PLANVIEW INC

Our Philosophy – resource-based project management

Table of Contents

PLANVIEW INC

7320 North Mopac #300
Austin, TX 78731
Tel: (512) 346-8600
Fax: (512) 346-9180
market@planview.com
www.planview.com

Professional Project-Driven Organizations

Project management has become a widely used strategy in modern business, yet an inordinate number of projects fail. Some are canceled, others are never deployed to production, and others simply add to the growing sense of frustration and anger with the management concepts. Building and deploying new technology is a complex task where processes, people and multiple projects interact in a powerful dynamic that many organizations are unequipped to handle.

The reality is that hundreds or thousands of projects might flow through an organization each year. Skills of proven staff members can become outdated in just a few months. Technology and hence the skills required to finish a task can change mid-course. And the underlining business needs being addressed are often themselves in constant evolution.

Professional organizations, requiring as they do a highly skilled workforce of ever-decreasing availability, will find even more challenges to manage their workload in the future. Studies show that by the Year 2000, as much as 60% of the workforce will be working from the home, or on the road, or sharing office space through "hoteling." More and more organizations are contracting out work to create "virtual organizations" to help them get work done.

Managing projects and other work in this environment requires different tools and techniques than those used in traditional organizations. Multi-project management based on the concept of a local staff under a manager's direct control working on half-a-dozen projects is no longer valid. Today's professional organization can include a "virtual" staff, comprised of contractors and sub-contractors, along with full-time, part-time and borrowed employees. This "resource portfolio" provides the structure through which work flows, both projects and other work. Managing this asset well is a key indicator of the success of an organization.

A Resource Portfolio

Knowledge and human capital drive the information society, just as property was the capital of the industrial age. Project management is a proven tool in leveraging the value of this human capital. Workforce portfolio management, a natural evolution of project management, is a concept for directing the skills of the enterprise to the right work.

A portfolio connotes a group of assets, with value that can fluctuate according to market conditions. Harvesting and exploiting the full use of an organization's resources— its skilled and knowledgeable staff— can be

