

Introduction to the PMPlan

Stand-Alone and Enterprise

Project Management Applications

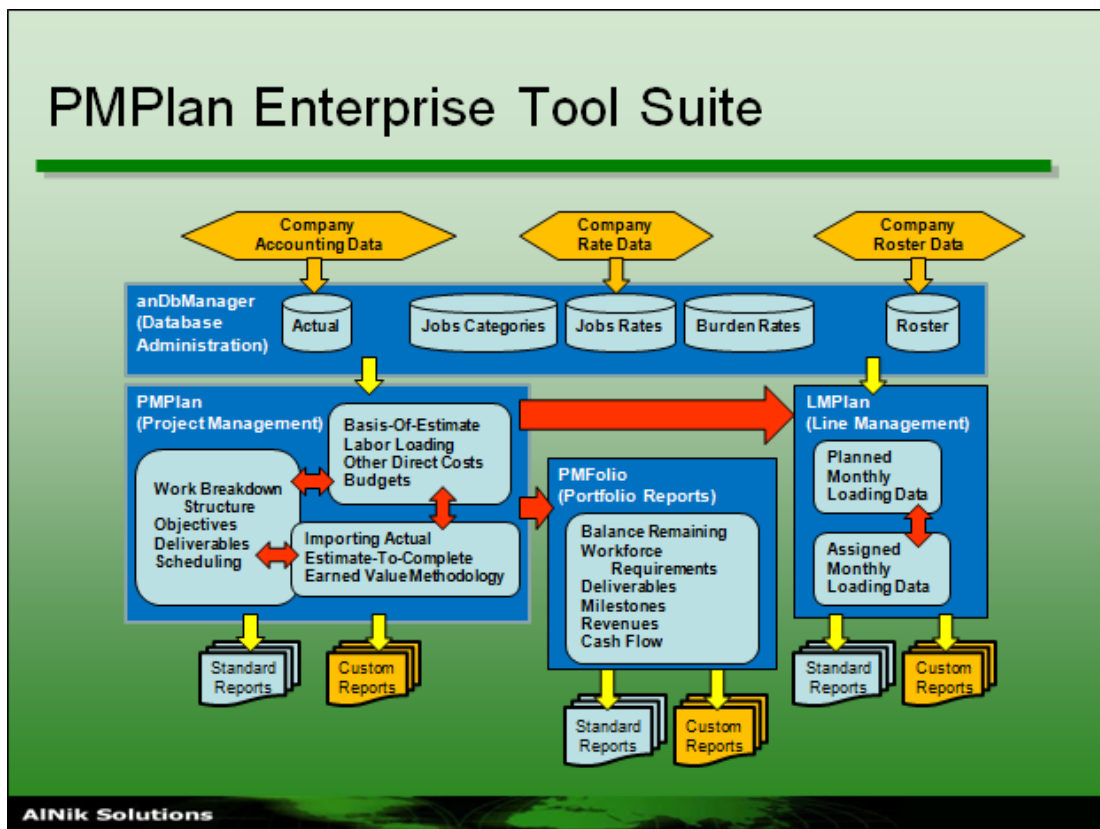
And

Some Project Management User Criteria Associated with PMPlan

By

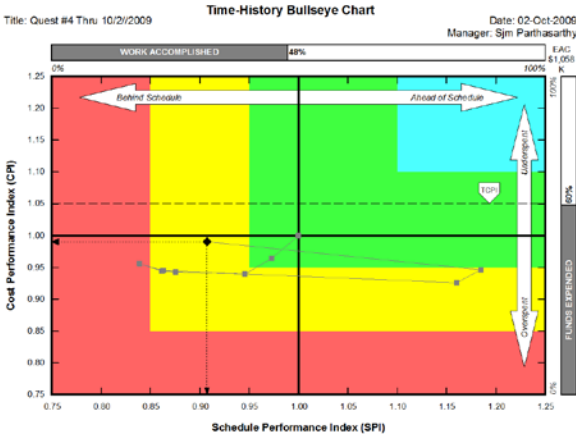


AINik Solutions, LLC



Introduction to PMPlan

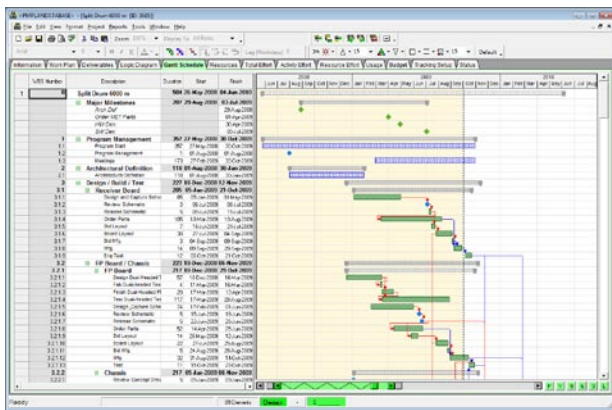
Workload/Workforce Performance Targets, Results, and Early Warning Indicators



