



Microsoft Enterprise Project Management

In one form or another, projects are the basis of most individual and group-oriented work across a broad spectrum of industries. Thus, the practice of applying information technology tools – such as Microsoft Office Enterprise Project Management (EPM) Solution – to help plan, prioritize, execute and deliver projects more effectively is already very familiar territory for many workers and teams.

However, putting these EPM solution capabilities to work more broadly – across interrelated business processes, inter-departmental initiatives and other activities – can unlock far greater benefits that advance a company's core business objectives. Many organizations are achieving marked success with this approach to business-focused EPM in areas such as IT governance, product development life-cycle management and quality management.

Each of these disciplines is characterized by a need to sharply align and optimize resources, establish best practices, streamline tasks, deliver against tight deadlines and collaborate effectively – requirements that the integrated Microsoft Office EPM Solution platform is designed from the ground up to fulfill.

Quality Management

The leading methodologies for quality management – Six Sigma, ISO 9000, Balanced Scorecard, Total Quality Management (TQM), LEAN and Malcolm Baldrige – each boil down to establishing a systematic, data-driven approach to improving

operations. Traditionally associated with manufacturing and IT operations, the quality management philosophy is also gaining appeal among other industries and departments seeking to achieve greater cost control, visibility and alignment with strategic objectives. Yet many organizations find their quality management efforts hampered by employees' resistance to change, lack of adequate tools, poor internal communication and other challenges.

Incorporating an EPM technology system to support an organization's quality management methodology can greatly speed and simplify tasks such as data analysis, visualization, reporting and cost assessment. With familiar Microsoft products as the foundation for carrying out these tasks, employee adoption is streamlined as people find they can easily adapt their current skills and expertise to the new quality management environment. Microsoft Office EPM Solution and related products, such as Microsoft Windows SharePoint Services, also facilitate better communication and collaboration among team members involved in various quality management workflow processes.

Black & Veatch Corp., a leading global engineering, consulting and construction company, is among the companies that have deployed Microsoft Office EPM Solution to help achieve continuous improvement in quality management. For a more in-depth look at Microsoft's approach to supporting such initiatives, see the white paper titled *Adopting Quality Management for Business Success*.

Product Development Life Cycle

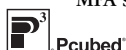
All companies involved in moving products from concept through delivery to customers can attest that time-to-market is a key differentiator. Success depends on trimming crucial time from all stages of the product development life cycle while maintaining high quality. It requires precise synchronization of people, information, materials and resources across organizations that are often extremely disparate and complex.

Many businesses are discovering that EPM technology and related tools from Microsoft can support the product development process in a variety of ways. The use of familiar project management tools for tasks such as tracking, timing, staffing and product mapping help managers of diverse teams ensure that overall business objectives are shared across the enterprise and executed consistently. EPM tools for communication and collaboration, such as shared online

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**Michael Angiulo, General Manager
Microsoft® Office Project, Microsoft Corporation**

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From the Editor

What an exciting time it has been over the past few months! MPA launched a new logo, name and brand, as well as added new member benefits that are having a direct, positive impact on our membership. The final phase of the launch has recently been executed and includes an expanded Chapter Officers' portal and chapter management section, much anticipated interactive discussion groups on the mympa.org web site, and a Blog that is being done by Microsoft MVP William Raymond.



Angie Wean

Each of you, our members, has shown great support and enthusiasm with the transition and new additions. Even non-members are embracing the changes as we have seen a great interest in the free monthly MPA Ezine for Microsoft® Office Project. While this is a trimmed down version of the members-only edition of the MPA Ezine that you receive, it is serving as a great tool to expose non-members to the benefits of membership in MPA. Our goal is to increase our membership to build our community, lend to more robust Chapter meetings and even more content on the web site that is available to members. If you know somebody that might be interested, they can sign up on the home page at the MPA site.

An enhanced, worldwide professional association has been our mantra and we will continue to strive towards this goal. I want to personally thank you for embracing the enhancements that have been made and for making MPA even better. In the next newsletter you will be greeted by a new name and face in the Editor's Column. I have transitioned to a new opportunity and will no longer have the honor of penning this article. However, I will still be an MPA member and look forward to seeing you all at Chapter meetings, events and in the new discussion forums on the web site! All the best...

Angie Wean, Editor

Newsletter Authors Wanted!

Do you have a Microsoft Project case study, tip or trick to share with your fellow MPA members? We are always looking for informative articles that showcase your insight and expertise, and remember you can earn 15 PDUs for a published article. If you have an idea or an article that you would like to submit, please email newsletter@mympa.org.

Microsoft Enterprise Project Management

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workspaces, enable product development teams to keep information following rapidly while minimizing inconsistencies and duplicated efforts. Capabilities that automate repetitive tasks, present product-related content in standard formats and facilitate access to information stored in back-end systems help move products rapidly through different stages of the life cycle. Easy-to-understand dashboards in the Microsoft Office EPM Solution technology equip decision-makers to effectively perform strategic comparisons, set overall priorities and provide consistent direction to project teams.

Among the organizations that have succeeded with this type of approach is **Samsung**, which increased research-related project management efficiency by nearly 50 percent in the company's Device Solution Network Division as a result of deploying the Microsoft Office EPM Solution. Learn more about the ways this technology can benefit companies across a variety of industries in the Microsoft white paper titled *Enterprise Project Management – Product Development Lifecycle*.

IT Governance

Chief executives and IT managers are increasingly focused on aligning technology investments with overall business objectives. Many organizations have created a Program Management Office (PMO) to address this need for improved IT governance. PMOs are being tasked with selecting IT initiatives based on strategic criteria, prioritizing and allocating resources –

human and otherwise – to each initiative, managing the delivery of multiple projects and programs for optimal business value, and communicating with executive-level sponsors and business owners about all of the above. A PMO's success largely hinges on overcoming project teams' resistance to outside direction, obtaining ready access to consistent information for “apples-to-apples” comparisons, and having robust data analysis and reporting tools.

Microsoft Office EPM Solution delivers extensive capabilities to improve tactical execution, process agility and communication for PMOs. Features such as dashboards, scorecards, collaboration resources and task automation tools combine to reduce complexity as well as amplify the insights that a PMO requires to bring IT investments in line with strategic priorities.

