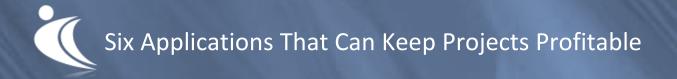


Project management software is not a homogeneous term. There are various types of applications available with distinctive purposes, though some features and functionality between these modules may have some overlap. Among these various types of project-orientated applications would be 1. Project Scheduling 2. Project Accounting 3. Time, Expenses, and Billing 4. Job Cost Software 5. Activity Based Costing Systems 5. ProMRO This white paper takes a look at common business issues and the modules needed to address them to ensure visibility into profitability.





### **Prologue**

#### Information Technology as an Advantage in a Globally Competitive Market

There are various software applications on the market to facilitate fundamental project processes. These processes are linked by the results they produce and are efficiently communicated using these systems alerts, reports and dashboards.

Without utilizing these process oriented systems, projects are plagued by disjointed scheduling, outdated spreadsheets, documents and inefficient work flows that are difficult and time consuming to control. This scenario becomes even more complex and time absorbing when analyzing multi-level projects. With fully integrated systems, more comprehensive and structured information is available faster, requiring far less administrative effort. Timely access to relevant information enables managers to better leverage resources, devote more time to quality control and ultimately meet or exceed customer expectations.

Project management software is not a homogeneous term. There are various types of applications available with distinctive purposes, though some features and functionality between these modules may have some overlap. Among these various types of project-orientated applications would be:

- Project Scheduling
- Time and Billing
- Job Cost Software
- Project Accounting
- Activity Based Costing
- ProMRO

Vendors applications may vary in the specific features and benefits they offer. A complete solution may require implementing more than one type of application in many situations. Before deciding, rather than evaluating the application's classification, consider your organizational needs and anticipated growth instead.





The software industry often uses the terms "project management" and "project scheduling" to refer to those applications designed to manage activity timelines along with resources and labor.

This can create confusion, since any project-oriented package could conceptually and purposely be described as a project management system. Focusing on software functionality is the best way to avoid any misconceptions.

Project scheduling software primarily addresses the desire to track who (labor), what (resources), where (locations) and when (timelines). These requirements are ideally addressed in the form of PERT or Gantt charts. Web enabled systems communicate project status data to stakeholders remotely or when face-to-face meetings are not either possible or cost effective.

Many project-scheduling packages also have budgeting capabilities. Ideally, they accumulate true costs to allow actual to budget comparisons at any phase of the project, but not all systems have this capability. Additionally, to help manage expectations and scope creep, users need the ability to itemize detailed tasks and project phases according to the agreed upon requirements.





### **Time and Billing Applications**

Track Workflow, Apply Time and Expense Entries to Projects, and Perform Billing

Time and billing software is designed to keep an accurate record of employee time as well as to assess customers or internal cost centers for services and expenses incurred. Time and billing software is geared toward the costs, expenses and revenues of one particular project component - labor.

The time entry component of most time and billing systems is either completely Web based or allows a Web interface with a localized system. This means that users can promptly and conveniently record their time into the organization's centralized system, using time sheet defaults (like charge codes) for quick entry from any location using any computer platform. Managers can then review, approve or reject a subordinate's time entry through the system.

Default rate schedules are maintained in the billing component of the time and expense system to expedite the billing process and minimize billing errors. Some systems also allow you to maintain standard rate schedules that afford comparison of the profitability of different projects. All time and billing systems accommodate progress billing. Certain time and expense systems even support percentage of completion, schedule billing and consolidated billing.





### **Job Cost Applications**

Track Detailed Job Costs, Prepare Detailed Budgets and Integrate Costs with the General Ledger

Job costing systems focus on measuring, recording and communicating both direct and indirect costs involved in each product and service rendered by a company.

Related costs include employee time, subcontract labor, equipment charges, material charges and overhead (operating expenses). Cost management systems generally focus on cost control through budgeting and analyzing variances between budgeted and actual costs.

Many packages provide job costing functionality aimed at smaller-scale projects, where the complexities are minimal and revenue analysis and flexible billing functionality are not required. When applied to project management, job costing systems are the expense side of a project control system, assigning costs that can be directly charged to projects (e.g., labor and reimbursable expenses). Overhead expenses like payroll and rent may also be allocated to a project through a burden rate assignment.





### **Project Accounting Applications**

Monitor All Project Costs, Revenues, and Billings, Prepare Detailed Budgets and Isolate Variances

Project accounting software is designed to estimate, track and control project costs, revenues and billings. Project accounting applications determine how much revenue, cost and profit is associated with any given project, and compares actuals to budgets in terms of dollars and timing.

Project accounting systems maintain project data in a relevant way, allowing project stakeholders to analyze timely reports and take action as needed. The software accumulates and organizes financial data that helps users plan for profit and rapidly respond to project issues, instead of the overall general ledger purpose—compliance with accounting standards.