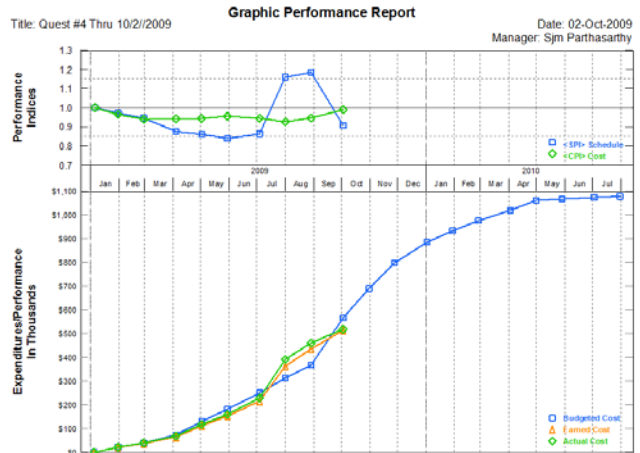
Project Bulls Eye Chart

CONTRACT PERFORMANCE REPORT									
FORMAT 1 - WORK BREAKDOWN STRUCTURE					Ann Approval: CASH/NO COST/NO				
1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD			
1.1 Name: Quest #4 Thru 10/2/2009		1.2 Contract: Quest #4 Thru 10/2/2009		1.3 Title: Quest #4 Thru 10/2/2009		1.4 From: 07/15/2009			
1.5 Location: Quest #4 Thru 10/2/2009		1.6 Number: Quest #4 Thru 10/2/2009		1.7 Phase: Quest #4 Thru 10/2/2009		1.8 To: 10/02/2009			
1.9 Contract Data		1.10 Type: Quest #4 Thru 10/2/2009		1.11 Share Ratio: Quest #4 Thru 10/2/2009		1.12 Share Adjustment: Quest #4 Thru 10/2/2009			
1.13 Quantity: Quest #4 Thru 10/2/2009		1.14 Not Contracted: Quest #4 Thru 10/2/2009		1.15 Cost Appraised: Quest #4 Thru 10/2/2009		1.16 Target Price: Quest #4 Thru 10/2/2009		1.17 Estimated Price: Quest #4 Thru 10/2/2009	
1.18 Estimated Cost at Completion: Quest #4 Thru 10/2/2009		1.19 Management Estimate: Quest #4 Thru 10/2/2009		1.20 Contract Budget: Quest #4 Thru 10/2/2009		1.21 Variance: Quest #4 Thru 10/2/2009		1.22 Share Rate: Quest #4 Thru 10/2/2009	
1.23 Contract Value: Quest #4 Thru 10/2/2009		1.24 Contract Budget: Quest #4 Thru 10/2/2009		1.25 Contract Value: Quest #4 Thru 10/2/2009		1.26 Contract Value: Quest #4 Thru 10/2/2009		1.27 Contract Value: Quest #4 Thru 10/2/2009	
1.28 Contract Value: Quest #4 Thru 10/2/2009		1.29 Contract Value: Quest #4 Thru 10/2/2009		1.30 Contract Value: Quest #4 Thru 10/2/2009		1.31 Contract Value: Quest #4 Thru 10/2/2009		1.32 Contract Value: Quest #4 Thru 10/2/2009	
1.33 Contract Value: Quest #4 Thru 10/2/2009		1.34 Contract Value: Quest #4 Thru 10/2/2009		1.35 Contract Value: Quest #4 Thru 10/2/2009		1.36 Contract Value: Quest #4 Thru 10/2/2009		1.37 Contract Value: Quest #4 Thru 10/2/2009	
1.38 Contract Value: Quest #4 Thru 10/2/2009		1.39 Contract Value: Quest #4 Thru 10/2/2009		1.40 Contract Value: Quest #4 Thru 10/2/2009		1.41 Contract Value: Quest #4 Thru 10/2/2009		1.42 Contract Value: Quest #4 Thru 10/2/2009	
1.43 Contract Value: Quest #4 Thru 10/2/2009		1.44 Contract Value: Quest #4 Thru 10/2/2009		1.45 Contract Value: Quest #4 Thru 10/2/2009		1.46 Contract Value: Quest #4 Thru 10/2/2009		1.47 Contract Value: Quest #4 Thru 10/2/2009	
1.48 Contract Value: Quest #4 Thru 10/2/2009		1.49 Contract Value: Quest #4 Thru 10/2/2009		1.50 Contract Value: Quest #4 Thru 10/2/2009		1.51 Contract Value: Quest #4 Thru 10/2/2009		1.52 Contract Value: Quest #4 Thru 10/2/2009	
1.53 Contract Value: Quest #4 Thru 10/2/2009		1.54 Contract Value: Quest #4 Thru 10/2/2009		1.55 Contract Value: Quest #4 Thru 10/2/2009		1.56 Contract Value: Quest #4 Thru 10/2/2009		1.57 Contract Value: Quest #4 Thru 10/2/2009	
1.58 Contract Value: Quest #4 Thru 10/2/2009		1.59 Contract Value: Quest #4 Thru 10/2/2009		1.60 Contract Value: Quest #4 Thru 10/2/2009		1.61 Contract Value: Quest #4 Thru 10/2/2009		1.62 Contract Value: Quest #4 Thru 10/2/2009	
1.63 Contract Value: Quest #4 Thru 10/2/2009		1.64 Contract Value: Quest #4 Thru 10/2/2009		1.65 Contract Value: Quest #4 Thru 10/2/2009		1.66 Contract Value: Quest #4 Thru 10/2/2009		1.67 Contract Value: Quest #4 Thru 10/2/2009	
1.68 Contract Value: Quest #4 Thru 10/2/2009		1.69 Contract Value: Quest #4 Thru 10/2/2009		1.70 Contract Value: Quest #4 Thru 10/2/2009		1.71 Contract Value: Quest #4 Thru 10/2/2009		1.72 Contract Value: Quest #4 Thru 10/2/2009	
1.73 Contract Value: Quest #4 Thru 10/2/2009		1.74 Contract Value: Quest #4 Thru 10/2/2009		1.75 Contract Value: Quest #4 Thru 10/2/2009		1.76 Contract Value: Quest #4 Thru 10/2/2009		1.77 Contract Value: Quest #4 Thru 10/2/2009	
1.78 Contract Value: Quest #4 Thru 10/2/2009		1.79 Contract Value: Quest #4 Thru 10/2/2009		1.80 Contract Value: Quest #4 Thru 10/2/2009		1.81 Contract Value: Quest #4 Thru 10/2/2009		1.82 Contract Value: Quest #4 Thru 10/2/2009	
1.83 Contract Value: Quest #4 Thru 10/2/2009		1.84 Contract Value: Quest #4 Thru 10/2/2009		1.85 Contract Value: Quest #4 Thru 10/2/2009		1.86 Contract Value: Quest #4 Thru 10/2/2009		1.87 Contract Value: Quest #4 Thru 10/2/2009	
1.88 Contract Value: Quest #4 Thru 10/2/2009		1.89 Contract Value: Quest #4 Thru 10/2/2009		1.90 Contract Value: Quest #4 Thru 10/2/2009		1.91 Contract Value: Quest #4 Thru 10/2/2009		1.92 Contract Value: Quest #4 Thru 10/2/2009	
1.93 Contract Value: Quest #4 Thru 10/2/2009		1.94 Contract Value: Quest #4 Thru 10/2/2009		1.95 Contract Value: Quest #4 Thru 10/2/2009		1.96 Contract Value: Quest #4 Thru 10/2/2009		1.97 Contract Value: Quest #4 Thru 10/2/2009	
1.98 Contract Value: Quest #4 Thru 10/2/2009		1.99 Contract Value: Quest #4 Thru 10/2/2009		2.00 Contract Value: Quest #4 Thru 10/2/2009		2.01 Contract Value: Quest #4 Thru 10/2/2009		2.02 Contract Value: Quest #4 Thru 10/2/2009	