Seeking a way to standardize and centralize project management among its businesses in the Latin American region, leading financial services company ING recently deployed the Microsoft Office EPM Solution. The technology has proved to be a cost-effective and scalable solution for ING to achieve more efficient planning, control and execution of corporate projects from start to finish. A complete overview of how Microsoft's EPM Solution technology can help all types of organizations address similar challenges can be found in the white paper titled *Enterprise Project Management – IT Governance and the Program Management Office*.

For more information about the Microsoft Office Enterprise Project Management Solution platform and related applications, visit <http://www.microsoft.com/office/project/prodinfo/epm/default.msp>.



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6-Step Proven Path for Schedule Development

Rudi van den Berg, PMP, Pcubed, Inc. (Member, Queretaro, Mexico)

How do you develop your schedules? Do you start with a schedule template in Microsoft Project, or do you work with the project team first to define all deliverables and tasks? Either way or both can be good. Templates are a great way to leverage previous lessons learned such that you don't overlook anything. This works well for projects that are alike. However, when you start a project that is completely new to the organization, it is useful to develop the schedule with a collaborative approach:

1. All team members will have mentally “lived” the project from start to finish, finding issues early on.
2. Team members will have created their own work plans, taking ownership of their assignments.
3. The project roadmap will be understood by all team members, setting the project up for success.

The 6-Step Proven Path for Schedule Development is a collaborative approach that can help you accomplish this. Let's assume we have received a charter from our sponsor, for one of those once-in-a-life-time projects. And let's assume the charter includes a series of high-level deliverables (sometimes documented in a scope statement) and target dates. Figure 1 illustrates the next steps.



Figure 1 – 6-Step Proven Path for Schedule Development

Developing a schedule based on the charter is a critical part of planning. It is a process of decomposition and composition. The decomposition starts with the end results of a project and organizing the project in deliverables, generic resources, and associated tasks. The succeeding composition starts with estimating work effort, duration, constraints, and relationships, with the schedule being the end result.

These steps may be familiar to you, but how do you go about them in the office, and how do you transform the results of a collaborative approach into a schedule in Microsoft Project? Let's have a look at each of the steps.

Step 1 Develop Work Breakdown Structure

The Work Breakdown Structure (WBS) is a project management technique to decompose a project with the purpose to identify all deliverables that are required to complete the project. A project can be broken down in different ways and hence have more than one WBS, for example by phase, function, or discipline. Figure 2 shows a sample WBS.

Pcubed (www.pcubed.com) specializes in EPM, server-based solutions, software implementation and technical support. Drawing on vast customer experience and expertise, *Pcubed Perspective* provides a blend of strategic and technical content, with a varied look at how Microsoft Project is being utilized within the marketplace.

The project manager organizes an event to start schedule development. Depending on the size of the project, the event's sessions may last one day, one week, or even months. For ease of describing the proven path, let's assume a small project. The steps are the same for a large project, but there may be more levels or iterations involved.

1. Invite all project team members and host the meeting in one meeting room.
2. Designate a facilitator. Often times this is the project manager.
3. Review the project goal and high-level deliverables with the team as per the charter.
4. Propose various ways of breaking down the project to define deliverables.
5. Draw organization structures for each WBS on flipchart sheets.

One sheet per WBS may be easy for comparison purposes. Eventually, all deliverables should appear on each WBS, so developing more than one WBS will help you catch any deliverables that you otherwise might have overlooked. Ask all project team members to provide input. Any feedback is good feedback. Feedback that does not belong on a WBS should be written up separately, which can be called the “parking lot”. This information may be added to a risk document or issues log at a later stage.

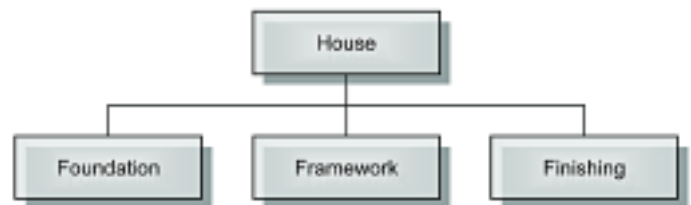


Figure 2 – Work Breakdown Structure

Step 2 Develop Organization Breakdown Structure

The Organization Breakdown Structure (OBS) is an organization chart of the project team. This may show organizational units or individuals. If two companies are working on one project, make sure to identify a mutual point of contact for each deliverable. Figure 3 shows a sample OBS.

1. Draw the organization structure of the project team.
2. Include all team members.
3. Identify any positions that still need to be filled.

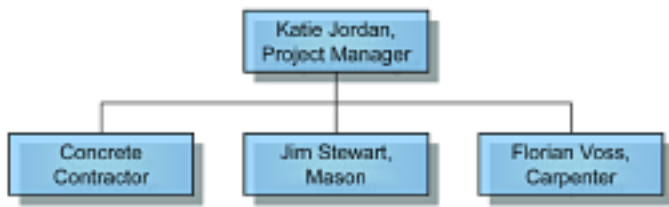


Figure 3 – Organization Breakdown Structure

Step 3 Develop Responsibility Assignment Matrix

The Responsibility Assignment Matrix (RAM) is a work matrix that maps the WBS with the OBS. Where the columns and rows intersect, areas of responsibility can be highlighted. The RAM is a handy communication tool, but it also forms the basis for task assignments after the work has been defined. Figure 4 shows the RAM based on the WBS and OBS.

1. Choose one preferred WBS, which can be considered the primary WBS for planning and communication purposes.
2. Re-draw this WBS and the OBS on a new sheet, such that all deliverables and resources intersect.
3. Agree upon ownership for each of the deliverables.
4. Optionally you can indicate roles by using codes or acronyms: who needs to provide input, who needs to approve, etc.

