

Integration of Project Management and Content Management to enhance the efficiency of Project Delivery and Managing services

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1. Introduction

A Project Management contains lots of phase such as “Feasibility study”, “Requirement Analysis”, “Creating Requirement Specification Document”, “Project/Product Design”, “Project/Product Development”, “Testing”, “Implementation” and “Maintenance” etc. The project development involves also “Resource Management”, “Time Management and Estimation”. Now a days , all the project related information such as project documents, Timelines, estimations are stored in Content Management system of any organization. In detail the scenario is, consider the project will start up with “Proposal”. The proposal requires saving into some centralized storage which for most of the organization will be a document Library or Asset Library inside content management system. The preparation of “Proposal” requires the involvement of Sales Team, Business Development Team, Management, Development and Delivery Team. Once the “Proposal” will be draft, it will go for different level of Approval such as , requires approval from “Sales Manager”, “Business Development Manager or Business Unit Head”, approval from “Finance Manager”, from “Deliver Manager”, from “Solution Architect” etc. So, in this case the “Proposal” need to process through a “Document Life Cycle” – merely says through a “Workflow”. This kind of document Processing also will be

consider as “Project Work” exclusively when there are some enhancement require upon some existing product. The manual work involves here to update the project related information such as “Span of Time”, “Slip of Target”, “ Requirement Changes”, “ Overdue or over time hour” etc. in to “Project Management” tool to generate proper report.

The manual interpretation may cause lots of disadvantage such as 1. Updating of “Project Life Cycle flow changes” in Project Management Tool manually won't be possible frequently. This will leads to inconsistence Project Information in different tool. 2. Any mismatch between “Document Management system” and “Project Management System” for any human mistake will leads to unsupported report result which can impact the estimation of project. 3. Inconsistence may impact on the “Time Management” of resource, which lead to inconsistence billing information generation. This may leads to generation of wrong report through Financial system (such as Dynamic) and through “Human Resource Management System” (such as Peoplesoft). 4. Inconsistency of data will leads to the generation of unintended records in “Issue Tracker” for any “Production Support or Live Environment support” projects. This will have an huge impact on “Resource Billing System” (have a direct impact on revenue).

2. Objective:

Since all most all the organization is now a days using “Content Management” system to track their documents and structured information. It is really require to integrate the “Content Management system” with “Project Management system”. While doing the integration the following objectives must be addressed.

- Solution will be flexible enough to run between different browser such as Internet Explorer, Firefox, Safari, Chrome, and more. Even the flexibility will be there to view, edit, submit, and collaborate on project, portfolio, and everyday work in system as well as in other device such as Tab etc.

- Availability of App to access to access Project Management information from Project Management Tool to quickly begin or flex project portfolio management capabilities. The information can be easily access in different application.
- Will helps to organized Project team in such a way where they can view project summaries, documents, tasks, newsfeeds and calendars. This view will get integrated the information flow from “Content Management” system.
- Promote a “Content Management” task list to an enterprise project management tool where strategic contribution of competing requests to determine alignments and streamline project initiation will be addressed.
- Seamlessly flow information from team member calendars in Content Management or in Exchange to Project Management Tool to simplifying project scheduling and task status updates while enhancing task-sharing capabilities.
- Bring together different disciplines such as ALM, NPD, and IPM through a connected and scalable PPM platform.
- Utilize Active Directory (AD) synchronization in “Project Management Tool” to choose which AD group contains the teams that you want to assign to projects.
- The approach will gives easy access to teams and trusted business partners the right level of Business solution

3. Solution Approach:

The solution approach to achieve the entire objectives is to integrate the “Content Management System and Project Management system” through “Service Application”. The “Service Application”. The “Service Application” will be execute in a managed way, means this will either hosted as service in environment(either as Windows Service or as Web Service). The service will handle the authentication. Make sure the “Content Management Solution” and the “Project Management solution” will have at least one authenticated service account, which will responsible to flow of data. Since now days the platform is for web based solution where user from different location can access the information, considering our “Content Management system” will be hosted as Web Application. Similarly, considering the “Project Management System” will be “Project Web Application”. This does not mean the service application won’t be able to communicate with standalone application. Depending upon the change of configuration, it will also fetch or populate data for standalone system.