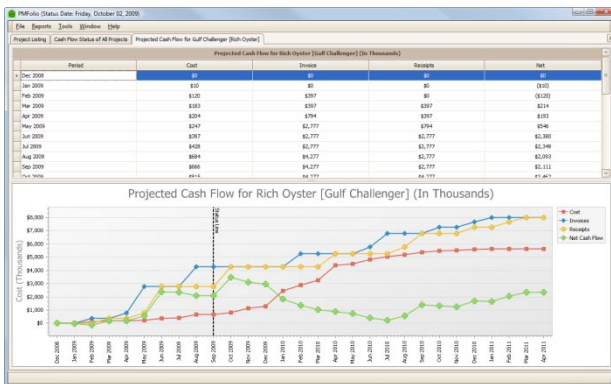
CPR Format 1



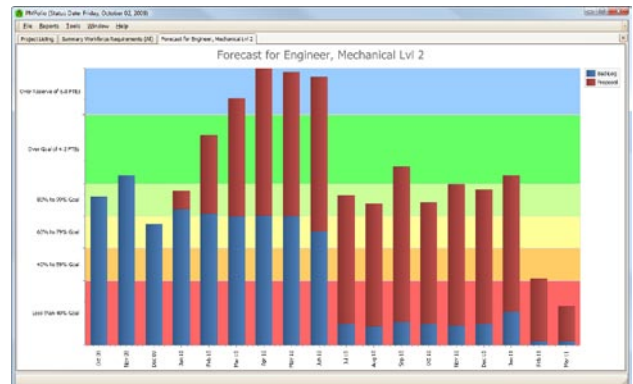
Integrated Project Scheduling (Gantt)



Project Graphics Performance Report



Project Cash Flow Forecast



Staff Forecast by Labor Category

Introduction to PMPlan

The PMPlan Applications:

PMPlan Enterprise is a **fully integrated** Planning, Pricing, Tracking, and EVM cost performance and reporting application, first developed in 1981 for minicomputer, and personal computer applications to the standards of DoD-I-7000.10 for Cost Schedule Status Control (C/SSR), and meets the standards of DoD-I-5000.2 for Contract Performance Reporting (CPR) and all 32 criteria of ANSI/EIA-748-A-1998 for Earned Value Management Systems (EVMS). These are also the basis of a good commercial project management application not requiring such stringent reporting. PMPlan is currently used in both commercial and government applications.

The PMPlan, integrated Stand-Alone and Enterprise Project Management applications, are divided into four independently priced components with varying degrees of capability to address specific client requirements. The capabilities of each of these components are identical in concept, but are limited to the strengths of each component purchased. These components are:

1. **PMPlan**, the Standard stand-alone version, is AINik Solutions original project management application that is fully integrated, using an 'MS SQL Server Express' database, and is used in many circumstances as an EVM Lite tool for those projects not requiring a fully mandated EVM capability. PMPlan Standard will handle 1,000 resources within 5,000 work elements for a plan period of up-to 10 years.
2. **PMPlanLT** is a very limited version of the PMPlan Standard version. It will handle 15 resources within 100 work elements for a plan period of up-to 1 year. PMPlanLT has very limited EVM capability. PMPlanLT would be used for very small business purposes or for student applications.
3. **PMPlan Enterprise** is the project management tool that is strictly used concurrently with other users on a server based 'MS SQL Server' database platform. PMPlan Enterprise can also be used on a local or server based 'MS SQL Server Express' database platform with some user limitations, and will handle 5,000 resources within 32,000 work elements for a plan period of up-to 10 years (+/-, and limited only by the amount of installed memory, and in some cases 32 bit vs. 64 bit processing). The PMPlan Enterprise tool does meet with, and has been approved for use by the Defense Contract Audit Agency (DCAA) standards, and other Government standards for those projects requiring a fully mandated pricing support and EVM capability
4. **PMPlanPro** is a significant upgrade to PMPlan Standard in that it can be used as a stand-alone application using a 'SQL Server Express' database, or it may be used as an Enterprise tool concurrently with other users as an additional user seat on a server based 'MS SQL Server' database platform. PMPlanPro will also handle 5,000 resources within 32,000 work elements for a plan period of up-to 10 years (+/-, and limited only by the amount of installed memory, and in some cases 32 bit vs. 64 bit processing). The PMPlanPro tool, when used in the Enterprise mode, can meet the standards, and has been approved for use by the Defense Contract Audit Agency (DCAA), and meets other Government standards for those projects requiring a fully mandated pricing support and EVM capability.