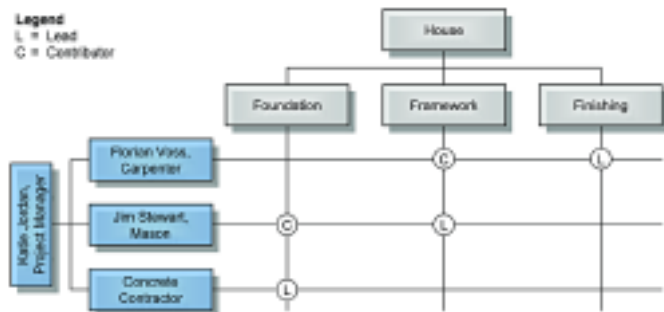


Figure 4 – Responsibility Assignment Matrix

Step 4 Define Tasks and Milestones

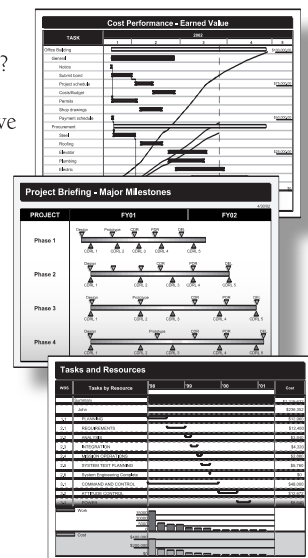
After deliverables and ownership are defined, the project team can define all required tasks and milestones associated with each deliverable. Ideally this is done by the team, but you could also have smaller group sessions per deliverable. Figure 5 shows sample task and milestone lists based on the RAM.

1. Hang a flipchart sheet for each deliverable on the wall.
2. Write all major milestones from the charter on the sheets with the appropriate deliverable.
3. Provide each team member with a marker and ask the members to write all tasks and milestones they can think of on the sheets.
4. Review all tasks and milestones for uniqueness with the whole team. This is a good time to start writing a WBS dictionary to capture the definition of all deliverables and tasks.
5. Assign all tasks to the project team members or generic roles.



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6-Step Proven Path for Schedule Development

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- Have the project team members estimate the work effort and duration of their tasks. Assume high-level estimates on behalf of generic roles. This information may be added to a risk document.

Foundation	Framework	Finishing
Clean site Contractor 8 hours, 1 day	Mix cement Jim Stewart 32 hours, 4 days	Build roof Florian Voss 32 hours, 4 days
Dig site Contractor 16 hours, 2 days	Lay bricks Jim Stewart 32 hours, 4 days	Place windows Florian Voss 24 hours, 3 days
Pour concrete Contractor 4 hours, 3 days	Plaster walls Jim Stewart 16 hours, 2 days	Insert cabinets Florian Voss 24 hours, 3 days
Foundation dry Milestone	Walls up Milestone	Woodwork done Milestone

Figure 5 – Task and Milestone Lists

Step 5 Develop Network Diagram

The network diagram is a precedence diagramming method which uses boxes to represent tasks and connects them with arrows that show the dependencies. Timing is added through the use of a Gantt chart, but it may help to include a high-level timeline with the network diagram. Figure 7 shows a network diagram based on the task and milestone lists.

- Write the milestone names on square post-it notes as per Figure 6. Include the project start and finish milestones.
- Secure a very large piece of paper on which you can create a graphical network diagram. Roles of paper that are 3 or 4 feet wide are preferred. Projects may need 20 feet in length or more to be planned well.
- Create a time-scale across the top of the paper, writing the project start date at the top left and the end date near the top right. In-between, mark appropriate time marks such as months or weeks.
- Arrange your milestones in a 45-degree angle across the very top of the paper, in an appropriate order, in the approximate time period you expect the milestone to be reached.

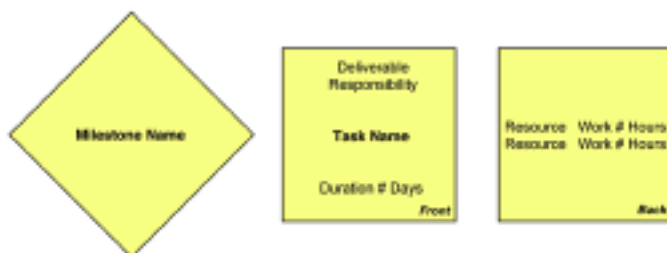


Figure 6 – Post-It Notes

- Write each task on a post-it note as per Figure 6.
- Place each of your task notes on the graphical network diagram in the approximate order that they will need to be performed in, aligning them under the timescales and milestones you have already arranged.
- Pencil in relationships between your tasks and milestones. Consider mandatory and optional relationships. Optional relationships connect tasks between the project start and finish milestones (not shown in figure).

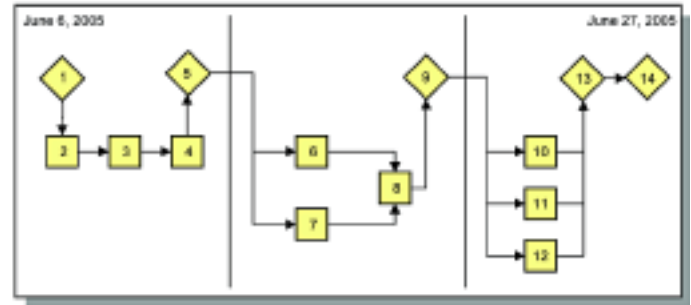


Figure 7 – Network Diagram

Step 6 Develop Gantt Chart

After the network diagram you can develop a bar chart like a Gantt chart. This is a frequently used method to show a detailed timing of the project. Even though Gantt charts officially do not show task relationships, it is very practical to do so. At this point you may also be interested in the critical path, float and other parameters. This can be done manually, but this is exactly what Microsoft Project can be used for. Figure 8 shows the Gantt chart in Microsoft Project based on the network diagram.

- Starting with the first post-it note, sequentially number each of the tasks and milestones on the graphical network diagram. Make sure all numbers are unique. See Figure 7.
- Enter the task and milestone names into Microsoft Project, aligning the task row numbers of the project plan with the numbers written on the post-it notes.
- Establish the relationships between the tasks and milestones by entering task predecessors and successors into Microsoft Project using the numbers you have written on the graphical network diagram.
- Assign the resources, and enter the durations and work estimates into your project plan, using the Resource Work form.
- Enter the deliverables names. You can create a custom text field or summary tasks in Microsoft Project for the primary WBS. For any other WBS you must use a text field, so you can group the tasks accordingly for reporting purposes.
- Have Microsoft Project calculate your critical path, float, and other information!



Figure 8 – Gantt Chart in Microsoft Project

In summary, the 6-Step Proven Path for Schedule Development combines traditional planning techniques with modern technology like Microsoft Project. It lets your team members actively participate in planning, while you can easily build your schedule based on the results!

