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# **Leveraging Microsoft Project In a Multi-project Environment**

***A guide for existing Microsoft® Project based organizations***

## **RECOGNIZING THE NEED FOR PROJECT-DRIVEN MANAGEMENT**

As pressures to compete more effectively in a global marketplace heighten, organizations are striving to re-define business practices to increase quality, productivity, and customer satisfaction. This has spurred a revolution of self-assessment in the areas of project and process performance. Progressive businesses have realized in order to achieve greater business success, they need to improve both their strategic as well as tactical project planning and management capabilities. As a result, leading businesses are embracing "project-driven" management - a philosophy based on budgeting, planning and gauging business success through the performance of their incremental projects.

Essential to "project-driven" management is the effective coordination and scheduling of multiple projects and resources across an entire organization. According to Dr. Rodney Turner, Editor of the International Journal of Project Management, and author of Project Based Management - Improving the Processes for Achieving Strategic Objectives, "the majority of project managers find that what determines the success of their projects is not the sequencing of a critical series of activities, but the prioritizing and sharing of resources across a portfolio of multi-projects. This prioritizing is made more difficult if the projects are of different sizes, urgencies, and skill mixes."

For many organizations, Microsoft® Project 98 introduced a new level of multi-project scheduling capabilities unavailable in previous Microsoft Project releases. However, even with these advances in multi-

project capabilities, Microsoft Project is limited as a strategic tool for resource planning and scheduling, or for strategic planning or reporting across multiple Project users. For example, Microsoft Project 98 is unable to plan and schedule critical paths across interdependent projects not scheduled on the same machine, nor is it able to organize projects into portfolios across an organization, or access centrally maintained resource pools or project templates. This limits its effectiveness in matrix-based organizations or fluid planning environments where shared resources and project prioritization is essential for proper alignment of projects to business goals.

For these reasons, businesses are recognizing the decentralization that Microsoft Project creates—a condition that restricts "project-driven" management at an enterprise level. However, these same organizations recognize the importance of leveraging their existing investments in Microsoft Project.

This has created a demand for technology solutions that can extend Microsoft Project beyond the desktop, and offer enhanced scalability, security, and resource management, without sacrificing the ease of use project managers expect on the desktop. The benefits of such a centralized system would include:

- Shared resource pools
- Critical paths schedules across separately managed, yet interdependent, projects
- Repeatable project practices and processes
- Standardized activity codes, project templates and breakdown structures
- Centralized budgeting and cost management

- Centrally managed resource calendars and cost rates
- Automatic resource assignment and tracking via timesheets
- Automatic schedule updates from actuals
- Executive "dashboard-style" analysis and reporting
- Automatic alerts of project events or trends
- Integration with enterprise financial systems and Enterprise Resource Planning (ERP) applications
- Established project priorities and the impact of change
- Logically organized and managed project portfolios

Harvey Levine, project management industry analyst with The Project Knowledge Group, commented, "The business world is moving increasingly toward a projects orientation of operation to measure the true costs and profitability of any business endeavor. As this paradigm takes root even in industries not traditionally identified as project-driven, the need for a complete activity management solution, integrated to a company's core financial systems has become more critical."

### HOW PROJECT-DRIVEN ARE YOU?

Project-driven organizations are characterized by: 1) their levels of standardization and discipline across project and process management practices; 2) their use of a common and consistent enterprise data model for projects; and 3) their use of centralized resource pools for assigning and tracking resource availability and activity.

To see how your business ranks in terms of its project-driven capabilities, answer the 12 questions below.

	YES	NO
Are your project managers using centralized resource pools?		
Are your project managers using centralized activity codes?		
Are your project managers using standardized templates?		
Are your project managers using standardized work breakdown structures?		
Are your project managers using standardized organizational breakdown structures?		
Are your project managers able to create critical path schedules across multiple projects?		
Are your project managers able to create activity or resource dependencies across multiple projects?		
Are your executives able to view real-time project and resource status without using a project management tool?		
Are your executives able to view real-time project budgets and costs?		
Are your project staff able to receive timesheets with assigned work?		
Are your project staff able to submit timesheets electronically showing work progress?		
Do your projects automatically notify you of milestone completions or project delays?		
<b>TOTAL:</b>		

If you answered "No" to four or more of these questions, then your business can be considered at the low-end of the project-driven maturity scale. If you answered "Yes" to ten or more of these questions, then your organization can be considered at the high-end of the project-driven maturity scale.