As a rule, project accounting systems have more comprehensive and flexible financial and reporting features than any other type of project-oriented application. For example:

- Project accounting systems accommodate contracts requiring percentage-ofcompletion and scheduled billing as well as time and materials as incurred.
- Project accounting systems usually have more extensive budgeting capabilities than desktop-level project scheduling systems. Furthermore, actuals are automatically updated with activity in a project accounting system, for a more expedient budget monitoring process.
- Invoices may be prepared using various formats, and invoice detail may be modified or appended for billing rates, notes and no-charge items.
- Billing and cost rates may be assigned at the employee or job title level depending upon the project; table rates can be overridden as necessary to comply with exception rates associated with a particular project.

Project accounting software is typically integrated with the user's financial accounting system. This integration not only avoids double entry of actual costs incurred but also allows audit trails and drill-down capabilities from the accounts payable, accounts receivable and general ledger systems to associated individual projects. Some project accounting systems permit the user to establish the level of project accounting transaction detail that is reported in the general ledger. Since drill-down capabilities from the general ledger are often possible, summary transactions from the project accounting application streamline transaction entry. In essence, project accounting links the organization's activities to the general ledger bridging the front and back office

## **Activity-Based Costing Systems**

Another term for project accounting? No, but...

Activity Based Costing (ABC) systems is not another term for project accounting systems. Though ABC is not really an approach to project management, some integrated project accounting systems do provide a way to embody an ABC system, while maintaining the existing chart of account general ledger structure. Though this is not the intended primary purpose of project accounting systems, project-costing features that accumulate costs by business activities may address some ABC recording requirements.

This potential employment of project accounting software may cause some confusion between the distinct concepts of project accounting and ABC and their respective software tools.

The converse software employment would not generally be possible. Given the differences between the two, it is doubtful that an ABC system could be used to fulfill project accounting needs. Some of these differences include:

- Direct allocation of overhead is a pinnacle of ABC. The goal of ABC is to find the true cost of goods and services offered to customers by assigning virtually all costs and expenses to products or services based upon each product's or services' use of expenditures. ABC avoids burden rates and overhead allocations based upon attributes of a single unit (like square footage). In project accounting, overhead may be directly charged to individual projects applying ABC principles, charged using allocation methods such as burden rates, or may be allocated as a separate period end process or may not be distributed to individual projects at all.
- ABC is ordinarily applied to ongoing and routine operations and processes (like manufacturing, medical services or financial institution services) rather than temporary projects. So, most ABC systems would not be able to provide estimates to complete or close down features incorporated into most project accounting systems.
- ABC targets cost management; project accounting targets cost, contract, revenue and billing management. Hence, project accounting systems provide additional functionality to address more diversified information and practices.

Consequently, someone in the market for a project accounting system should not be lured into activity-based costing systems due to some similar sounding terms. ABC systems rarely provide all the features needed to employ project accounting.





#### **Standardize Services & Analysis**

The management of a projects-based business is complex. Unlike a discrete or process manufacturer each job a projects based business releases to production varies in the tasks, materials and labor that are consumed. Variances, which are critical to evaluate whether your standards are reasonable, or manufacturing activities are properly executing are challenging to unmask.

The normal response is to avoid under bidding jobs by using the following techniques:

- Add a fudge factor to each job as a contingency or multiplier. In one case, a company label this as fees, permits and other expenses which was set to 30% of the job.
- Spend a disproportionately level of analysis and engineering is applied to all job regardless of size to create the perfect estimate.
- Call the shop for the estimate and use that one the quote which transfers the responsibility of the misquoted job to the shop. The shop will typically give different numbers on different days depending on how busy the shop is allowing the salesman simply to call back on a better day.
- The shop then masks their inefficiencies by taking a poorly budgeted job by simply sandbagging any excesses or rework under the "bleeder" to hide the rework activities. While it is impossible to mask all deception, ProMRO is an extension to the standard Projects module to help control the activities while giving you the ability to do analysis on your services.

ProMRO is an extension that enhances the standard projects functionality by providing you the capability of predefining your services and then using them as the basis for quotes and estimates. Upon acceptance, the approved estimates automatic become the detail used for the shop traveler. Labor, inventory and materials consumed along with any expenses incurred are tracked within the job and can be compared to the original estimate or a revised estimated if the scope of work had changed.

In ProMRO you can define standard services that vary by price by customer or customer types. The prices are used to create either fixed priced or time and material jobs which can be billed in a variety of ways including progress billing. Standard services give you the ability to

- Evaluate service performance by equipment type, make /model serviced
- Create standard price lists for customers
- Provides for a consistent starting point to accommodate unique repairs avoiding overlooking estimating a specific task.



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