Adding Task Outline Codes to the Portfolio Analyzer OLAP Cube

Brian Kenemer, Project MVP, Senior Trainer for Electronic Arts and QuantumPM Associate (Member, Puget Sound)

The Project Server Portfolio Analyzer allows administrators to create Pivot Table-style visual reports of resource and assignment data such as work, cost and availability. The dimensions by which you “pivot” this data are the Project, Resource and Assignment Enterprise Outline Codes that you define in the Enterprise Global template. These codes capture such things as resource skill, location, project type, organizational breakdown structure (OBS), etc. You can also define such outline code fields for tasks but they do not appear as dimensions in Portfolio Analyzer. However, there is a quick workaround that will allow you to see task level outline codes as dimensions. This article will go through these steps.

Overview

The Portfolio Analyzer does not recognize task outline codes as dimensions, period. But Project Server does something interesting with Resource Outline Codes that we can use to get our Task Codes into the Analyzer. Project Server copies the values of any Resource Enterprise Outline code into an Assignment Enterprise Outline Code field that it defines. So what we will do is trick it into creating an Assignment level code field for us and then we will use a macro to move the value in the Task field into the Assignment field. Then the Assignment field will be there as a dimension and it will contain the Task based information from the task to which it belongs.

Setting up the Fields

The first part to this process is setting up the fields in the right way. Let's use an example of Task Location. Several of your projects happen across geographic locations so you want to have a way of seeing exactly where your tasks are taking place. This will help you make sure you are assigning the right resources based on their locations. To do this you have an Enterprise Task Outline code that you call “Location”. To set this up open the Enterprise Global by logging into Project 2002 Professional as a user with Project Server administrator rights. Then click on Tools | Enterprise Options | Open Enterprise Global. Once in the Enterprise Global you can start adding code fields. To do this click Tools | Customize | Enterprise Fields. Click on the Outline Codes tab and you will see the dialog shown in Figure A.

Pick an unused code and click the Rename button and rename it to Task Location and click OK. Now click on the button marked “Define Code Mask”. This dialog allows you to define the ‘layout’ of the code field. For this example set up your dialog like the one shown in Figure B.

This configuration tells Project to expect values for this field on two levels, both levels can contain any number of characters.

Ask Brian covers topics appearing in the Microsoft Office Project Support Newsgroup, where people with questions about Microsoft Office Project can interact and seek solutions. Members can find this newsgroup and many more in the Members Only Section, www.mymppa.org/members.asp

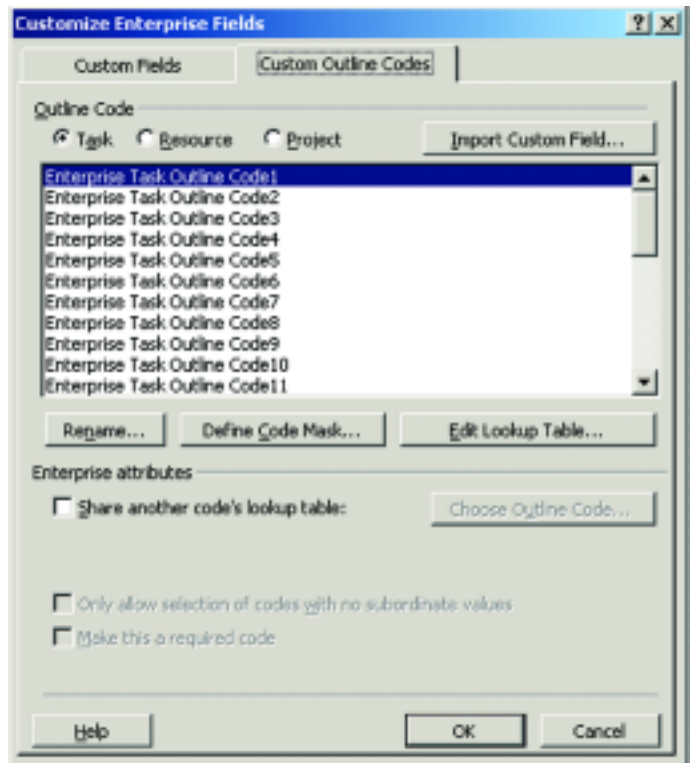


Figure A

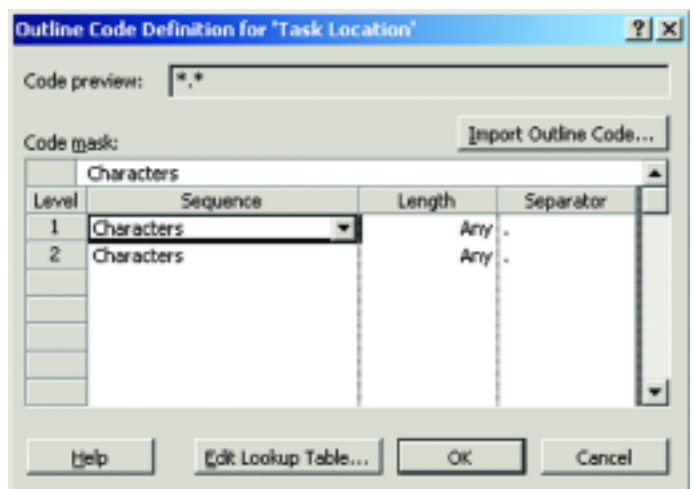


Figure B: The Code Mask Dialog

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From here click on the button marked “Edit Lookup Table.” This will allow us to define the values that users can pick from for populating the outline code field. Figure C shows you a sample outline structure for our example field for location.

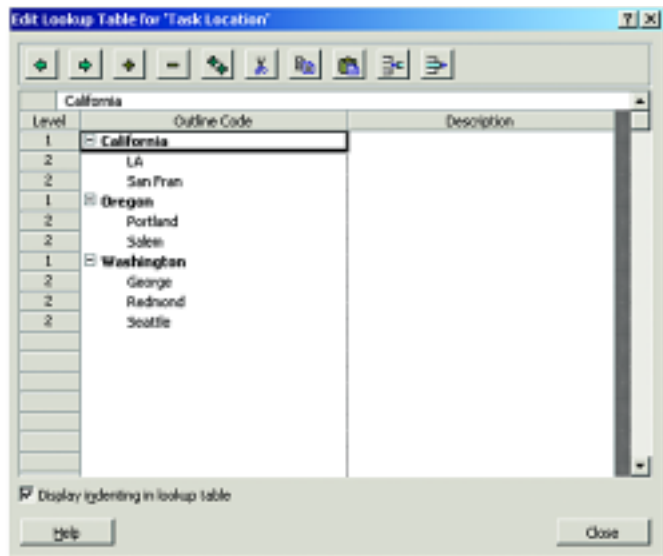


Figure C

The outline structure of this field will allow us to report on individual cities or on the higher level of the State. When you have entered the outline structure for your Location field click Close and then click OK on the Code Mask dialog. This will bring you back to the Customize Enterprise Fields dialog. If you want to make this field required you can click the “Make this a required code” check box.