What is PMPlan?

- PMPlan is an **Earned Value Management (EVM)** application for interactive project planning and resource management, providing the means to meet the objective of standardization and to enable the project manager to plan and report performance, addressing the value earned of all activities against a baseline plan.
- PMPlan is a cost-effective integrated cost and schedule project control system that deals with internal management needs, and contractual data items that may require **Earned Value Analysis and Reporting** on both cost and schedule.
- PMPlan is a **Work Breakdown Structure (WBS)** focused development tool, and a **Resource oriented planning tool**, with an **Integrated Project Schedule** and a **Precedence Logic**

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Network Diagramming tool that link critical **Milestones** and, and with, Project Activities. PMPlan provides enhanced resource management, detail control of project budgeting and tracking, and accurate **variance analysis** and earned value **reporting** methodologies.

- In PMPlan, the WBS is the cornerstone of Project Management in that it is the graphic tool that defines and breaks down the work scope into finite pieces that can be assigned to a responsible person or organization. In PMPlan, the WBS serves as the framework for the development and **control** of technical, schedule, project and resource organization, and cost and price objectives.
 - The WBS is a tree composed of hardware, software, services, and all other work effort to be accomplished on a given project. The tree is a graphical portrayal of the top-down Work Breakdown Structure. The hierarchical arrangement of each of the elements makes it valuable as a downward expansion of the WBS, to the Activity where work items requiring identification, scheduling and resource allocation for performing the work are found.
- PMPlan provides for the integration of the WBS and the **Organizational Matrix** in a manner that permits identification of responsibilities, cost account selection, work authorization, scheduling and milestones with precedence logic networking, resource management, budgeting, cost accumulation, cost and schedule performance measurement, variance analysis, and reporting and change control for WBS and Organizational elements.

Project Management User Criteria:

An effective Project Management support tool should address, at the minimum, three critical elements of a Project Plan; the Proposed Project Plan's Development, the negotiated Project Plan's Execution, and the resulting activities, milestones and the objectives of the Projects Stakeholder's.

In developing a Project Plan, elements of the plan should include the following:

- The expected Scope of Work of the activities associated with the project plan should include:
 1. the development of a **Work Breakdown Structure** to identify and define the activities required to perform all of the work, consistent with MIL-HDBK-881A, which addresses mandatory procedures for those programs subject to DoD Instruction 5000.2, and provides guidance to industry in extending contract work breakdown structures.
 2. a written description of the **Objectives**, and written **Notes** of justification or assumptions associated with each critical activity defined in the project.
 3. the identification of the key **Milestones** necessary to measure the progress of the work plan as it relates to budget and schedule.
 4. the development and/or inclusion of those **Deliverables** required to complete elements of the project plan, and of the project.
- The elements critical to developing the **Integrated Project Schedule** of each activity required to perform the work in the project plan, and remain consistent with the Defense Contract Management Agency (DCMA) 14 point schedule assessment analysis for government work, should include:
 1. the scheduling of the key **Activities** and **Milestones** necessary meet the deliverable expectations established by the plan.

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2. the logic necessary to establish the relationships and the **Sequence of Activities** and **Milestones** required to meet the objectives of the work plan.
 3. the Estimated Duration of each **Activity** required of the work plan to establish the total duration of the project plan.
- The **Budget** estimation and the **Basis Of Estimate** (BOE) of each activity of the project plan, consistent with the procedures of the DOD-5000.2, and DCAA Standards for Proposals and Pricing, should be derived from the following:
 1. the **development** of the **Pool of "qualified" labor Resources** to perform the work identified in the activities of the project plan;
 2. the **Allocation, and/or re-allocation** of the **labor Resources** across the activities associated the project plan;
 3. the identification and the basis of estimate for the materials, **other direct costs** (ODC's), **indirect costs**, special facilities and equipment required of each activity, and the basis of Travel associated with the support of the activities of the project plan.

In Executing the Project Plan, the plan should address the following:

- The establishment of project Assignments that include:
 1. the development of **Work Authorizations** (a contract) for each activity to establish the requirements and the expectations of the project team for that activity;
 2. **Control Accounts** that set budgets and serve to track the cost of work performed for each activity of the project plan. In PMPlan, cost accounts are identified as work packages.
- A process for the measurement of the **Status** of the **cost and schedule of the work performed** of each activity should include:
 1. a Methodology for determining the **Value Earned** of the work performed against cost and schedule;
 2. Graphical displays and reports of work **Performance** against the project's cost and schedule.
- The ability to re-baseline the project plan for inevitable **Revisions** to the plan, should address:
 1. the **client authorized revisions** to the Work Breakdown Structure of the project plan;
 2. the **client authorized re-Scheduling** of critical activities and milestones in the project plan;
 3. the **re-allocation of resources** based on client authorized revisions to the Budget.

The responsibilities of the Stakeholder's of the project include:

- The **line Management** of the **project labor resources** should be responsible for:
 1. the project **Staff Selection** process;
 2. the project's **Risk Assessment** issues;
 3. the **Reporting** on the performance of individual Staff associated with the project.

