



Feasibility of Erp System of Supply Chain Management in Construction Sector

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ABSTRACT

In Indian Construction organization there is not legitimate administration for materials supplied subsequently it might bring about venture delay and also increment in expense. For this reason it is vital for appropriate arranging of materials supplied so it will land nearby on time without postponing any action. The administration of the said above is known as Supply Chain Management and the framework which is utilized under it is known as ERP (Enterprise Resource Planning). In these paper again significance of ERP programming in SCM is clarified furthermore stages and execution is talked about.

This thesis concentrates on productive arranging of supply chain administration on development destinations can prompt noteworthy enhancements in development efficiency and undertaking gainfulness. Existing exploration concentrates on spotlight on material acquisition and supply are two separate arranging errands with considering their basic and common interdependencies. In these explorations, it comprehend the significance of the production network administration in development organizations. As well as it learn about how to execute it in framework extends, its troubles, constraint, stages for usage furthermore, advantages with respect to it.

As the theory title is achievability of ERP for that reason a meetings are brought with some ERP clients who are working and working in that office in their association. Also, to turn out with conclusion contextual investigation is led to know plainly and successfully about ERP framework and its association with production network administration.

KEYWORDS : supply chain management, Inventory network management, product network administration.

Introduction

Nowadays, companies are in the race for improving their organizational competitiveness in order to compete in the 21st century global market. This market is electronically connected and dynamic in nature. Therefore, companies are trying to improve their agility level with the objective of being flexible and responsive to meet the changing market requirements.^[1]

SCM

Supply Chain Management is recognized as a leading process improvement, cost saving and revenue enhancing business strategy. It applies to all businesses involved in the delivery of construction projects. Supply Chain Management requires a corporate initiative, supported by strategic and tactical planning, to instill systems thinking and promote a new discipline that companies must master.

Construction Projects Supply Chain Management requires a good understanding of production management; planning, design, and construction; and business drivers. Like other disciplines within an organization, such as structural, mechanical, electrical, or process engineering, accounting and materials management, Supply Chain Management must have a champion who can drive the ideas across disciplines within the organization as well as across organizational boundaries.^[2]

Supply Chain Management may be practiced on a single project, but it results in the greatest benefits when it is practiced at the enterprise level, when it involves multiple companies, and when it gets applied to multiple projects over an extended period of time.

Before supply chain management there was traditional method for management purpose in which management of individual projects; separation of design, installation and operation functions, uniquely engineered facilities and components; competitive bidding; early delivery of all materials at construction sites; and information hoarding. These practices characteristically fail to capture the advantages of synergies and leverage that may be obtained by taking a multi-project perspective.^[2]

With the application of Supply Chain Management to the delivery of capital projects, managerial approaches will emphasize: supply based

management; life-cycle costing; assembly of unique facilities from standardized modules and components' problem solving through strategic partnering; emphasis on long-term working relationships; extensive use of communication and information technology so that the value chain supports the supply chain.

ERP

A valuable initial element in managing a supply chain is developing Supply Chain Information System. The concept of SCM is built on functional integration, which is supported and often catalyzed by information technology. Mutually sharing information among the members of a supply chain is required, especially for planning and monitoring processes. All the infrastructure projects carried out by the construction companies are at remote places so to establish connectivity with their materials and procurement dept's. with that of H.O. a well-established IT system is must.^[3]

Which led to development of Enterprise Resource Packages which are compatible to the requirements of construction industry.

One of the newest types of information system that facilitates information sharing is Enterprise Resource Planning (ERP). Enterprise resource planning (ERP) is a set of applications that serve as the nerve center of the organization. The whole system is just like a warehouse that stores and tracks internal information such as inventory levels, pricing structures and other key supply chain factors. ERP systems allow companies to replace their existing information systems, which are often incompatible with one another, with a single, integrated system; thereby streamlining data flow throughout an organization and promising dramatic gains in a company's efficiency and bottom line. These systems help companies reduce inventories, shorten cycle times, and lower costs.