Now we need to set up a corresponding Task Location field in the Resource outline codes. Click the Resource option at the top of the dialog to show you the Resource outline codes. Click on an unused code field and rename it to the same name as the Task field you just created, for our example this will be “Task Location”. (Make a note of which field it is (1-30), we will need it when we create our macro. In our example it is Enterprise Resource Outline Code 5.) Then check the “Share another code’s lookup table” check box and then click the Choose Outline Code button. Figure D shows the dialog for picking the outline code. In this case we pick Task for Field Type and Task Location for Field Name.

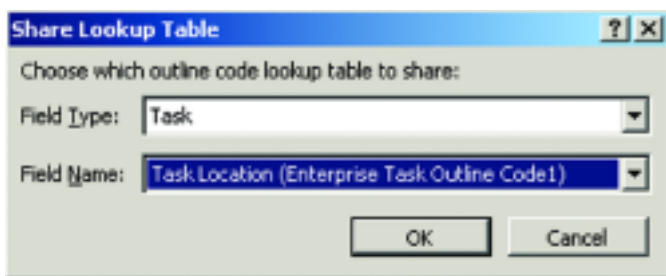


Figure D

Click OK when you are done and then OK on the Customize Enterprise Fields dialog.

We are finished setting up the fields. Now we need to write the macro that will place the values picked for a task in the Task Location field into the corresponding Assignment outline code field.

The Macro

The last part of this process is to insert a macro into the Enterprise Global that will copy the value in Task Location into the Task Location field for each of that Task’s assignments. Here is a macro that will do this (see Figure E).

While you still have the Enterprise Global open click Tools | Macros | Visual Basic Editor. Double click on the element in the tree control called “ThisProject (Checked Out Enterprise Global).” Then copy in the code in Listing 1. When you are done your screen should look something like Figure F.

Listing 1.

```

Sub Transfer_Task_Codes()
Dim tskT As Task
Dim asnA As Assignment

On Error GoTo ErrorHandler

If Application.Projects.Count > 0 Then
If ActiveProject.Tasks.Count > 0 Then
For Each tskT In ActiveProject.Tasks
If Not (tskT Is Nothing) Then
For Each asnA In tskT.Assignments
asnA.EnterpriseResourceOutlineCode1 = _
tskT.EnterpriseOutlineCode1
Next asnA
End If
Next tskT
End If
End If

Exit Sub
ErrorHandler:
MsgBox prompt:=Err.Description & Chr(13) & "In Task: " _
& tskT.ID & Chr(13) & "In Assignment: " _
& tskT.Assignments.Item(i).UniqueID, Buttons:=vbCritical, _
Title:"Code Transfer Error"

End Sub

Private Sub Project_BeforeClose(ByVal pj As Project)
Transfer_Task_Codes
End Sub

```

Figure E

Continued on page nine

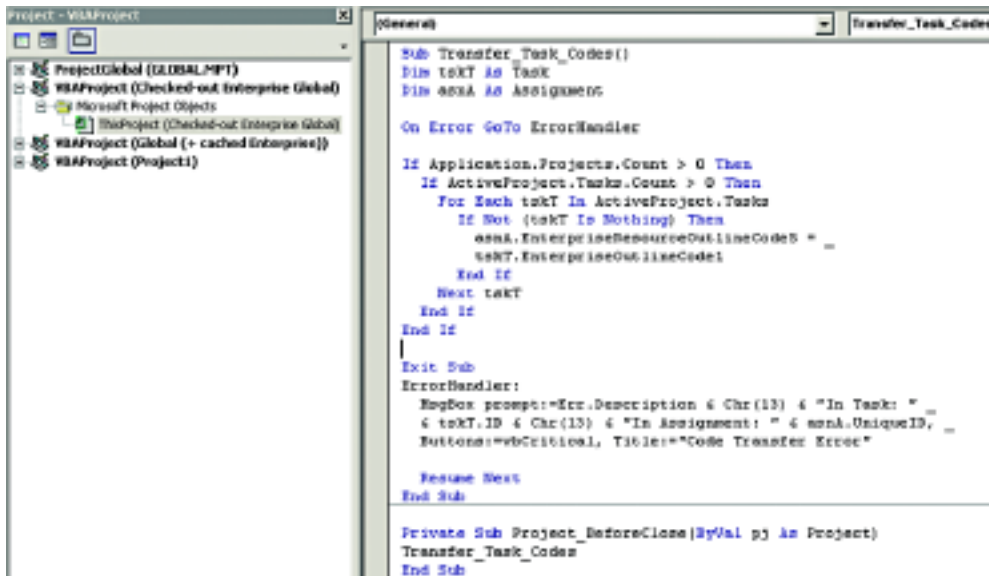


Figure F

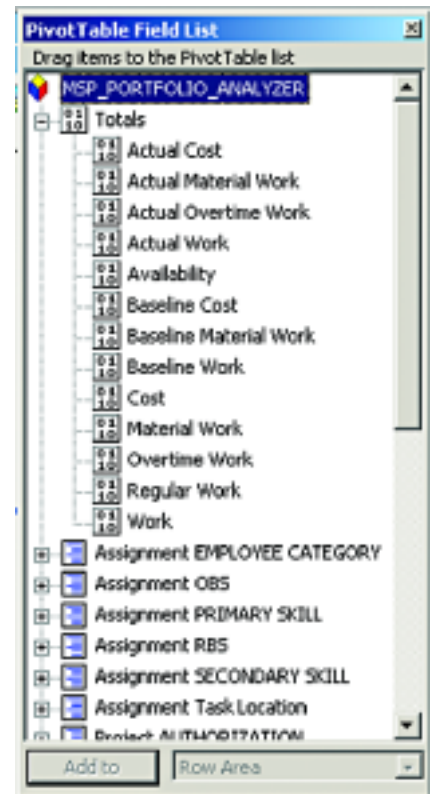
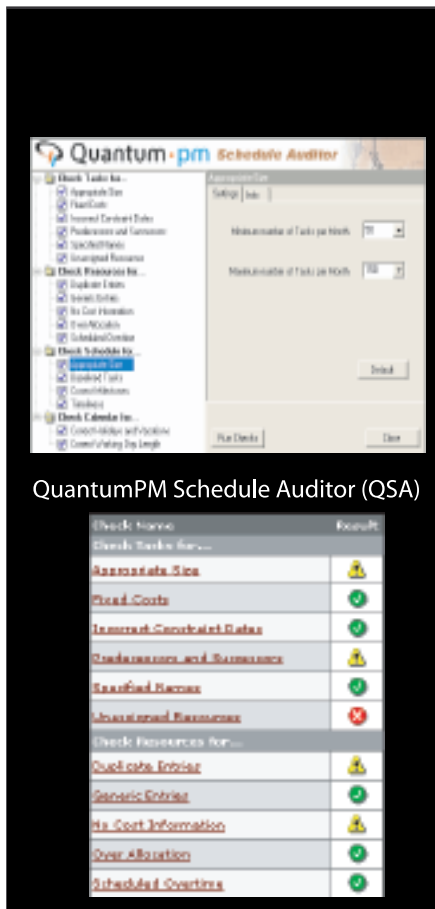