## HOW CAN MY BUSINESS BECOME MORE PROJECT-DRIVEN?

For organizations where Microsoft Project is the dominant project scheduling application, becoming more project-driven requires converting a planning environment from being "decentralized" to "centralized". In other words, establishing a method for capturing, storing and managing project and resource information centrally, while enforcing standards for establishing and reporting on project performance.

For existing Microsoft Project based organizations, the alternatives for creating a centralized project-driven environment can be achieved in a number of ways. The two most popular and recognized methods are:

- I. Consolidation (data "sweeping")
- II. Centralization

Determining which alternative best suits your needs begins with a clear understanding of each method.

### I. Consolidation

Within this area, two options are available. The first is through Microsoft's web site, where you can find a custom aftermarket routine written on top of Microsoft Access. This consolidation routine will simply copy multiple projects into a consolidated Microsoft project plan. Although, this routine does not integrate the projects, allow you to set dependencies, or create multi-project critical paths, it is faster than recreating multiple projects on a single machine; and for that reason, is considered an option.

Alternatively, applications called "consolidators" roll-up Microsoft Project data from multiple project managers for analysis and reporting. This includes products

from Business Engine and Innate. Through a process often called "sweeping", these tools—at set time intervals (usually daily)—will "sweep" projects into their central database by capturing snapshots of current project data. This data is passed through a flat file one-way transfer to the consolidator's SQL-based repository (usually through an MPX data transfer).

For companies looking for a fast, quantifiable method of extending Microsoft Project, project consolidators offer some distinct advantages. Most notably, consolidators offer the ability to quickly aggregate data from multiple project managers to perform analysis and reporting. And consolidation requires no user intervention—which is why this is a historically popular avenue for managers of small workgroups of Microsoft Project users. Used effectively, consolidators can help perform project benchmarking, compare performance, and potentially predict downstream conflicts in resources or deadlines.

Consolidators generally do not, however, offer any advantages to Microsoft Project users. There is no integrated resource tracking (timesheets) or two-way data passing between the consolidator and Microsoft Project. Nor is there a central standardized source for project templates, codes or resource lists. Which makes it nearly impossible to identify resource availability using a shared list.

Opponents to this method contend that consolidators have several limitations:

1. Consolidated data can often have different code structures for resources, activities and costs, making it difficult to generate consistent management reports, or

measure performance (using methods such as earned value). Although this can be addressed through training, it is difficult to enforce.

2. Consolidators make it difficult to integrate "real-time" project data into corporate systems (like ERP systems), since the data is only a snapshot of the actual projects. Hence, data can be passed to corporate systems, but cannot be fed back into the projects.

3. Consolidators lack the ability to post resource activity (via timesheet tools) to update project schedules and re-estimate times to complete. For example, data can be passed to timesheets, but is not passed back to Microsoft Project for schedule updates and reporting.

4. Since consolidators simply "sweep" project data, they cannot offer a backward pass, which limits management's opportunity to use it as a top-down portfolio planning tool (strategic). Projects can be analyzed offline in the consolidator, and potentially organized into portfolios, but the projects cannot be created or approved in the consolidator and passed down to the individual Microsoft Project users, as is required for "top-down" planning.

5. Consolidators do not offer centralized or standardized resource pools, security, resource calendars, templates, breakdown structures or pick lists for individual project managers to select from, which limits its benefits to end users.

6. Consolidators generally use a .MPX (Microsoft Project 95 data format) file transfer method that limits the quality of data created in Project 98 that can be transferred to the system by limiting data to field parameters defined by Project 95. This includes losing many of the multi-project and resourcing features added to

Project 98.

As a result, opponents to the consolidation method contend that neither project managers nor executives gain the true benefits of a project-driven environment, since both organizational levels (strategic and tactical) cannot share in the advantages of the system. However, if simply reporting on consolidated projects is the main objective, this method can be an acceptable and evolutionary step forward for some Microsoft Project based organizations.

## **II. Centralization**

The second option for centralizing Microsoft Project 98 within an organization is through the use of a bi-directional integration between Microsoft Project and a centralized enterprise project database (SQL-based backend). An example of this would be Artemis MSP Gateway.

