Project Management Tools Not a Mere Necessity

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1.1 Abstract

The power of project management is at its peak, primarily because it has become a business strategy of choice. The evidence is gigantic. Large corporations have launched global PM initiatives and have centers of PM excellence, poised to create a successful environment for PM's. The central part where project management is on a rise is project process management, which aligns to the various quality models that are established. This detailed level of project management cannot be thought without having the ideal toolset

The challenge with using off the shelf tools is that they may not be designed to collaborate with different needs of the project, at the same time leading to isolated automation efforts by teams, resulting in duplicate automation efforts. It is important to use a tool that support all types of projects, provide an integrated approach to project management activities; support internal project management standards e.g. time reporting.

The point is simple and clear, what we are looking for is a controlled, no nonsense, and predictable execution to successfully put out fast repeatable high quality IT product and services. We have to make sure that activities will actually meet the specified need, to devise a workable schedule, develop systems for reporting progress, and manage requests for changes.

Through this paper we are proposing a toolset that can be used as a standalone tool if required, and integrated to manage projects end to end. This tool will be a Single window for Project and Delivery Management needs, and cater to the needs of IT services.

1.2 Introduction

Projects and programs are becoming increasingly complex. Economic uncertainty is putting a new level of pressure on teams and programs to execute well. Businesses are struggling to react quickly to fluctuating markets and changing business demands.

Executives are demanding more project visibility. Distributed teams require around the- clock collaboration and coordination, as well as the ability to successfully navigate change throughout the project lifecycle.

The Project Management buzz is all around with lot of talks but it certainly needs a lot of attention in understanding what it is and what it can do to you and your organizations bottom line. All organizations comprise of processes and projects for implementing changes.

Today's project and program managers need tools that deliver the necessary project insight to maintain project schedule and budget commitments. And they need the ability to integrate project and program resources with other departments and at other locations to ensure project success.

The tool set we are proposing is a project portfolio management solutions enabled to support project driven organizations, to intelligently manage their programs and projects—from small and simple to large and complex. This solution can help you make better portfolio management decisions by providing end-to-end, real-time visibility into all relevant information. You can determine whether you have sufficient

resources and team members with the right skills to accomplish the work. It will also help you evaluate the risks and rewards associated with projects and programs.

You get the project management, collaboration, and control capabilities you need to manage change and successfully deliver projects on time, within budget, and with the intended quality and design. Plus, you can interoperate with ease—across the toolset—with flexible integration capabilities

This will be process oriented toolset that will map to the QMS of the organization, deliver business outcomes –based results by aligning delivery of IT services with business goals and objectives.

The most interesting part of this toolset will be its dynamic dashboard, which will provide a real time data for all the decision makers to make those critical decisions which will change the face of the organization.

The toolset will be a role based applications which will authenticate users using SSO (Single sign on), so that once the user logs in will be able to navigate through multiple tools seamlessly. This toolset will have some business tools that will operate offline and when get connected to the network will have the data sync to the central servers. This will enable business users to have the needed data on time, and work independent of any network or internet availability. This tool will be available to clients and alliance partners, creating an ecosystem of shared development and implementation of high-value and high-impact engagements.

1.3 Challenges

- Many a times, there are multiple sources of data (ex. Different tools used for Project management data, financials etc) that makes this process more complicated.
- Usage of tools is not consistent across projects. Tools are not standardized. For example,
  - Some projects use client mandated project management tools others use Microsoft project plan or even spreadsheets.
  - Many accounts use client mandated defect tracking tools, for others there is no standard tool mandated for Defect Tracking.
- For a large number of activities data collection happens manually, using spreadsheets or other non-standard tools.
- Lack of centralized reporting system for delivery
- Huge Manual effort by Project Managers and delivery teams for reports required by senior management
- Lack of accuracy and huge turnaround time for reporting
- Lack of real-time reporting
- Customer Audits – Organization Credibility at stake due to lack of traceability
- Isolated efforts by many teams for automation, resulting in duplicate automation efforts in silos

- Due to the time lag in data collation, Project managers cannot take informed decisions based on data at any stage of the project. This results in very high person dependency.

1.4 Solution

We understand that a new solution only delivers value if it can seamlessly and successfully bridge legacy systems and future innovations. A solid architecture determines the application's overall performance, stability and maintainability—which are critical when you are relying on an application to enhance overall business performance. That is why our delivery architectures comprise structured application frameworks and reusable components to provide guidance on how to enhance an application's performance and set the stage for future upgrades and innovations.