Exhibit 1 - The Challenges of a Resource Manager

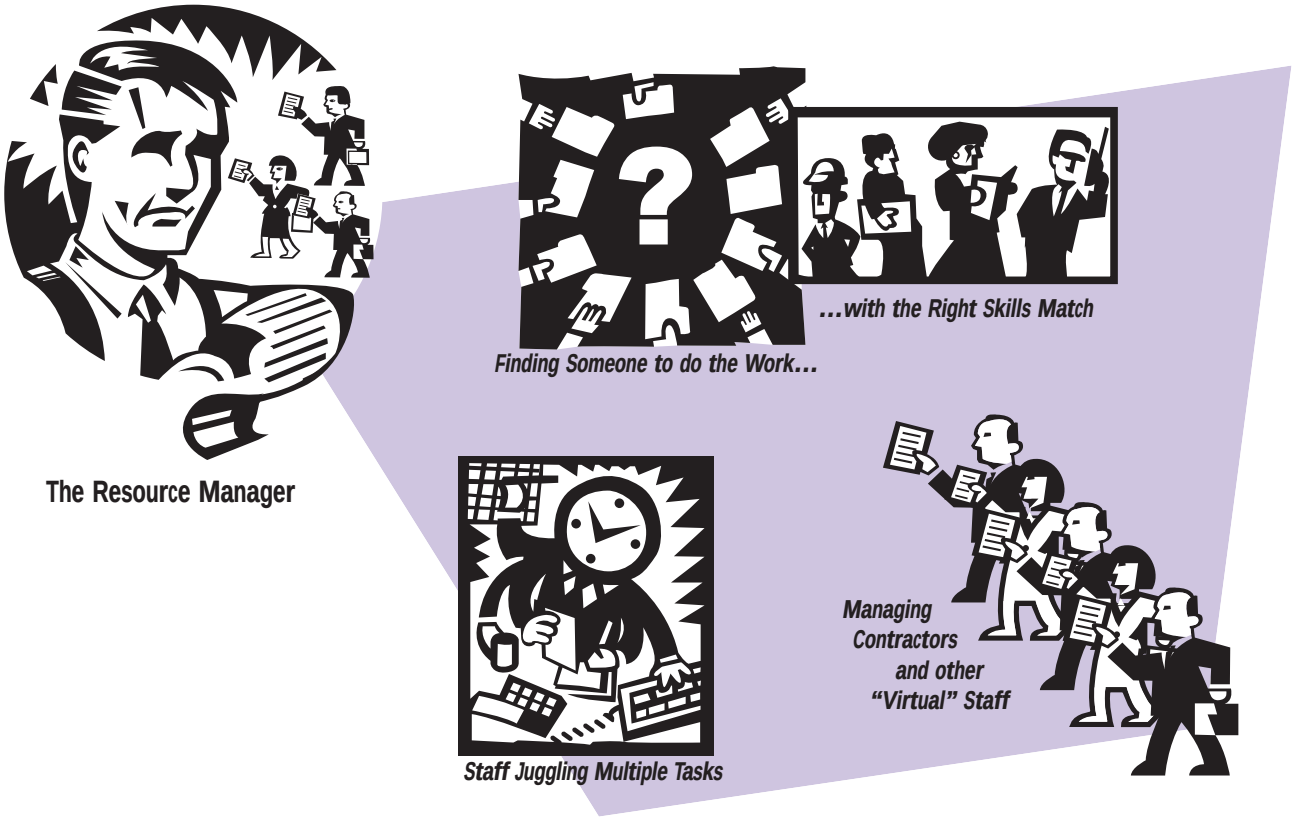


Exhibit 2 - Workforce Capacity Determines Project Load

viewed as managing a portfolio. There are leverage points, typically individuals with critical skills, in the resource portfolio whose under-use or over-booking have the most effect on the amount of work the organization can complete. A multi-project, enterprise-wide management system must provide a view on how all resource time is utilized to be able to effectively manage the resource portfolio as well as the "work portfolio" of major projects, other projects, service work, and administrative tasks. Such a system will allow an organization to manage to the full capacity of its staff without overbooking.

Adding to the complexity is the fact that good help is hard to find. Some reports put the shortfall in the range of nine developers in the U.S. for every 12 positions. According to the "Trendsetter Barometer" of Coopers & Lybrand (now PriceWaterhouseCoopers) in a April 21, 1998 release, seven out of ten CEOs interviewed from some of the fastest-growing U.S. businesses said they face serious problems finding skilled, experienced workers. As a result, they do not have the resources they need to meet the rapid expansion of their businesses and must cancel growth plans, delay initiatives, and hold off on expansion or over-hiring. Of the workers most in demand at these "Trendsetter" firms, professionals and technicians constitute 54% and IT another 43%. The scarcity is expected to get worse before it improves.

Resource-Based Management Techniques

The evolution of professional worker demographics has required a natural adaptation of processes to manage the enterprise as well. Some of the characteristics of professional resources that must be accommodated:

- Highly skilled, sometimes practically irreplaceable staff within a project deadline,
- Limited availability with constant competition,
- Highly paid with high expectations of stock options, etc.
- Simultaneously involved in several projects, maintenance, service and other work,
- Geographically dispersed,
- May work for a separate organization.