Figure G

Close the Visual Basic Editor and click Save to save the Enterprise Global. Now every time an enterprise user saves a project the values in the Task Location field will be copied into the corresponding Assignment field. Then the next time the Portfolio Analyzer OLAP cube is rebuilt you will see a dimension called "Assignment Task Location" as shown in Figure G.

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QuantumPM Schedule Auditor (QSA)



AIM - Look for the new QuantumPM authored book, "Microsoft Office Project Server 2003 Unleashed" coming in June 2005!

ACT - Many businesses rely on project schedules created in Microsoft Office Project to establish product delivery dates across organizations. Often, predicted delivery dates are incorrect, due to scheduling errors that are time consuming to find manually. **QuantumPM Schedule Auditor (QSA)** is an application add-in that uses a set of checks to automatically audit project schedules that have been developed in Microsoft Office Project. *Save time! Set standards!* www.quantumpm.com/qsa.aspx

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Dynamic Scheduling with Microsoft Office Project 2003

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Many people create schedules in MS Project. A schedule consists at least of a Work Breakdown Structure (WBS), detail tasks to accomplish the WBS-deliverables, estimates, dependencies between the tasks and perhaps some hard dates. Schedules are commonly presented as Gantt Charts with taskbars in a timescale. The way the schedule is entered into the software determines if the schedule is rigid or dynamic. If you enter the dates for the tasks, it creates hard dates and you will end up with a rigid schedule.

The Principle of Dynamic Schedules

A *dynamic schedule* is not just a fashionable term. A schedule is only dynamic if the schedule can easily be kept up-to-date when you are busy during project execution. Think of a schedule as a dynamic model that you continue to work with until the project is over. Ideally, when **one** thing changes in your real life project, you would have to change only **one** field in your MS Project model to have *valid* forecasts again. This is the *principle of dynamic schedules*. You will only come close to this ideal if your schedule meets the following *requirements*:

- You find and enter all the *relationships* between the tasks that may impact your forecasts. These relationships are called “*dependencies*.”

- You minimize the number of *hard dates* in your schedule. Hard dates or *fixed dates* are called *schedule constraints* in MS Project.

Finding the dependencies between the tasks and entering them into your schedule takes a considerable effort. A legitimate question therefore is: *Why is it important to realize this principle of dynamic scheduling as much as you can in your schedules?*

Many changes occur in every project. Every time a change happens, you need to change your schedule to reflect the new reality. If you have a static model, you need to review all future tasks every time and make many changes to their dates. If you have a dynamic model, you don't need to make many changes; ideally only one. If you did an excellent job on dependencies, you probably don't even need to review the future tasks and rely almost blindly on the dependencies to adjust their dates appropriately. Network logic tends to stay the same during the entire project. In other words, *do the logic once well, and your life will be swell.*

Expected Gains from Dynamic Schedules

Let's see if we can approximately quantify how much time you gain with applying the principle of dynamic scheduling and how much time you have to invest to make the model dynamic.

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Good reports are very important because it is the value perceived by the customer. People rely on good graphics. Reports and graphics are communication tools that drive the demand for better planning and scheduling.

It is one thing to expect the unexpected, but quite another thing to be able to act on it positively and decisively. Yet it is safe to assume that the best laid plans will run into snags and unforeseen circumstances.

Performance Measurement is an essential element to good project management practices and it is a key feature of Safran for the Microsoft Project platform.

Without measurement, planners and managers do not know how well or badly they are doing. This makes improvements or corrective actions difficult – if not impossible – to achieve.



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Imagine a schedule with 100 tasks. It will take approximately 8 hours of effort to discuss, identify and set all the dependencies and make the model dynamic.

How many changes occur? This is the hard question. We do know for sure that each task needs to be updated at least once, and about 30% of them twice. This already results in 130 changes to the schedule, if you enter them all individually.

Other changes that typically happen in projects are:

- Clients change their mind on requirements
- Deliverables are dropped; others are added
- Activities that were overlooked are inserted
- Activities that cannot be done are dropped
- Resources get sick or are reassigned
- Resources are interrupted with higher priorities

Let's be conservative and say that these things cause 50 more changes, to a total of 180 changes for a 100 task schedule. Entering 180 changes in a dynamic model would take you about 8 hours, since you only need to revise one (or two) fields for each change.

Entering 180 changes in a static model will require you to review the rest of the schedule every time. Therefore, you have to review and adjust on average 50 tasks in a static schedule with every change. If adjusting 50 tasks takes you about 2 hours for each change, the total time spent to keep the schedule alive will be $180 \times 2 = 360$ hours. Working with a static schedule becomes a fulltime job and does not allow project managers to help their team members any longer.

What you will see in practice therefore is that people who work with static schedules get smart and enter five changes at a time and only then review the rest of their schedule. In other words, they update their schedule only $180 / 5 = 36$ times instead of 180 times. Notice that the schedule is not up-to-date all the time any longer. Even in this case, they will spend at least $36 \times 2 = 72$ hours on their schedule. The difference in effort spent on a static schedule versus a dynamic schedule is at least: $72 - 16 = 56$ hours for a 100 task schedule, which is the gain you can expect from applying the *principle of dynamic scheduling*. This is time you will be spending with your family or friends instead of with MS Project.