On the most basic level, ERP is a complex software system that ties together and automates the basic processes of business, from taking customers' orders to monitoring inventory levels to balancing books.^[4]

Role of scm and erp

Role of supply chain management in construction industry

The generic concepts, methods and lessons learnt, which have been

developed in the framework of Supply Chain Management, can be used in different ways for the improvement of construction supply chains. In the following, we see how the methodology of Supply Chain Management can contribute to the understanding of construction supply chain problems, and in giving direction to improvement efforts. The bottom line is the effective resolution of interdependency caused issues in the construction supply chain, including basic problems and myopic control.

Construction supply chain problems

Now the construction industry in India is not organized as compared to International scenario. Most of the works are being done by unorganized contractors who don't even have a proper system in place for the execution of the projects. Existing research show that problems in construction supply chains are largely characterized by interdependency. Myopic control of the construction supply chain, combined with traditional trading and non-cooperative relationships, reinforces the problems, and complicates their resolution. Above, Supply Chain Management has been introduced including an appropriate methodology to resolve the basic problems in the construction supply Chain. The first step of the methodology suggests a chain assessment to uncover the nature and causality of the problems, which has been demonstrated earlier in the case studies. Understanding existing problems is an absolute necessity to be able to resolve them effectively. The goal is to become totally aware of the real basics of the problems (i.e. seeing the "big picture"), and approaching the issue properly (i.e. holistically) in order to unlock possibilities for effective improvement of the supply chain. In fact, it's a matter of making waste and problems visible and tangible, and identifying and detecting the root causes to make it possible to resolve them all.

Supply Chain Management Scenario in India

Supply Chain Management in the Construction Industry in India exists only up to 10%. Only few companies in India use Supply Chain Management and that too in a very limited area like E-procurement. To get information about the SCM in construction companies is like playing cards- no one reveals their exact information.

Now the Supply Chain Management in infrastructure projects is a network between raw material suppliers and the contractors. Also as far as logistics is concerned in SCM of infrastructure projects the inbound logistics plays an important role here and there is not outbound logistics at all. Projects worth 1000Cr or more should have an independent logistics wing. Now for infrastructure projects logistics of plant and machinery play an important role. Also the construction companies should have a separate centralized and decentralized procurement of materials while executing the projects. A fully developed E-procurement system in place makes this system of SCM more effective.

Projects, which do not have a proper SCM system in place, suffer from time and cost overrun. The template is used to format your paper and style the text. All margins, column widths, line spaces, and text fonts are prescribed; please do not alter them. You may note peculiarities. For example, the head margin in this template measures proportionately more than is customary. This measurement and others are deliberate, using specifications that anticipate your paper as one part of the entire proceedings, and not as an independent document. Please do not revise any of the current designations.

summary of interview

Before beginning of contextual analysis, little meeting was taken between some inventory network administration framework clients. To think about SCM all the more legitimately and a few inquiries were asked to them with respect to it.

As the contextual analysis is identified with L&T organization, So we have taken meeting of SCM System clients other than L&T.

SCM framework is executed for the most part in IT division, producing area and so on. In any case, in development organizations it is extremely hard to discover SCM framework as there is less mindfulness about it in development division. There are a few organizations where it has executed that are Siemens, Godrej, and Tycoons Construction. Be that as it may, it is in part actualized in development as indicated by the necessities. For the most part it is best in organizations where turnover of that organization is more than 10 crores as materials ar-

ranging will be vital in every single sub movement. L and T organization have one of the best SCM framework which is actualized in appropriate way.

While interview the main points highlighted where as given below according to which feasibility parameters are found in next segment.

Points were as follows:

- ERP implementation: challenging task
- Points To Be Remembered While Choosing ERP Package
- Failure of System
- Advisable to go with Less Well Known Company
- Importance of Training & Education
- Lead to Unemployment?
- SCM Market Growth in India
- ERP Maintenance Phase
- Can Organization Succeed Without ERP

From the above mentioned points and discussion with ERP users came to know about above points in detail and with the help of that data analysis took place and result is mentioned in V module.

case study

Larsen and Toubro Limited (L&T) is India's biggest building and development combination with extra interests in electricals, hardware and IT. A solid client center methodology and consistent journey for top-class quality have empowered L&T to achieve and manage initiative more than 6 decades.