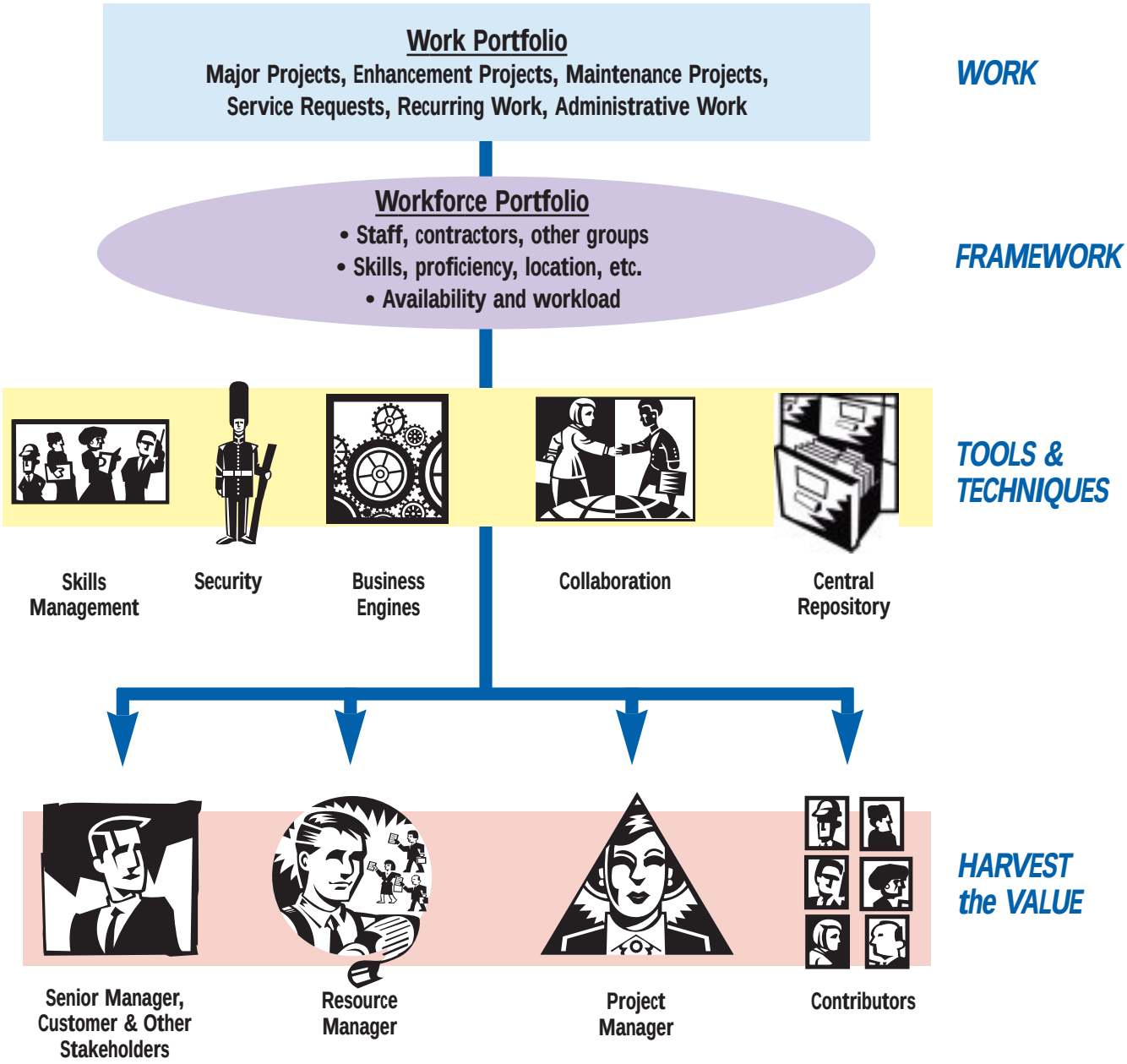
New management techniques in this environment that focus on the organization's resources can bring benefits to a range of people (see Figure 3).

In today's fast-paced business environment, multiple projects are a reality, and most employees are handling several projects simultaneously. It's not enough to schedule multiple projects as though there were no relationship among them. The common denominators in all of an organization's projects are that they flow through the same set or subset of resources. Management tools must smoothly integrate these many different projects as well as service requests, administrative work and other items. Many traditional project-management products also overlook non-project work, which can lead to increased overtime or missed deadlines as projects progress.

The ability to analyze multiple projects when assigning staff and/or other critical resources is one of PlanView's greatest strengths. PlanView also allows managers and users to plan service work alongside project work, providing a more comprehensive overview of total resources. Then powerful, integrated skills scheduling features let you search through the PlanView central repository for the best resources for your task or set of tasks.

Stakeholders, resource managers, project managers and other staff members can review project and service portfolios from anywhere in the

Exhibit 3 - Resource-Centric Management Techniques



world through the world wide web. Status can be updated, project and service requests added and reports produced.

Since PlanView considers all the work assigned to a person, division or other group (see Figure 4), it gives managers a clearer picture of availability, allowing them to schedule more accurately. PlanView also offers automated CPM and other scheduling methods that weigh project priorities, the relationships between different tasks or projects, and business rules.