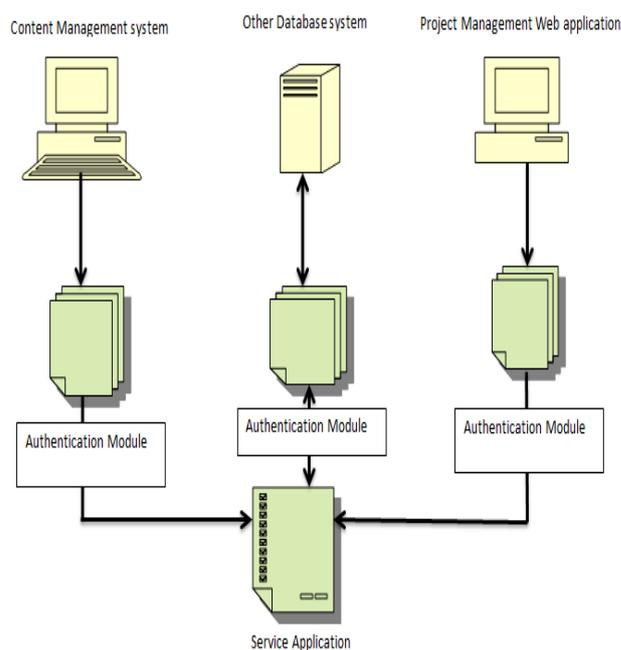


Fig 3.1: Interaction of service application to fetch data from “CMS” to “PWA”

4. Advantage of Integration between Content Management System and Project Management Application

- Integration will help organization to quickly start projects, prioritize project portfolio investments, and deliver results with the intended business value.
- It ensures the easy manage and collaborate on work as a team without the structure of a project, but have visibility into the work for planning and reporting purposes since any intended user can access this virtually through any device from nearly anywhere.
- This will ensure a damage management since the same task and document list will be there in “Content Management System”.
- Moreover, this will also help to implement resource sharing along with load balancing. The documents and information will be there in CMS. So, the document workflow and reference can still be the part of CMS where in Project Management application only reference of document and data will be reflected.
- Integration with CMS ensure utilization a centralized and common approach to time reporting and task management.
- Financial Management adopt financial management processes and effectively track cost performance to ensure delivery within budget and that the portfolio realizes the forecasted benefits.
- Project Management Application helps to collect, categorize, understand, and make decisions about project data. Utilize business intelligence (BI) to provide visibility and decision support to proactively manage projects, programs and portfolios.

5. Some research upon the optimal project management after CMS and PWA integration

While different organizations are using different business application to manage the data required for the project management. It is really difficult to have the required and intended data automatically available for the “Project Management System”. The information will contain the “Task Detail”, “Time Management Detail”, “Documents”, “Resource Information” etc. This integration will address all these needs.

Amdocs is standardizing its application life-cycle management processes with Microsoft Project Server 2010. It is also integrating the solution with Microsoft Visual Studio Team System 2008 Team Foundation Server and Exchange Server 2007. IT administrators benefit from deployment that is more than 50 percent faster, and Amdocs expects to cut costs around 55%. Employees have Web-based access from almost any location and work more which helps to increase the efficiency around 35%. A survey said, previously while deploying and manage project information from different source requires much manual effort which has been decrease around 60% after integration.

The Ministry of Aboriginal Relations and Reconciliation was facing challenges in planning, tracking and documenting the multiple treaties they manage. MARR has all document related information, resource data and other project related information stored in SharePoint 2010 which is a CMS. Turning to the Microsoft SharePoint 2010 and Microsoft Project 2010, the software has streamlined projects and given better insight into the treaty development process. This has allowed their staff to think more strategically, has helped to locate negative cost drivers and for them to avoid legal risk in developing the treaties. More over MARR has experience the project management effort decrease around 40%.

LINET is the leading European manufacturer of intensive care solution and hospital Bed. To gain the additional service portfolio to individual customers, it has used Project Server 2013 to store and represent refined, analyzed project information. It also used integrated Office 365(SharePoint Online CMS) to store customer centric documents. This approach has reduce the complexity of project management around 65%.

Emmi Schweiz AG has used SharePoint 2013 and Project server 2013 for timesheet management and customer project management which helped to increase productivity by 28%.