Proposals and recommendations with respect to Supply Chain Management in Infrastructure Projects by taking case study into consideration are as per the following:

Supply Chain Information System: Before undertaking any task a firm should introduce a legitimate store network data framework. These will help in rapid development of materials and hardware to site as and when required. This will in a roundabout way lessen the requesting cost and the capacity expense of products. Organizations must create indigenous entrances like Enterprise Information Portal (EIP) and Construction Enterprise Management Asset (CEMA) to suit their organization prerequisites.

2) Logistics System: The organization must have an appropriate acquisition cycle so that less time is spent to clear the archives when they go through the bureaucratic cycle of the organization and in this way accelerate the obtainment procedure. Likewise the organization must have an entrenched Waste Disposal System. This will in a roundabout way diminish the dead load of materials and lead to decrease away cost.

3) Financial System: Construction organizations must have an appropriate occupation cost reports demonstrating the expense of different exercises anytime of time. This will see if the advancement is according to the arranged calendar and whether the genuine expense of development matches with the planned expense and if not then discover the change. The organizations by and large utilize Financial Accounting Approach where they ascertain the benefit in light of the expense brought about. In any case, we feel that the organizations must utilize administration bookkeeping approach where that genuine expense of development is connected with the real advance of work and subsequently is a more exact technique.

4) Model: There is an appropriate SCM model in assembling organizations yet not in development organizations. So the need of the time is to build up a legitimate SCM model for development organizations.

5) Inventory Turnover Ratio: Another critical finding is that the stock turnover proportion of a large portion of the development organizations shifts from 3 to 4. This is a low figure. With a specific end goal to have speedier transformation of stock into money and along these lines produce liquidity development organizations ought to have an Inventory Turnover Ratio of 1.

Feasibility study before implementation

For effective execution of ERP first do require examination audit, then in light of necessity select proper expert taking into account their ex-

perience, then take after the choice criteria for merchant choice and based basic achievement variable attempt to actualize those component and in light of basic disappointment element attempt kill those elements additionally discover complete expense of proprietorship so it turns out to be clear for association that the amount they will need to spend. In view of this basis ERP usage ought to be done to achieve association objective through ERP. Cry is the model gave to make one see how different individuals are related at different stages and how they play out their part into association and which are the parameters they consider at pre-execution stage.

Stages and parameters involved to check feasibility are as follows:

ERP need analysis

- People involved: Implementation team, Head of each department, IT division, Organization and methods specialist.
- Parameters to be considered:
 - How new system can increase organization value?
 - What are the benefits of ERP?
 - What are the needs for implementing ERP instead of existing information system?
 - What are the risks associated with ERP implementation?
 - What is the total cost of ownership?
 - Which are the critical successfactors?

Implementation consultant

- People involved: Top management, Head of Department.
- Parameters to be considered:
 - Major consultant in the market.
 - Select based on Experience and Performance.
 - Also determine the organization where they have served.

Vendor Selection

- People involved: Top management, Consultants, Method specialist, Head of particular
- Parameters to be considered:
 - Major players in the market.
 - What are the specialties in them?
 - How flexible & user friendly software is?
 - Degree of integration of other IS.
 - Total cost of license and end users.

Training process:

- People involved: Implementation Consultant, Implementation Team, IT division.
- Parameters to be considered:
 - System overview- what's ERP?
 - Demonstration of versions and handbooks
 - Training to implementation team leaders

conclusion

Not all of ERP executions are altogether fruitful. Truth be told, about portion of ERP usage neglect to meet desires. A large portion of them experienced over-spending plan, after some time, client disappointment, neglected to present every arranged module, or the enormous and even ERP frameworks maneuvering once again into beta testing. So it's fundamental for any organization before going for ERP execution they ought to do plausibility study. Likewise organization ought to take after the proposed fundamental pre execution parameters and additionally handle graph portrayed in information investigation.

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