PlanView provides managers with real-time access to their resource and work data, and automatically notifies the appropriate managers of changes that affect their schedules. Project managers can focus on project duration, while functional managers concentrate on year-end goals. Resource managers can forecast skills and staff for several years in advance. Each based on a common data repository, so data are consistent across the enterprise.

Workflow Through the Organization

Many project management tools focus on planning, while ignoring other critical workflow stages to be managed, as shown in Exhibit 5. Each stage has its own deliverables, roles, tasks, and trigger tasks.

1. START WORK - initializing and capturing all new work into the system
2. PLAN WORK - defining and estimating time and expense by WBS (Work Breakdown Structure), using CPM to set a plan
3. PLAN RESOURCES - searching by skills, scheduling and assigning

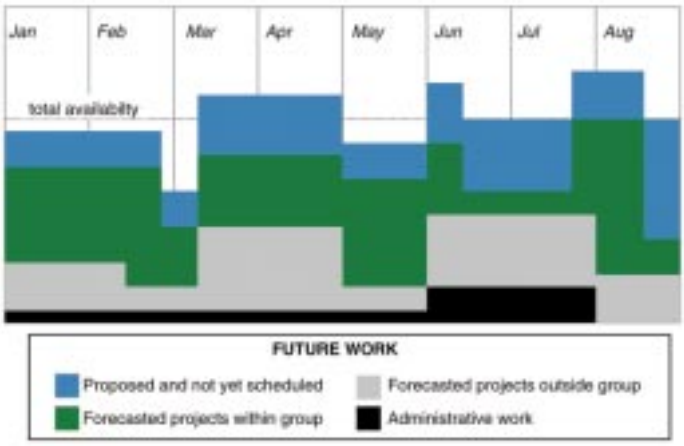
resources, checking availability, setting milestones, etc.

4. STATUS WORK - having staff report hours worked and expenses on individual tasks, along with estimates of time remaining
5. CLOSE WORK - a formal process when work is complete to update resource skills and metrics.

Historically, project management software has focused on planning work (step 2 in the PlanView model) and left the definition of the overall model and workflow process to the customer or consultants. This approach limits the effectiveness of a software solution in delivering real process improvements to the customer. Techniques and tools for all these five stages will support management of the whole project lifecycle.

Service requests as well as major projects and projects should be captured into an enterprise work portfolio. This permits resource and project managers to view and track all work. Tracking service requests also provides valuable information on cost of maintenance. Typically this information is used to measure profitability of products and services, and to optimize the timing on new releases.

Exhibit 4 - Profile of all the Group's Work



Projects and Other Work

The Standish Group International's* landmark 1998 "Chaos Report" contained some sobering statistics on IT project failure: 28% are canceled before completion, and of the remaining projects, 46% have cost and/or time overruns or changes in scope. Though the success rate has improved since the 1995 report (40% failure), a one-in-four failure rate is still a problem.

One great contributor toward failed projects is the lack of reality in most project schedules. Some organizations apply 80% of their management effort on their "major projects." Ignoring or marginalizing the other work leads to missed milestones, delayed projects, cost overruns and the "chaos" so compellingly covered in the Standish Report. Larger organizations have in reality four categories of work:

1. Major projects - Those projects to redefine the workings of the organization, launch new products or services or other major event. Most organizations only have a small portfolio of major projects, and those get the management attention. In the past few years these projects have typically been identified as re-engineering or defining new business processes.
2. Projects - Those enhancement and maintenance projects affecting in-place systems and procedures. These projects are typically shorter duration with less dramatic impact on the organization, but they are often critical to smooth operation.
3. Service requests - A service request is an occurrence with a resolution. It may be a user question, a system failure, or a simple task— any event that has a limited scope and can be resolved. The difference with service requests is that they often can be handled directly by professional staff without management intervention. The critical issue with service is to accurately account for the work performed to update metrics, charge back the work, and communicate with the customer about the service that they receive.
4. Administrative - These are the necessary activities to maintain the health of the individuals and the organization. Examples are holidays, vacation, sick leave, and training. Most organizations strive to reduce administration due to a perception that it is "non-productive." We have found that a healthy balance is critical to the organization's viability.

