project preparation:** Once client decided its ERP system, then they prepare landscape of the project. In this step Server information, project cost, resources, Subject Matter Experts (SME), business teams are decided by the PMO. PMO stands for the Project Management Organization. It consists Project Managers, Steering Committee, Core business members and sponsors. Project team studies legacy system, gathers information regarding core systems, interfaces, what interfaces client wants, what are necessary, what are nice to have, etc. Core team carry out as is studying, it is the study of the current system and its processes. The project management team also hire resources and carry out project planning and outline.

2) **Business Blueprint:** In this phase core team carry out to be studied. Then team does GAP analysis. It is the differences between as is and to be studied. Allocated resources write down the rules and requirements for the new system. Integration points, interfaces and process maps are finalized. Functional specification written by functional consultants. If needed technical specifications written down for developers to do further configuration. Testing team also started working on preparing testing steps and scenarios. Financial specification and technical specifications are created in this step for further development and configurations.

3) **Realization:** In realization step, functional consultant carried out configuration. Development is done for the required customization. Testing carried out by the core team. Basis configuration carried out by the security team. Basis team moves all configurations from one server to another for testing purpose. Testing is mostly done in the quality control server. All the configuration upload master data across all modules (sample load of few parts or entire data end as per client wants). Unit testing and integration testing has been done by the testing team. Unit

testing, integration testing and day in the life testing happens at this stage.

4)   **Final Preparation:** In this step, all configurations from the golden client will be moved to other services. Uploading master data into new system mostly using various available tools. Cut over activities done only when we stop legacy system and start using the SAP system. End user training and user documentation is carried out in pre go live stage.

5)   **Go Live&Support:** After all cuts over activities implementation goes live in a production environment. Transactions will be created in the system by using preset data during final preparation. In support, the team helps client to solve if any production issue came regarding configuration, master data change or transaction issue. Also the team will provide training to users and super users. All the support documentation work has been completed in this step.

VI. Conclusion

There are many factors to be considered by the customers before they implement the solution. Some examples ERP success history of the industry (Banking, Infrastructure, Manufacturing, Retail, Financial Services etc) they are in, Licensing and Maintenance costs, User Friendly applications, References of the other clients. Successful ERP implementation will provide a great impact on the organizational growth towards future.

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