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- The responsibilities for the project's Client should include:
 1. development of the **Statement Of Work**,
 2. **negotiation** of the baseline project plan;
 3. **early identification of revisions** to the baseline project plan, and the Requesting of such Changes for re-negotiation.
- The Project Team's obligations should include:
 1. the timely **Distribution of expected project Information** to all stakeholder's;
 2. the **understanding of, and the Work Buy-in** of those activities associated with the project plan.

PMPlan, and Earned Value Management (EVM):

The PMPlan Suite of Enterprise Project Management Tools are aligned with, and adhere to the Principles of Earned Value Management Systems (EVMS) as outlined in the Electronic Industries Alliance (EIA) Standard, EIA-748-A, adopted by EIA in accordance with the American National Standards Institute (ANSI) patent policy. The Following objective and Principles are quoted directly from this Standard:

"An Earned Value Management System (EVMS) for program management will effectively integrate the work scope of a program with the schedule and cost elements for optimum program planning and control. The primary purpose of the system is to support Program management. The system is owned by the company and is governed by the company policies and procedures. The principles of an EVMS are:

- Plan and price all work scope for the program to completion.
- Break down the scope of the program work scope into finite pieces that can be assigned to a responsible person or organization for control of technical, schedule and cost objectives.
- Integrate program work scope, schedule, and cost objectives into a performance measurement baseline plan against which accomplishment can be measured. Control changes to this baseline.
- Use actual cost incurred and recorded in accomplishing the work performed.
- Objectively assess accomplishments at the work performance level.
- Analyze significant variances from the plan, forecast impacts, and prepare an estimate at completion based on performance to date and work to be performed.
- Use EVMS in the company's management processes."

The PMPlan, Project-Plan “Workflow” for a project Development and Proposal effort:

The following is an example of how the PMPlan Workflow may help the user in the development of a **proposed project plan** that meets the goals and objectives of a potential customer, as found in the **Statement of work** of that customers request for proposal:

- Open PMPlan and in the **Information Tab**, enter the Proposed Project Title, the estimated start date and other pertinent proposal/project information that's then available.
- **Create the Project Work Breakdown Structure (WBS).**
 - Select the **Work Plan Tab** to construct the WBS Tree, and in the **Objective/Scope** and **Notes** panels, the user can, and should, enter, or cut and paste from an electronic copy of

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the **Statement of Work**, the objectives/scope of work of each element of the project, and note the assumptions and justifications of each element as the user develops the WBS.

- In developing the WBS, the user needs to consider the customers reporting requirements, the expected actual cost tracking, and having a work activity for each deliverable (Documentation and Products).
- If at all possible, activities should be able to proceed without interactive dependency on other activities (For example the design of item #2 that requires information from item #1 should not start until the required information from item #1 is completed).
- **In the Deliverables Tab**, select those items of the statement of work, as outlined in the WBS Tree that are considered deliverables. This will develop an independent tracking schedule of the deliverable requirements.

Milestones:

- Milestones are critical events, and not Activities for planning costs. Therefore, **Milestones** are scheduled events that depict major project objectives such as IDR, PDR, etc, and are linked logically to WBS elements. In PMPlan, Milestones are not a function of the WBS, and should be scheduled outside of the Gantt Schedule in a highly visible area described as the Milestone area.
- **In PMPlan, there are three distinct types of Milestones; Major Milestones, Intermediate Milestones and Earned Value Milestones.** It's **important** to remember, especially in PMPlan, that Activities are the lowest level of each branch of the WBS tree.
 - Activities define the work effort and costs that are required to meet the activities specific objectives or goals, and are not Milestones.
 - “Milestones are major or critical events”, and should be scheduled separate of the Activities.
 - “Milestones separately set the time lines” for the objectives or goals of the Activity(s) and are not priced to perform an Activities workload. The cost of a milestone may not necessarily be the cost of any one Activity, but may be the resulting cost of a chain of Activities required to meet a particular objective or goal.
 - Intermediate Milestones may be linked to activities as a measurement of progress, and may be scheduled adjacent to the Activities.
 - Earned Value Milestones may be set up as a performance tracking method.

Precedence Logic Network:

- PMPlan uses a precedence diagramming technique (**Precedence Logic Network**) as the methodology for more accurate project control over the relationships between the Activities and the Schedule. A resultant of this is the identification of Lead and Lag times, and the definition of the Critical Path of the project schedule. This technique supports the linkage of Activities to other Activities and to Milestones.
- Develop the sequence that the activities should be completed in the Precedence Diagramming Method (PDM) Network Logic with Critical Path).
 - In the **Logic Tab**, or in the **Gantt Schedule Tab**, develop the logic from the start of the project plan, or backward from the last element (If starting with last, still link predecessor to successor).
 - Minimize overlapping (parallel) paths of different elements (If there are parallel paths, a different team of resources should be used. Otherwise, consider resource dependencies in addition to activity dependencies).
 - It is strongly recommended that **Finish-to-Start (FS)** linkages should only be used.
 - In developing the sequence do not be concerned about the duration of the activities at this time.

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- Do not forget to link the WBS elements with the Major Milestones. If the customer specifies that the Major Milestones must occur at a specific time after the start of the project, the user should put in a starting milestone and use a FS link with lag to get each Milestone to occur as required.