While traditional project management tools consider only projects, project management tools for complex and distributed organizations must be resource-centric, in that they must look at the work portfolio of the organization based on the maximum work capacity of the resources. This provides a more comprehensive overview of the capabilities of the organization, whether structured on existing resources or on some future planned state. What typically happens when a view like this is created is that managers realize they have a bigger work portfolio than they think they have. This becomes a critical first step in creating realistic project schedules.

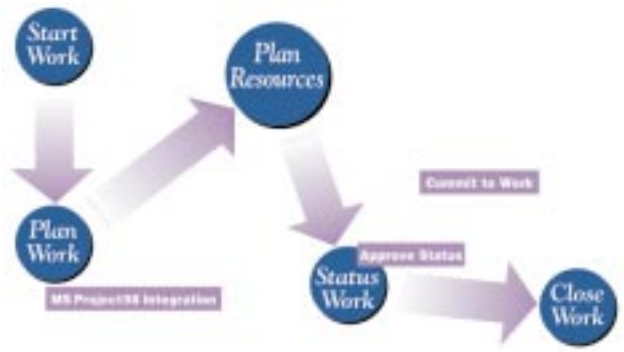


Exhibit 5 - Organizational Work Flow

Status & Update from Around the World

On-line services are exploding at a 75% annual growth rate, said the Harvard Business School in a 1997 workshop report. Studies show that about 70% of the Fortune 1000 companies are Internet ready. This is good news for enterprise resource management. To support the high-quality communication needed to manage a nomadic workforce, the Internet/Intranet will become indispensable. Exhibit 6 is an example of a multi-tier system with 100% web interfaces, supporting "unlimited" scalability.

