APPLICATION OF PRIMAVERA IN CONSTRUCTION INDUSTRY

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Abstract: - Many studies have shown that the primavera application has positively impacted the productivity of planning processes and later its execution. Its potential impact on the entire life-cycle of construction project is to the fullest extent. Some high potential parameters (in primavera application), which significantly affect the project results (positively), are discussed.

INTRODUCTION

It is primarily a visualization tool, which has improved the ability to exchange complex ideas among project participants. It has become easy to generate and reuse the information for construction projects. This is a ‘CIEPM’ (Computer Integrated Enterprise Project Management) concept which allows the meaningful extraction of project management data, information and knowledge from the participants beyond their imagination. A number of viewpoints have been given by the researchers to the practitioners for adopting this new technology for their own benefits. However, there seems to be some reluctance on the part of the practitioners, for adopting this technology, which will have to be overcome by the researchers.

It should not be applied to one particular phase of construction project. In fact, many architectural/engineering/construction firms hesitate to invest and adopt in this primavera tool, because they don’t have sufficient time to study and analyze this technology. The objective of this study is to validate its applicability to the entire life-cycle of construction projects, including planning, design, construction and operation, and maintenance phases. Application of Primavera Project Management –

- Basically project management deals with project cost and resources. So this software enables an organization to deliver project on time and on budgets through reuse of best practices.
- Primavera uses standard windows interfaces, client/server architecture, web-enabled technology, network based (Oracle and Microsoft SQL server) databases. It stores all projects in a single database system, which allows greater flexibility, increased efficiency, consistency and repeatability and hence saves organizations time and money. Application of Enterprise Project Management (E.P.M.) –
- For big, complex and multi-level projects in any organization, it is necessary to have strong coordination and standardization, centralized resource management, higher-level reporting about projects and resources. And for all this one ideal solution available is Enterprise Project Management.
- For a company’s multi-level projects, a continual identifying, prioritizing and investing strategies have to be aligned. This can be done by ‘Managing projects as a collective portfolio’ for better decisions.
- Human resources are the most valuable and often expensive assets. It is difficult to maximize the productivity and cost-effectiveness, of human resources. So in E.P.M., we have ‘Optimizing resources across organization’ for proper survival.
- To achieve project success, clear and effective communication should be there with knowledge sharing team members. Project teams can meaningfully get connected and maintain coordination with quality, hence strengthen collaboration across the enterprise for improved productivity. Application of Organizational Breakdown Structure (O.B.S.) –
- It represents the hierarchy in project for a responsible management. It usually shows the top to bottom level personnel in any business. After defining the hierarchy, one can associate responsible personnel on individual projects i.e. on EPS node and also projects within. So directly/indirectly one is assigning the responsibilities, accountabilities and authorities over the work heads.
- A proper and completed work breakdown structure must be defined in a project to assign a committee or person for each task. The OBS will mirror the structure of the WBS. Major category work will be assigned to senior committee members and lower level tasks to the groups or individuals. By doing this, project manager becomes the responsible person for the project and indirectly gets authority to re-assign groups or individuals working in it. The access and privileges to EPS/Project/WBS nodes are assigned through the OBS. A maximum of 25 levels can be created in primavera.

Application of Risk parameter of Primavera –
- We are able to identify categories and prioritize potential risks associated with specific WBS elements and resources through integrated risk management feature. One can create risk plans
and assign a probability of its occurrence. Also for each risk defined, an OBS can be assigned. This means a particular person or a project manager can be held responsible for defined risk.

- The risk type, priority level can be mentioned and also the particular WBS element and resources which will be impacted by that risk.
- It uses a risk’s probability of occurrence, date of potential impact, and resource unit and expense estimates to calculate a risk’s net exposure values. These exposure values are then used to determine the risk’s impact on the project’s cost, float and finish date. The current project data can’t be changed.
- It calculates the risk’s exposure values as,

\[ \text{Exposure} = \text{Impact} \times \text{Probability} . \]

- The above calculated values are being applied to those activities which finish on or after the risk’s impact date. The values do not include activities which are completed, locked or milestones. It then schedules the project according to the current scheduling preferences.

Application of Primavera Web –
- It is a web application that provides browser based access to a project, portfolio and resource data across the enterprise. Hence anyone working in an enterprise can access information whenever and wherever it is needed.

CONCLUSIONS

Project management concepts are no longer theoretical but have got converted to technology driven means. There are some more parameters of Primavera such as primavera architecture, calendars, scheduling, work breakdown structure, resource assigning, its analysis and leveling, updating, etc. But here we have discussed the major parameters which affect the construction industry in a far bigger way. To divert the attention of non-participants of primavera, to show its proper utilization, applicability, we think the above mentioned parameters are sufficient, so that they can take initiative for their business or roles and responsibilities in their projects.

REFERENCES

- Project Planning & Management – Primavera reference guide (CADD Centre).