Integrated Project Scheduling:

- The **Integrated Project Scheduler (IPS)** format reflects the time phasing performance of all line items of the WBS. In PMPlan, the WBS elements and milestones of the project are linked by the Logic Network and the critical path of the project to the IPS. While various types and methods of scheduling and planning techniques may exist, the IPS, as developed by PMPlan, primarily sets forth the contractual schedule requirements and establishes the basic time parameters for the Project Organization at the lowest, Activity level of each WBS element. The IPS reflects all contractual schedule requirements and can be graphically adjusted with resources loaded reflecting the days of the month, weeks of the month, or months of the year.
- **Develop and Review the Project Schedule in the Gantt Schedule Tab.**
 - Does the schedule meet with the client's request?
 - If not, the user needs to consider if different or more resources can reduce the durations of the activities. The use of more resources may allow some activities to be done in parallel.
 - If resource constraints prevent the user from meeting the customers' expectations, the user may need to negotiate alternatives with the customer.

Project Resources:

- **Project resources** are composed of units of labor, materials, travel, use of equipment and any other "cost items" necessary to meet performance requirements, and can be loaded daily, weekly or monthly. In PMPlan, these items are properly identified and unit priced with appropriate rates, overhead and inflation factors, calculated and input manually or down loaded from a corporate database. Labor resources may also be categorized into rate tables with the rates based on the weighted average of the resources identified and used in each labor category. Individual resource files may be constructed and saved for merging into new or other project resource listings.
- **The Resource Pool.**
 - The primary difference between PMPlan stand-alone products and PMPlan Enterprise is the Resource Pool. Either resource pool may be constructed using staff, labor categories or both.
 - **The resource pools in the stand-alone products;** need to be developed with staff, rates and a burden factor in the **Resources Tab** for each new project. This can also be accomplished by attaching a resource pool template from previously developed resource pool(s) and stored on the same computer as the project data file, or accessed by disk or through the intranet.
 - **The Enterprise Resource Pool;** resides in the common database on the server where PMPlan Enterprise develops and stores the project(s) data file(s). PMPlan Enterprise automatically attaches the common resource pool, shown in the **Resources Tab**, to each project(s) data file, for the **selection of Resources**. The resource pool, including staff with rate structures and burden tables, are developed and managed through a separate restricted access administrative application, **anDBManager**.
 - In addition to the estimated cost of preferred resources, the user, before selecting a project resource, should **assess the availability** of the resource(s) on the **Resources Tab** for a more realistic forecast of schedule issues. (i.e. unless the resource will be

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assigned full time to the project, it should be less than 100%). Assigning **realistic availability** will give a better idea of schedule.

Budgeting and Basis of Estimate:

- PMPlan deals with the development of project workforce and budgets at the lowest level of each WBS element (the Activity), and provides for the interactive development of workforce scheduling and materials planning for the development of the program **budget**. While loading project staffing or workforce and materials requirements is generally a straight forward process when using PMPlan. **Other Direct Costs** (ODC's) i.e. travel, use of equipment planning and **indirect costs** may require better definition and cost justification (**Basis of Estimate**) and some method of accountability during contract performance. Material and/or ODC cost estimates can be extracted from PMPlan's list of materials or other listings (notes), using vendor price quotes or best engineering estimates based on previous purchasing history of the same or like ODC's.
- In PMPlan, there are multiple means of loading resources into activities to **Develop a Cost and Schedule Estimate**.
 - To spread labor hours using **Spread Rules** for developing a quick, **initial Rough Order of Magnitude (ROM)**, in the **Work Plan**, **Gantt Schedule** and **Total Effort** Tabs:
 - **"Right Click"** the activity to select the **Task Properties** dialog,
 - Select the labor spread **"Rules Tab"**, select **Resource Driven** by activity for the activities duration, and select the type of spreading to use.
 - Spread **"Rules"** to determine the **Spread Type**
 - The following are the choices of spread available in PMPlan; Flat, Back-Loaded, Front-Loaded, Peak, Double-Peak, Plateau, and Custom, or "Manual".
 - Select the **"BOE Tab"** to enter the total labor hours desired per resource to be spread by the Rule selected for each activity (As the user enters each resource effort, PMPlan will calculate the duration of the activity based on the loading **"Spread Rule"**, and the **availability** of each resource assigned to that activity (Labor only).
 - When the initial estimate is complete, turn off the Resource Driven settings, whether it be global, or by activity.
 - **Load Resources by Activity in the Activity Effort Tab to develop an Estimate, or to Fine Tune the ROM Estimate;**
 - Enter the total labor hours desired per resource for the activity selected into the Planned Loading pane, and spread the resource over the schedule of the activity using the loading "Spread Rule", or manually spread the resource over the schedule of the activity, which will override the spread rule. Later, when executing the project, a comparison can be made between the current Planned Loading panel and the Baseline loading panel and the Actual Loading, or all three panels in this view.
 - **Load Resources by Resource in the Resource Effort Tab to develop an Estimate, or to Fine Tune the ROM Estimate;**
 - Manually enter, and spread the desired labor hours per resource over the schedule of each activity for the selected resource.
- **Review the Budget (Costs) of each activity.**
 - Is the project total cost competitive?
 - Are the cost ratios and the **Basis of Estimate** (BOE) of each major task reasonable and supported by past projects. For example, is the cost ratio of the project management task

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similar to other similar type of projects or is the cost ratio of detail design to preliminary design similar to historical data?