**Visit www.planview.com to read the Standish Group's profile on PlanView Software v6.0!*

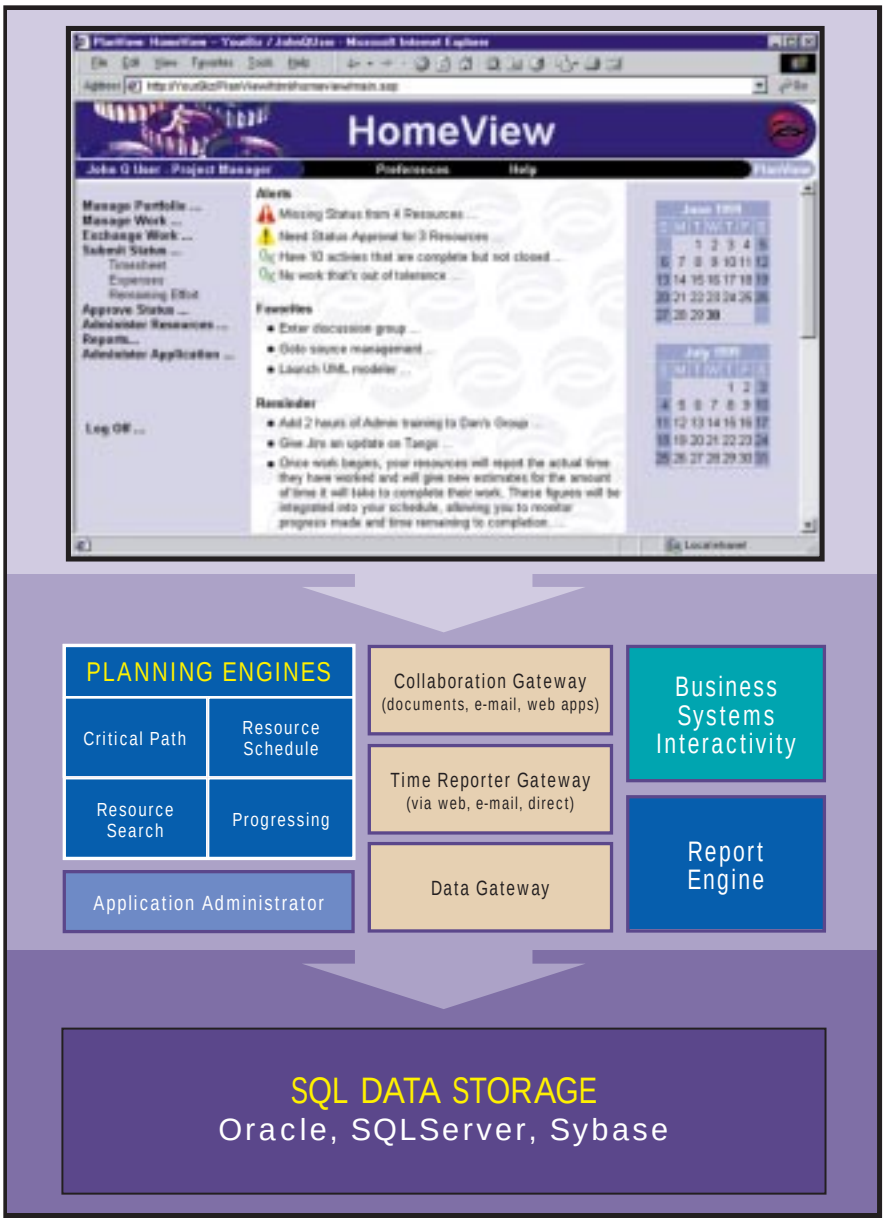


Exhibit 6 - Multi-Tier System

Client Tier

Personalized web portal; browser-based, thin, easy to maintain.

- system-generated Alerts,
- access to software thru FeatureSets™,
- links to URLs and executables,
- a reminder note area

Middle Tiers

Powerful business engines to manage collaboration

- Many functions performed here
- Gateways give access to the central repository
- Supports scalability to multiple 1,000's

Database Tier

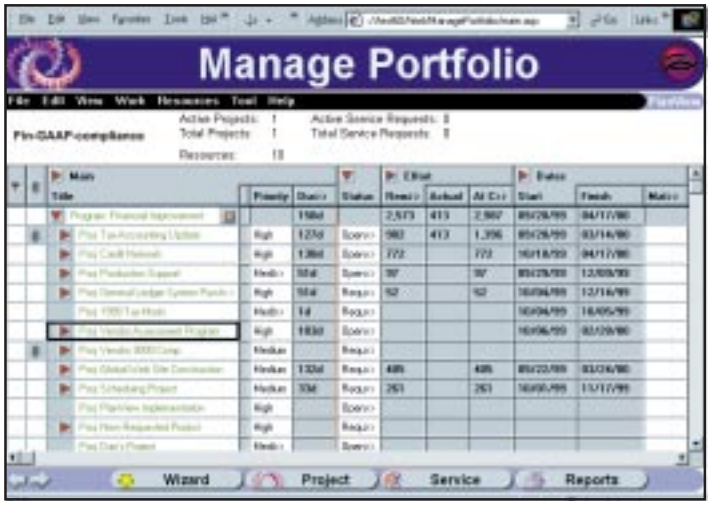
Industry standard central repository to facilitate information sharing

Implementing an integrated, browser-based work management system as an Extranet or Intranet offers the distributed, asynchronous communication platform necessary for managers to oversee the work of their far-flung workforce. For instance, each manager or staff member can have their own personalized web portal that gives them access to the functionalities of the project management system. When they view the time reporting software tool, their work assignments for the week can be automatically displayed.

Critical information can be put into the Extranet or Intranet for accessing anytime from anywhere in the world. Web-based reporting tools for project management must be able to convert documents from many sources into a standard format that can be attached to work or resource entities in the central repository for review and editing. Even better is to save changes in a history file that documents how the final product was achieved. Figure 7 is an example of a web-based real-time information management tool showing project status of programs or portfolios.

There are several factors critical to the success of these new management techniques. First is the implementation of security. The World Wide Web is a combination of opportunities for productivity improvements and for the hackers of the world to cause damage. Encryption techniques, passwords and user identification are critical to the success of the business application of the web. Just as important is that the business process being enabled by the software be easy to learn, easy to remember and interesting to the user. When a process is being engaged by a remote user, maybe from home, it is important that they understand why they are being asked to do it and find the experience to be tolerable, even enjoyable. If not, there is no manager nearby to enforce the organization's needs.