The expected gains from applying the principle of dynamic scheduling are:

- 56 hours of project management time on a 100-task project
You can adjust the averages and calculation for the typical project in your organization and multiply the saved hours by the number of projects your organization has, and you will get an idea about the potential for immediate savings.
- The number of 56 hours saved for a 100-task schedule does not include how much easier it is to develop scenarios with a dynamic model as opposed to a static model. Every time the

project slips, you will have to develop scenarios to find solutions for this; the dynamic model will be much more helpful than a static model.

- Another advantage of working with dependencies instead of with dates is that you set dependencies during the *planning phase* of the project when you have time and that you reap the benefits of them during the *execution phase* when you don't have time.
- Lastly, a dynamic model can be up-to-date all the time. If you use Project Server as a communication platform, executives can see *real time status* in the projects.

In Closing

Organizations may need to invest in training and certification to ensure that their project managers apply the principle of dynamic scheduling properly and that people indeed adjust their behavior and habits. Only then can they reap all of the potential rewards of dynamic scheduling.

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Creation of a Spanning or Bucket Task

Ross Andren, Pcubed Inc. (Member, Sydney, Australia)

There are situations where you might want to create a task that acts like a summary task without the requirement of creating a summary task. For instance a task representing four or five tasks within a phase which do not require their own sub-phase. I have seen this used to represent the amount of work needed by a project manager over the length of a phase. It grows and shrinks dependent on the tasks it is linked to. I have to admit to liking it purely because it represents more flexibility for me when I come to thinking scheduling.

Process:

1. Create a new task that you want to be your 'bucket' task. Name appropriately to your needs and also decide if you want the duration to be estimated or not (see Figure 1).

	Task Name	Duration	Start	Finish	Pred	Mar '05			Apr '05			
						21	28	07	14	21	28	04
1	Phase 1	30 days?	Mon 02/05/05	Fri 10/06/05								
2	Task 1	5 days	Mon 02/05/05	Fri 06/05/05								
3	Task 2	5 days	Mon 09/05/05	Fri 13/05/05	2							
4	Task 3	5 days	Mon 16/05/05	Fri 20/05/05	3							
5	Task 4	5 days	Mon 23/05/05	Fri 27/05/05	4							
6	Bucket of Tasks 1 to 4	1 day?	Mon 02/05/05	Mon 02/05/05								
7	Task 5	5 days	Mon 30/05/05	Fri 03/06/05	5							
8	Task 6	5 days	Mon 06/06/05	Fri 10/06/05	7							

Figure 1: Note the lack of predecessors or successors to the new task

2. Select the cell representing the Start date of the earliest starting of the tasks you wish to represent. In this case, the start of Task 1 as shown in Figure 2.

Task Name	Duration	Start	Finish	Pred		M
						21 28
Phase 1	30 days?	Mon 02/05/05	Fri 10/06/05			
Task 1	5 days	Mon 02/05/05	Fri 06/05/05			
Task 2	5 days	Mon 09/05/05	Fri 13/05/05	2		
Task 3	5 days	Mon 16/05/05	Fri 20/05/05	3		
Task 4	5 days	Mon 23/05/05	Fri 27/05/05	4		
Bucket of Tasks 1 to 4	1 day?	Mon 02/05/05	Mon 02/05/05			
Task 5	5 days	Mon 30/05/05	Fri 03/06/05	5		
Task 6	5 days	Mon 06/06/05	Fri 10/06/05	7		

Figure 2: Start date of earliest starting of tasks

3. Right click and select the 'Copy Cell' option
4. Select the start date cell of the newly created task and right click, then select paste as link as shown in Figure 3.

The screenshot shows a 'Paste Special' dialog box with the following options:

- Source: Project\LINK_1
- As: Text Data
- Paste
- Paste Link
- Display As Icon

The 'Result' section states: "Inserts the contents of the Clipboard into your document as Text Data. Paste Link creates a link to the source file so that changes to the source file will be reflected in your document."

Figure 3: You will see the date change and a little grey triangle appear in the cell indicating the link

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5. Select the Finish date of the latest finishing task of those you wish to represent. In this case, the finish date of Task 4 (see Figure 4).

Task Name	Duration	Start	Finish	Pred
Phase 1	30 days?	Mon 02/05/05	Fri 10/06/05	
Task 1	5 days	Mon 02/05/05	Fri 06/05/05	
Task 2	5 days	Mon 09/05/05	Fri 13/05/05	2
Task 3	5 days	Mon 16/05/05	Fri 20/05/05	3
Task 4	5 days	Mon 23/05/05	Fri 27/05/05	4
Bucket of Tasks 1 to 4	1 day?	Mon 02/05/05	Mon 02/05/05	
Task 5	5 days	Mon 30/05/05	Fri 03/06/05	5
Task 6	5 days	Mon 06/06/05	Fri 10/06/05	7

Figure 4: Finish date of the latest finishing task

- 6. Right click and select the 'Copy Cell' option
- 7. Select the Finish date cell of the newly created task and right click, then select paste as link (see Figure 5).

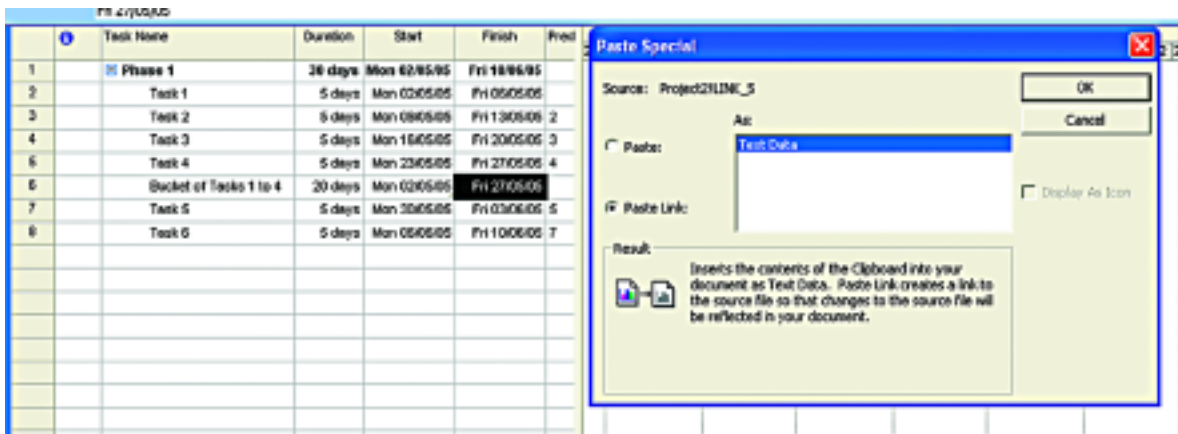


Figure 5: You will see the date change and a little grey triangle appear in the cell indicating the link

Now the created task will represent a duration spanning the earliest start to the latest finish of the represented tasks and will change based on the changes to the tasks driving it. See the final view below. You may find it also creates a Must Start On constraint. If you remove this, both the start and the finish can move with the movement of tasks 1 and 4 respectively. Go on, try it out!