Our proposed toolset, comprised of both commonly used vendor-provided tools and internally developed tools, is designed to address key points across the pre-sales, development, delivery and post delivery lifecycles and equip our professionals for end-to-end solutions delivery. From RFP (Request for Proposal) to wining a contract, from requirements gathering through development, testing and deployment, the toolsets will help support, sales, finance and client project teams with emerging technology such as Web services.

With these robust applications as a foundation, we will have tool-specific assets that will enable us to perform on all fronts when it comes to building and integrating a solution.

- Vendor selection guidelines help teams find the right tools faster. Recognizing that not all projects needs are identical, the guidelines define project profiles and a set of recommendations that addresses various project types and criteria. In building each profile, we work to provide tools that work well together and within the Delivery Methods.
- Our integration approach reflects both our experience—evident in our practices, guidelines and templates—and our vigilance, demonstrated by our ability to track requirements throughout an implementation.
- Our attention to detail on the back-end is complemented by our commitment to front-end users. Intuitive user interfaces and pre-configured toolsets integrated into one easy-to-use portal of the Delivery Tools can dramatically reduce the time client teams need to start using and benefiting from these solutions.

1.4.1 Data Maintenance:

Tool facilitates the creation and maintenance of project artifacts. This tool helps to record, link and analyze data within a shorter duration of time. It acts as a repository providing data and information accessibility across locations. It also enables accurate data capture on regular defined intervals.

1.4.2 Dashboards:

Reports can be generated in order to provide stakeholders, summaries of the project. These reports can be used to more effectively communicate key data to stakeholders during the course of a project. Tool enables in providing various outputs (e.g. Gantt Charts, Milestone Charts etc)

The tool has made possible to create dashboards at project as well as on organization level for project managers and senior management to act right on time and take critical measures for the project. For e.g. an inbuilt audit tool where the compliance of each project is recorded during milestones audit or internal audit, enable generating the audit report and list of compliance issues. It facilitates the tracking of these compliance issues till closure. Historical data help in analyzing the nature of non compliances at project as well as organizational level. It helps senior management to know the overall health of projects in organization at any point of time

1.4.3 Improved Quality of deliverables:

Various validations built up in a system where the mandatory activities will restrict the flow of the activities and automated mailers acting as a reminder to complete the critical activities of the project completely with in time before moving ahead. For e.g. mandating the required review checklist execution for various types of reviews and linking the findings with Defect tracking module, which will automatically create a review defect which later will be tracked to closure. It will also provide data for future analysis to take preventive actions in turn improving the quality of deliverable and reducing the cycle time of the activity.

The tool is flexible to consider the need of the project and waive the mandatory activities through tailoring or deviation.

1.4.4 Enhanced Metrics Collection:

Metrics is collected as the project progress from requirement till closure. The reporting of these metrics helps in understanding the variances and project health at any given point of time and contributes to the buildup of statistical information to assist in improving management of future projects. This enables the adherence to respective product measures. For e.g. during the course of the project, the review comments and testing defects of all the phases are recorded in the tool. The milestones are getting tracked as planning is done through the WBS integrated in the tool. These multiple automation of key activities provides data for measuring effort and schedule variances, review effectiveness and efficiency, defect leakage and defect density on a click away.

1.4.5 Improved Process compliance:

The complete work flow (output of one stage becoming the input for other stage) of the project built in taking process as a base enables the project members to fulfill the need of the process and in turn understanding the importance of underlying processes. It leads to better process compliance and effective delivery. Its integrated mapping with the QMS at each phase of the project ensures that delivery and processes are not separate entities. Process is not an extra plus for the projects but the way to deliver quality end products.

1.4.6 Shared development Eco System:

With required modules integrated with client tool, it is easy for the delivery team and the client to work in a shared environment. For e.g. .Customer ability to directly log defects in the defect tracking module enables team to look at it instantly without switching between various tools. Additional advantage is of availability of data at one single location. Delivery team does not have to pick defect data from various tools for analysis. Ease of Mapping of user acceptance defects of same nature with the defect of internal testing also help in taking preventing action.

1.4.7 Risk Management:

Risk management module and risk repository helps to identify and manage project risks step-by-step. It allows logging risks formally, in the tool itself. The log describes the risk in detail, the likelihood of it occurring and the impact on the project. All the types of risk are monitored and tracked through risk management module. This module also enable the reminder emails on going back to review the risk.