Exhibit 7 - Project Status via a Web Browser



Managing Skills

New positions are being created in competitive professional organizations almost monthly. Project and resource managers face the challenge of creating skill profiles and detailed job descriptions for these new roles, and identifying in which tasks those skills are required. More critical is updating the "knowledge" or skills that individuals gain from a project assignment. Traditional human-resource-based skills-management techniques often update skills each six months or a year, but business moves at a much faster pace! In today's Internet business economy, skills can become critical—or outdated—in a matter of months. A system that allows self-administration of resources' skills, proficiencies, interests, etc. with managerial review, can help to keep the resource database "fresh."

Day-to-day management challenges also abound. A project manager must typically draw workers from the various resource pools of full-time or part-time employees, telecommuters, contractors, and sub-contractors, all with multiple skills, who may or may not have indoctrination into the organization's business practices. Resource managers are also being asked to manage fifty, a hundred or more resources— employees, contractors, part time workers, etc. Managers must be able to match people to the work and communicate objectives through a common business language, using tools like project charters and "To-Do" lists.

Developing a resource database on a central repository that can be accessed by all project managers, resource managers, and functional managers becomes a critical foundation for multi-project project management across the enterprise. Included in this resource database should be information on the skills and proficiencies of each person, as well as other criteria such as location, functional group alliances, and, most importantly, availability. PlanView's resource search engine is then be able to access this repository, and the resource availability engine is then able to find the best fit to assign project tasks to the best person(s) for the job, as shown in Exhibit 8. Searching through the resource database takes no more than a few seconds, and the results are real-time, returning a ranked list of resources that can be allocated from within that FeatureSet.

An Organizational View

Running a critical path schedule is an important early step. PlanView's collaborative CPM engine uses the familiar definitions of Critical Path found in the PMBOK® framework, such as early dates, late dates, float, lag, etc. A CPM schedule is still immature unless resources are associated with the project schedules, and until availability has been confirmed. PlanView makes project schedules realistic.

Unlike other project management products, PlanView allows organizations to plan and manage multiple projects based on the availability of staff members, equipment, materials, capital, and other critical resources. PlanView makes it possible for managers to integrate planning for both projects and "non-projects," such as vacation time, staff training, equipment maintenance time and other important constraints, providing a full accounting of all the resources necessary to plan, implement, and complete a business project—on time and on budget. With critical resources— staff members, equipment, materials, and capital— as its focus, PlanView supplies the information the managers of an organization need for both tactical and strategic decision making and resource management. Staff members are at the top of the resource list. Managers can evaluate proposed work plans based on the availability and capabilities of their work force.

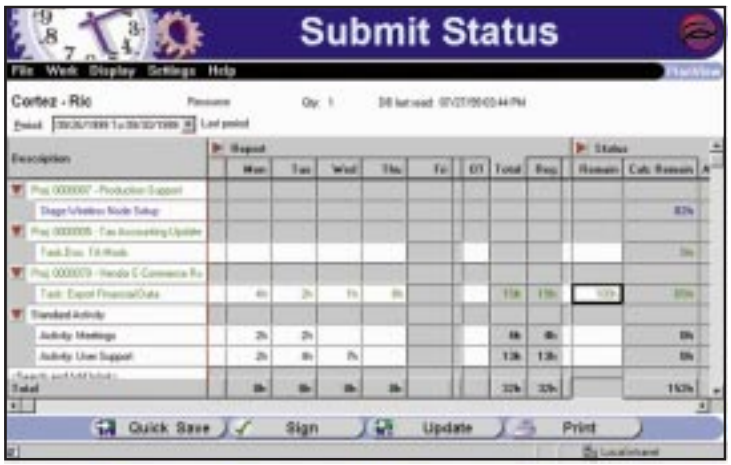
PlanView helps managers make better decisions by helping them balance workload assignments and forecast which skills are needed for new projects. Varying levels of executive decision are supported. For example, managers can assign work by project or by task at the departmental, team, or skill levels without identifying specific individuals. Then the resource managers responsible for the teams or for people with a certain skill set assign the work to specific individuals within their group. Resource managers can coordinate staff efforts and project managers can oversee projects. This eliminates confusion and ensures that authority and responsibilities are retained even as project planning is done at an enterprise level. With PlanView, resource managers are also free to plan, manage, and forecast project resource requirements into the future and build work schedules for major projects, projects, and service requests.