- Is the assigned skill level appropriate?
- **Submit the project plan resource usage reports, if required;** to the companies finance group for **alternative pricing**.
- **Adjust the project plan costs;** to match the **alternative pricing**.
- **Generate the review documentation;** of the project plan WBS, Schedule, BOE, and other graphics or supporting documentation needed for internal review.
- **Make adjustments to the project plan;** as required from the internal review.
- **Generate the Proposal Documentation;** of the project plan WBS, Schedule, and other graphics or other supporting documents needed for the proposal to the customer.
 - The project plan may be printed as hardcopy or copied and pasted into the finished proposal document.
- **Submit the finished Proposal to the customer.**

Performance Measurement:

- **Analysis and Reporting** in PMPlan produces, among the other reports that are available, a standardized cost performance and status report consisting of a basic Contract Performance Report (CPR) and Cost/Schedule Status Report (C/SSR), and in PMPlan Enterprise, the full Contract Performance Report (CPR) with all five formats, along with the Graphics Performance Report. The analysis and reporting of the CPR and C/SSR system measures Earned Value, and reports work performed through comparisons of PV (BCWS), EV (BCWP), AC (ACWP), and BAC (Budget and estimated costs-at-completion). In PMPlan, the development of the project reporting system has been a reflection of the need to develop a standardized method for cost/schedule performance reporting, regardless of whether the project is of commercial/industrial or government origin.
- PMPlan stresses, but does not require, the use of the **Earned Value Management (EVM)** method to determine performance. EVM is required to determine the **Value Earned** through the measurement of **schedule and cost variances** to a baseline project plan and actual costs. The goal of EVM's performance measurement methodology is to reduce the subjectivity with which this assessment is made in order to provide for a more accurate report of work progress.
- **Earned Value Measurement Terminology is also expressed as:**
 - **Budget at Completion (BAC)**
 - In order to maintain management control over the project and, in some cases, to fulfill contractual reporting requirements, it may be necessary to periodically assess and project the BAC (formally **Estimate-at-Completion (EAC)**). The BAC will include actual costs-to-date plus estimates-to-complete, that will be based on remaining work, which is automatically accomplished in PMPlan's cost and schedule process.
 - The sum of the total budget for a Control Account, major task, or project.
 - **Planned Value (PV)**
 - The scheduled cost based on the allocation of cost items such as resources and materials during the time line of an activity.
 - Also called Budgeted Cost for Work Scheduled (BCWS)

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- **Earned Value (EV)**
 - The value of the work performed to-date using any reasonably accurate, mutually acceptable methodology for determining value (i.e.; EV Milestones, 0/100%, 50/50%, 30/40/40, ratio of units completed versus total units, manager estimate, level of effort, being some examples).
 - Also called Budgeted Cost for Work Performed (BCWP)
- **Actual Cost (AC)**
 - Total cumulative incurred costs charged to a work package (usually through the accounting system), which can include labor costs, direct costs (overhead), and indirect costs (material, travel, and etc.)
 - Also called Actual Cost for Work Performed (ACWP)
- ***These values are used to calculate the performance values below.***
- **Performance Terminology**
 - **Cost Variance (CV)**
 - $CV = EV - AC = BCWP - ACWP$
 - **Cost Performance Index (CPI)**
 - The cost efficiency ratio of earned value to actual costs ($CPI = EV/AV$). In PMPlan, the CPI is used to calculate Estimate at Completion (EAC) ($EAC = BAC/CPI$)
 - **Schedule Variance (SV)**
 - $SV = EV - PV = BCWP - BCWS$
 - **Schedule Performance Index (SPI)**
 - The schedule efficiency ratio of earned value accomplished against planned value ($SPI = EV/PV$). The SPI describes what portion of the planned schedule was actually accomplished.
 - **Variance at Completion (VAC)**
 - The predicted magnitude of possible under-run or over-run at completion of work package, major task, or project ($VAC = BAC - EAC$)

Estimate-To-Complete:

- Estimate to complete is an input output mechanism that determines from the project teams, an estimate of what will be the estimated costs needed to complete the remainder of work on the project, or on a particular phase of that project.
- If used, Estimate to complete is something that should be started quickly and early in the process and/or life cycle of the project to most adequately and effectively help the team budget accordingly.
- The estimate to complete should be repeated as needed more than once during the life cycle of the project in question, and that past project efficiencies in terms of money (AC) and resource productivity should be addressed in new assessments, i.e. "the past efficiencies are a predictor of the future efficiencies"
- Determining operating efficiency, (EV / AC) .
- Determining the ETC is calculated by subtracting the EV from the BAC, leaving a remaining budget. Divide this value by the present rate of efficiency (EV / AC) . Or, as formularized:
 - $(BAC - EV) / (EV / AC) = ETC$

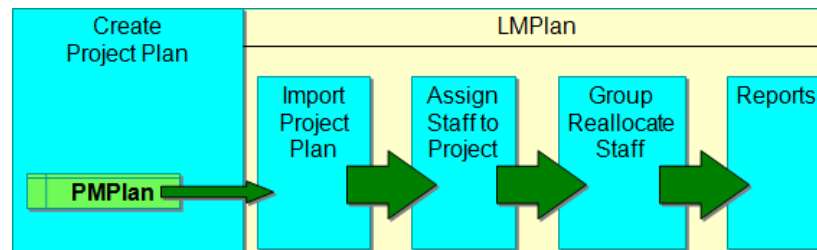
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PMPlan Enterprise - Supporting Applications and Customization Capability:

As with nearly all of our clients, each one of which has a different approach as to what kind of input and output documentation is, or may be, required due to differences in their internal policies and procedures; special support for reports such as bid/no-bid, proposal preparation, project performance, staff utilization and forecasting, financial forecasting, etc., may be required. In many of these cases, we've been able to develop custom, client specific, reports that draw data directly from the PMPlan database, are produced directly from the Enterprise applications, and are available for current review at any time by anyone having access to the database with the applications on their computers. Custom reports can range from just adding company information to some of the standard reports, to the development of completely new client specific reports. Web access is also on our short list to enable access to several of the reports via the web.