6. Risk Mitigated:

The following table will demonstrate the risk involve while the Content Management and other system is not integrated with Project Management system

Proposal Creation	Create and modify the Proposal. Go through different approval level. Complete the entire process and capture document with version and meta data information	Manually copy day by day data and generate report after a week interval. Any sudden changes are not getting reflected in Project Management. Catastrophic failure won't be captured as occurred. Poor Project management for Data Inconsistency
SOW(Statement of Work generation	Create and modify the SOW. Go through different approval level. Complete the entire process and capture document with version and meta data information.	Manually copy day by day data and generate report after a week interval. Any sudden changes are not getting reflected in Project Management. Catastrophic failure won't be captured as occurred. Poor Project management for Data Inconsistency
Requirement Analysis	Interviewing the client. Analysis of Market. Capture work data, survey data, analysis report, portfolio management along with metadata. Designing and Redesigning of Requirement Analysis Report	Effort and risk detail won't be captured manually. Chance of catastrophic failure is high. Temporary resource scheduling and time management needs to be done manually.
Designing and Delivery	Development activities, design decision related information captured	Development and deployment related information which is very critical, will be update manually. Any slip of time management will be adjust manually and notification will be send by project manager. High risk is involve because a small miss of development information leads to project failure.
Support and Maintenance	Task and Support ticket lists will be updated with information	Task and support ticket need to update manually which leads in most of the cases inconsistence "Time Report for Resources" and effect "Issue Burn down ratio".

A survey in a MNC software organization where a project with five member team was about to implement a portal required to generate clearance form for a user. The team decided to go with integration of CMS with PWA to check how it can work. The overall effort has been decrease around 63.77%. this calculation has been considered as per day basis. Below is the table.

Stages	Effort before Integration with PWA	Effort after Integration with PWA
Proposal Creation	17	12
SOW(Statement of Work generation	9	6
Requirment Analysis	15	9
Designing and Delivery	30	22
Support and Maintainence	56	32
Total	127	81

Fig 6.1 Effort matrix for a project after integration

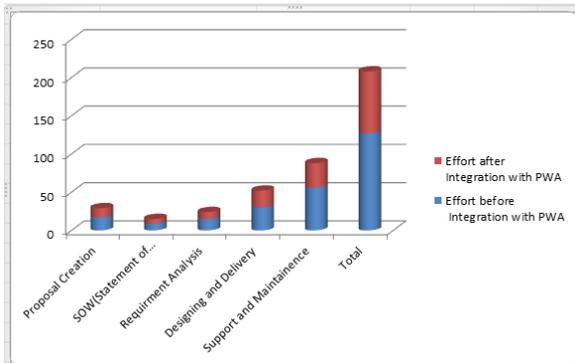


Fig 6.3: Integration benefit of CMS with PWA

7. Risk Mitigation Methodology:

The methodology to check whether our Integration approach of Project Management Solution is optimizing our effort or not. This methodology can be more standardized by considering the following factors. Since in different industries the Project Management, resource Management, Supply Chain of Raw materials are varies, we will consider a range of value. If your calculated values are falling under this range for particular phase, then the project management for that particular phase is optimized.

Consider for Project Proposal Creation stage hours of effort by project manager and subordinate team to gather project related information such as resource information, time sheet, issue burn down, sprint delivery deadline, project health etc is "X1" hours. Few things such as entry of resource information and additional things which can be consider as "K1". This won't be change in any aspects. After integration with Project Web Application solution, consider the effort will be "x1". So, the saving of effort is: $K1(X1-x1)$, if $(X1-x1)$ is more than 3 then this phase is more optimized compare to before integration. Now, consider the fig 6.1 where "Effort before integration with PWA" is 17. "Effort after integration with PWA is 12. Since , data entry and batch program execution and others require hours of effort 0.6. So, savings of effort is $0.6(17-12)=0.6X5=3$. Since, $(17-12)>3$ so required optimization happens. similarly, for other stages, $SOW=K2(X2-x2)$; "Effort before integration with PWA" is X2. "Effort after integration with PWA is x2.

Requirement Analysis= $K3(X3-x3)$; "Effort before integration with PWA" is X3. "Effort after integration with PWA is x3.

Design and Delivery= $K4(X4-x4)$; "Effort before integration with PWA" is X4. "Effort after integration with PWA is x4.

Support and Maintenance= $K5(X5-x5)$; "Effort before integration with PWA" is X5. "Effort after integration with PWA is x5.

So for instant, for project mentioned in fig 6.1 effort will be: $0.6(17-12)+0.9(9-6)+0.8(15-9)+0.9(30-22)+0.7(56-32)=34.5$

8. Conclusion

Integration of CMS and Project management system together gives robust and high end solution for project portfolio management (PPM) and everyday work for project. Team members, project participants, and business decision makers can get started project and manage the utilization very easily.

Always know how your tasks come together and identify which tasks are the most critical to your project's success with new Task Path highlighting. These data will be delivered by CMS after analysis. Project Management system then create a project to quickly share project details with your team, keeping everyone connected and organized.

9. Reference

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