Short-term demands on staff and project priorities are clearly displayed and can be updated instantly to reflect new project assignments, sick leave,

Exhibit 8 - Searching for Skills

customer-service calls, or other scheduling changes. Employee information is fed back into the system to provide regular, timely status reports to functional managers and others. This also allows managers to more accurately plan future activities, because they can see how much time and effort was required for similar projects or tasks in the past. The amount of resource time spent in servicing and maintaining a product can be tracked to provide product profitability reports.

Exhibit 9- Browser-Based Timesheet



Staff-Driven Progress and Chargeback

Staff members are the best source of information on what has been done, what remains to be completed, and why. Providing a way for workers to report their time and expense accounting details, work progress information, and the changes and issues affecting them can empower the staff as it enhances the data in the central repository for executive reporting. Important for publicly traded companies, such a system can ensure compliance with SOP 98-1, GAAP requirements for accounting for the cost of in-house development. Encouraging staff to provide their own estimates of hours remaining can capture front-line information of great strategic value into the central repository for executives. Short-term demands on staff and project priorities are clearly displayed and updated in real-time to reflect new assignments.

PlanView's simple, accurate time accounting provides a framework for progressing projects and service requests, as well as for charging work and expenses to customers, explaining changes and measuring performance. The feedback is through a browser-based, time and expense reporting system as shown in Exhibit 9. Staff information provides regular, timely status reports to functional managers and others. There is an option for managerial approval before the data is integrated with the work management system, with options for managers to update effort themselves. Expenses do not have to be turned in concurrently with time reported, and have their own approval cycle. The system generates Alerts to notify when timesheets are late, or are ready to approve.

Integrating Business Productivity Tools

PlanView Software can consolidate information from a variety of sources. Most organizations with a need for multi-project management already have significant investments in desktop process and project management systems. Microsoft Project, Project 98, and Project 2000 are the de facto standards of desktop project management. PlanView offers an easy, one-step, bi-directional connection with Microsoft Project 98+, so organizations can leverage that investment in software and training, but still use PlanView's rich enterprise features like integrated time & expense accounting and skills searching.

Process management is defining and estimating a project before it is scheduled and resources are allocated. Some process management tools build the work breakdown structure and estimate duration. Others extend to assigning roles or named individuals. PlanView interfaces with PriceWaterhouseCooper's Summit-D with a closely coupled bi-directional link, and with CA's Process Continuum in an industry-standard interface. PlanView also integrates with leading ERP, project accounting software, and with HelpDesk software vendors, and others.

PlanView's Technology

PlanView Software Version 6.0 released in 1999 is 100% Web Software that has evolved from PlanView's ten-year history of enterprise-level project and resource management. PlanView is implemented as an Intranet or Extranet application, has appropriate security for either, and runs on both Internet Explorer and Netscape. Web servers link the browser client to enterprise services on application servers, and then to the central repository. The central repository is stored in an SQL database from Oracle, Microsoft SQLServer or Sybase, and contains all the work and resource data.

Managers, staff (contributors), customers, and others in the extended organization sign onto PlanView through a dynamically built web portal called HomeView™. Their personalized HomeView gives them access to software FeatureSets™ appropriate to their role, and access to the information in the central repository appropriate for their rights. The portal creates alerts such as work out of tolerance, staff not reporting time, work that needs to be closed and more. It is also an access to the users' favorite web links for discussion groups, project or department web sites, as well as executables for key software like a methodology content provider, etc.

The enterprise services are server-centric business applications to enhance collaboration and decision-making using the web. They calculate critical path, perform resource searches, balance resource schedules, progress the schedules based on billing and status information reported to the central repository, and more. Gateways manage collaboration and link roles to the repository.

Visit our website at www.planview.com for more information or to order a free CD demo and literature packet. See us for other whitepapers on topics of interest!