There are currently two additional application Modules available to support the PMPlan Enterprise application, LMPlan and PMFolio, and as in PMPlan Enterprise, they include standard reports and may contain special (custom) client directed reports. These separately priced Modules are normally included as part of a total PMPlan Enterprise package:

- **LMPlan – the Staff Assignment and Forecasting Module;**
 - LMPlan is a complementary module of the PMPlan Enterprise Suite and is a line management tool for project and organizational workload and workforce loading and forecasting.
 - The Line Manager tool is used for forecasting resources for projected projects, and assigning staff to these projects.
 - It is integrated with PMPlan Enterprise, thus draws its planned data from selected projects on the common PMPlan Database.
 - It provides reports to review the project and organizational workload and workforce loading and forecasting in different ways.



- **PMFolio – the Management Summary Portfolio Module;**
 - PMFolio is a complementary module of the PMPlan Enterprise Suite and provides summary reports showing the status and health of projects to line managers and upper management.
 - It is a Management Revenue Analysis and Portfolio tool for analyzing all projects within the organizations common server database. Provides summary reports showing the status and health of all of the projects, or projects of interest.
 - It is integrated with PMPlan Enterprise, thus draws its data to be summarized from selected projects on the common PMPlan Database.
 - It provides summary reports that address the project's status and health as they impact on the organizations bottom-line in different ways.

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PMPlan Enterprise's Potential Competition and the Comparisons:

AINik Solutions has not yet developed a detailed feature/function comparison chart for its potential competitors such as, Deltek's Open Plan/Cobra, Oracle's Primavera P6/Cost Manager, and Microsoft's Project and its add-on applications, as well as others; but we can however offer some comparison thoughts on the VALUE of PMPlan Enterprise.

We CAN tell you that PMPlan Enterprise has competed against the competition and has won primarily based on PMPlan's intuitive processes and ease of use, its rich set of features and ability to do more in less time, versus the non-intuitive products of the competitors. The current mix of users of the PMPlan Enterprise products include Project Manager's and Project Staff, PMO Managers and Staff, Line Managers and Administrators, Marketing, Contracting, and Financial Management and Staff, and Executive Management Staff. Currently, no additional fulltime staff have been required by our customers for operating the PMPlan software applications for project workload and workforce control, but some staff have been assigned to sensitive (HR, Financial and other) database administrative responsibilities.

With the government/industrial standards in mind, PMPlan tools are fully integrated applications, and are first, WBS (Work Breakdown Structure) focused, and resource based planning tools, using Integrated Scheduling with Precedence Logic Network diagramming to identify and define the critical path of the project schedule, and to assess any risk developed as a result of the planned cost and schedule; whereas most of the competitive products, are not fully-integrated Scheduling and planning tools. Once the information is developed in some competitive applications, it is extracted from them and imported into other functional applications, such as pricing tools, and EVM tools for EVMS cost and performance analysis and reporting.

Some elements we would suggest to be included in a comparison:

1. **Approval by DCAA** as a fully functional pricing tool, with the capability of having all supporting documentation filed within the PMPlan database and integrated with the project plan, including a full Basis of Estimate capability; or, if required, the full project resource loading details may be exported to a separate pricing tool with separate, non-integrated, pricing support documentation (i.e. ProPricer, MPM, etc.).
2. **Flexibility** in interfacing with other client associated applications and systems (i.e. financial costing, pricing, HR resources, and other policies and processes, etc.).
3. **Ease of use** (only gained through demonstration & reference checks). In many cases, competitive applications may require full-time project control staff, as reports indicate they may not be for the casual user.
4. **Affordability without reducing value.** One significant difference between PMPlan Enterprise tools and most of the competition is that there is no limit as to how many user computers the PMPlan Enterprise tools may be installed on. The only limit when using PMPlan Enterprise is the number of user seats that may access, and use the PMPlan database concurrently. 20 concurrent user seats are in the base price of PMPlan Enterprise which is normally adequate for about 100 total users. Additional concurrent user seats are available.
5. **Workforce resource assignment** and proactively controlled leveling.
6. **Workforce resource forecasting** of staff-time availability for current and future; billable work, proposal preparation, IR&D, other responsibilities for overhead activities, staff vacation, etc.
7. **Executive / Management summary reporting (Portfolio)** of all, or preferred workload requirements and performance, and the workload's impact on billing and cash flow.

We are quite confident that through a web-demo, a hands-on evaluation and other discussions, we can convey the overall increased VALUE that PMPlan can bring to your organization, as compared to the competition. Our price is based on the concurrent user licensing method versus the competitions per user seat licensing method.

System Requirements

Project size will have the greatest impact on the computers processor speed and memory resources.

The recommended minimum system requirements for the installation and use of PMPlan4:

- X86 based compatible computer at 1 GHz
- Windows XP/Vista /Windows 7 (installation requires administrator or power user permissions)
- 200 MB RAM
- 200 MB free hard disk space
- 800 x 600 display , 256 colors 16-bit color quality 512 MB Ram

The recommended system requirements for the installation and extended use of PMPlan4 (more may be appropriate for very large projects):

- X86 based compatible computer at 2.40 GHz + (or faster speeds for a large project plan)
- Windows XP/Vista/Windows 7 (installation requires administrator or power user permissions)
- 4GB RAM (more is better)
- 200 GB free hard disk space
- 1024 x 768 display minimum (1280 x 960 preferred), 256 colors 16-bit color quality, 512+ MB Ram

Elements of a Project's Life Cycle



PMPlan Enterprise effectively reduces the time and effort, thus the cost of performing all elements of a project's life cycle.

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