1.4.8 Task Management:

Effectively direct the tasks associated with the projects they manage. The tool provides ways to better structure organize and assign tasks for team members. E.g. Integration of resource management module, where the resources skills, training needs, cost per resource etc are captured, with the time entry module which provides the data on the availability and utilization of the resource, has made it possible for a project manager to effectively assign the available, capable resource for the activity

1.5 Critical Success Factor in developing and implementing the integrated tool

Before we start with CSF (Critical Success factor) for development and implementation of tool, there are critical factors associated with the decision of developing an in house tool to meet the specific, unique need of the organization. Those factors are mentioned in the table below:-

Major Factors	Description
Management Sponsorship	To have the top Management Commitment and Support. History has shown again and again the failures of great initiative due to lack of support from Top Management
Organization Culture	To understand the organization culture and the strong role it plays in an organizational level change. Practitioners have realized that even the best laid plans have failed if it is not thought about that how to deal with the established culture during roll out of a major change in the way things are done.
Quality Management System	To understand the existing processes and procedures in the organization and the required changes that will need to be done for the implementation of Tool by doing required impact analysis. A buy in from the quality group to sync the tool with the processes as these two cannot perform as a separate entity.
Customer Satisfaction	Customer satisfaction is the prime concern and the most important assets for any organization. The objective of increasing client satisfaction while implementing the tool should be met

1.6 CSF for Development and Implementation of Tool

1.6.1 CSF 1: A well planned approach to gather requirements and designing the automated tool:-

The effective integration of all areas related to project and program management starts with effective project planning and a planned approach of gathering requirement and designing, by using various tools like questionnaires, workshops, use cases, whiteboards, screen mockups, prototyping, transition diagrams etc.

1.6.2 CSF 2: Obtain required skill set and resources for development of the tool:-

People with relevant experiences are required to built the tool effectively along with the other needed resources of hardware, technology and processes

1.6.3 CSF 3: Effective Communication:

Communication between the various teams and stakeholders must be dynamic. It is must that the team members and stakeholders are fully apprised of the project status and the required information flow is always consistent

1.6.4 CSF 4: Evaluation after the Pilot:

Once the tool is implemented, the same should be evaluated against the goals.

1.6.5 CSF 5: Training and Support:

Training the user is another key area to focus. Effective Training programs on detailed usage of how to use the tool and its benefits should be conducted customized for the various roles in the organization.

1.7 Key Benefits of Integrated Tool

1.7.1 Improved Productivity:

Improve productivity by enabling effective communication, collaboration features, assignment of work, monitoring and tracking mechanism .Along with it, reducing the complexity of project management, resource allocation, and time management activities.

1.7.2 Effective Time Management:

As a standalone solution to all the needs of the project management and engineering lifecycle, it helps in achieving reduce cycle time which result in saving effort and time of the project. It can provide electronic methods of approvals, speeding up decision making.

1.7.3 Maintainability & usability:

In house tool is developed from user perspective after through analysis of need of organization. It is more user friendly compared to market third party tool as the terms and terminology usage, the work flow of the activities, and the familiarity of the GUI, is related closely to what exist already in the organization. They are more maintainable as compared to market tool as they are designed and developed internally.

1.7.4 Improved Customer Satisfaction:-

Increased productivity, better resource management, effective verification and validation activities, reduced cycle time, analysis of defects etc helps in providing quality deliverable which leads to improve customer satisfaction.

1.8 Conclusion

An integrated project and delivery management tool providing a complete solution to project management processes and engineering life cycle processes and enhancing the quality of the deliverable by increased coordination among various teams. It enables to assess how a project is performing and progressing against its goals and objectives. It also ensures that effective tracking and reporting is done on a regular basis.

It may be easy to use a “off the shelf” tool and customizing it to an extent to meet the need of the project .But the need of the organization should be thoroughly evaluated and weighted against the ease of using a “off the shelf” tool with benefits of an integrated tool which has been developed as per the unique needs of the organization.

Through this paper we were able to highlight only some critical parts of this tool, but the scope of the tool is such that it encompasses from the umbrella activities such as project portfolio management, verification and validation activities to smaller critical task like, traceability, tailoring and deviations, automated minutes of meetings.

1.9 References

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1.10 Author(s) Profile

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