With the centralization method, all data is stored and managed centrally, offering advantages in the areas of consistency, security, repeatability, integration and measurement. For instance, this method allows Microsoft Project users to save/retrieve directly to/from a centralized SQL database, such as Oracle or SQL Server (bi-directional), with minimal perceived change to their work habits. This method also provides a set of standardized resource pools, activity codes, breakdown structures and project templates for users to choose from, which improves consistency and repeatability. In turn, this significantly improves project standardization, while providing centralized security, backup and reporting. Additionally, this method provides automatic integration with resource timesheets (to automatically

update projects based on actuals), or other corporate databases, such as Enterprise Resource Planning (ERP) applications or financial systems.

With the centralization method, executives and IS departments benefit by:

- Greater project and data consistency and repeatability
- Leveraging investments in existing Microsoft Project schedules, templates and training
- Centralizing data security, backups, resource profiles and calendars, cost information, and system administration
- Integrating timesheets to automatically send and receive resource/activity updates
- Integrating with other corporate systems
- Providing automatic alerts of project events or trends

Existing Microsoft Project users benefit by:

- Following standards easily
- Having a quick start (framework and template management) to projects
- Accessing integrated information
- Utilizing a familiar tool, with minimal perceived change

This integrated environment adds a higher degree of data integrity, multi-project reporting capability, and openness to the project data. By allowing the centralized enterprise project database tool to use its integrated timesheet or resource tracking applications, project managers can identify resource availability through shared resource pools, assign resources to activities, and automatically track project progress via their Microsoft

Project schedule. Bi-directional interfaces to Microsoft Project also add discipline and consistency to projects by providing Microsoft Project users with access to standardized breakdown structures, activity codes, project templates, and pick lists. In turn, this improves the consistency of reporting, and provides more reliable feedback to executives for "top-down" portfolio project and resource planning.

Opponents to this method contend that centralization has a few drawbacks:

1. Centralization forces change on Microsoft Project users (new keystrokes and procedures). This can range from new "button bars", to new procedures in file loads and file retrieves.

2. Centralization requires additional administrative burdens to configure and manage the central database. As with the introduction of any centralized database, additional administrative overhead will be required, usually for database management (i.e. Oracle, SQL Server) and backup. Additionally, resource will be required to initially set up the codes and structures used by the project managers. On an on-going basis, administrative involvement can be limited to updates, posting of data, and customization of reports.

3. Centralization often results in changes to a business' culture and project processes. "Project-driven" companies consider their cultural model a critical component to maintaining competitiveness in continually changing markets, particularly those driven by technology. For success with the centralization method, it is critical to have an organization and management team committed to training, formalizing and adhering to

their guidelines for creating, managing and measuring project success. An additional measure would be the introduction of a Project Office, tasked with creating standards for project practices and methods. Either way, a centralization approach often includes assessing and re-defining project practices or processes, and enforcing these guidelines through the natural course of project creation and measurement.

For Microsoft Project based organizations wanting to create a project-driven environment, the centralization method offers many advantages, including the addition of enterprise scalability, consistency and visibility to project planning and reporting efforts, while leveraging existing investments in software and personnel.

## **SUMMARY**

The fundamental process of planning and scheduling activities and resources is instrumental to every successful project-driven organization. However, as businesses have become more multi-project in nature, integrating project teams and sharing resources has become a fundamental requirement of the planning process and tool. Thus, the need to leverage Microsoft Project across the enterprise has reached a critical mass. In recognizing this, Microsoft Project 98 based organizations need to consider the available "consolidation" and "centralization" methods available to achieve the scalability, performance and flexibility required to align projects with business goals.

## **ARTEMIS MANAGEMENT SYSTEMS**

Artemis Management Systems is the world's largest independent project management software and consult-

ing company. In addition to the Artemis Views suite of enterprise project planning, resource management and cost control applications, Artemis offers a sophisticated bi-directional integration with Microsoft Project 98 through Artemis MSP Gateway. Through MSP Gateway, organizations can leverage existing investments in Microsoft Project 98, while using Artemis' enterprise database engine to add true "centralization" to their planning, budgeting, resource management and reporting capabilities.

In addition to applications software, Artemis offers a structured set of planning and implementation consulting services, called pm2. Using pm2, Artemis Consulting delivers a formalized set of workshops, training sessions and processes to baseline and build a plan for successfully implementing project management into an organization's existing culture.

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