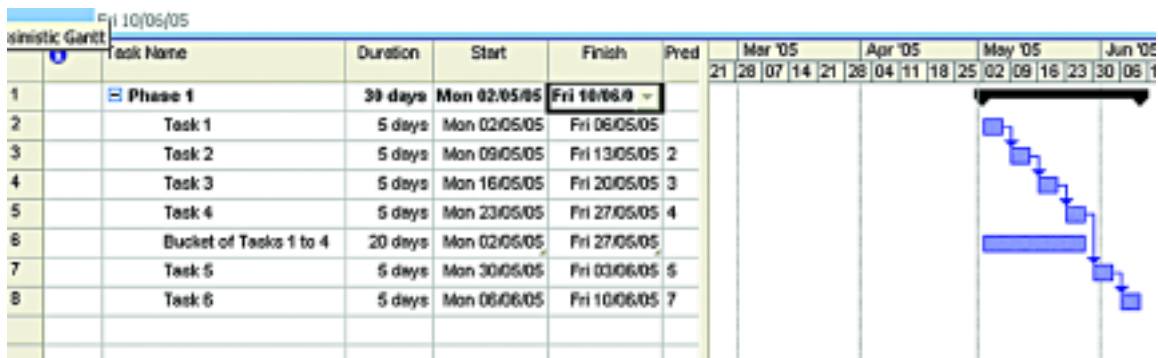


Figure 6: View of earliest start to the latest finish

Deploying EPM as an OD Initiative

Reggie Brown, PMP, UkuZwana Project Management Solutions (Member, Newlands, South Africa)

Your organization has committed to implementing the Microsoft Office Enterprise Project Management Solution. Several months have gone by since the completion of the Limited Production Pilot and the struggle continues. Very little improvement has been realised as a result of the effort and management is getting anxious. What is going wrong?

Many organizations fail to invest in the pre-EPM phase. This is because their posture is the tool will solve all of their organizational problems around project management. Au contraire! Allow me to suggest that deploying EPM is an Organization Development Intervention. Completing the development of a project management methodology that is intended to be utilized as a tool for replication across all projects is only the beginning of the long journey.

Management is convinced that enforcing project management practice, including the utilization of tools, will increase the probability that the organization will reach its goals. Many months of intense discussion and iterations have produced a deliverable that is useless until it is validated and utilized consistently. The hard work is just beginning. Where do you start? How do you define the critical mass, individuals or groups, where commitment is essential? What intervention strategies will you use for gaining this commitment? The dynamics of this turnaround require an understanding of both the overall process improvement and individual intervention methods.

What is Organization Development?

Organization development (OD) covers a wide spectrum of activity. These activities take on many variations including team

building, structural change, and job enrichment. OD also examines a variety of topics including methods of change and effects of change.

Organization development increases organization effectiveness and health through planned interventions in the organization's processes using behavioral science knowledge (Beckhart 1969). OD emphasizes features that differentiate it from other approaches to change and improvements to an organization. Organization development applies to the entire system. OD does not focus on individual improvement nor is it concerned about the improvement of a single process.

- Organization development is based on behavioral science knowledge and practice. At the micro level, it deals with leadership, group dynamics, and work design. OD involves strategic objectives and organization design at the micro level. OD emphasizes the individual's influences over the destiny of the organization.
- Organization development is concerned with planned change. The change effort is not associated with business planning or technological innovation but involves planning to diagnose and solve organization problems.
- Organization development involves the creation and support of the change effort. Specifically, OD moves beyond the initial efforts to initiate change to the long-term plan needed to stabilize and institutionalize the new processes. Establishing a Project Management Office where the EPM Solution will be administered is one form of a formalized support system.
- Organization development encompasses strategy, structure,

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and process changes. A strategic view may look at how the organization relates within a layered environment and how the organization can improve that relationship.

OD may include structural changes or process improvements to support strategy. Finally, OD is about improving organizational effectiveness.

It makes two assumptions:

1. Effective organizations are able to solve problems more efficiently and are able to focus their efforts on achieving its goals.
2. An effective organization is a high-performing organization that delivers quality products and services. It is responsive to its customers. An organization with these traits attracts and motivates effective employees.

Intervention strategies, specifically process and individual interventions, are recommended approaches to achieving lasting change and institutionalizing EPM. Within the context of these two strategies, this article will offer remedies that support the organization's need and driving forces behind the EPM deployment. It is more efficient typically to perform process interventions first before undertaking individual interventions.

Process interventions not only affect group norms but also impact individual behavior. For example, if the group decides that it needs to implement EPM, an individual who chooses not to adopt the new policy will realize that they may have to change their behavior. Signals about the expected process changes can be enough in some cases to trigger change in resistant individuals.

Process interventions identify for individuals what behaviors or skills will have to be developed and therefore will help with the selection of the training and development tools and techniques. If individual intervention follows process intervention, individuals will perceive the changing behavior as relevant, and they will most likely be more motivated to learn. This order in the process will result in the support of the new group norms by the individuals in the organization.

Prior to your EPM deployment, it is imperative during the Envisioning Phase that your organization has investigated the business processes around project management that will be impacted once the new system is in production. In many cases there will be some major changes. These changes must be communicated early in the process so that everyone understands what will be expected later.

Managing the issues resulting from change is the key. The organization is often caught in a dilemma resulting from determining the amount of instability that the environment should experience due to the turbulence that is being created by the presence of this new project management environment. Management can be quick to expect immediate results. Many change efforts have failed because of the lack of understanding by leadership about the process of interventions and change. If this occurs, then the focus will be placed prematurely on the results. Management must be educated as to the whats, hows, and whys of implementing the Microsoft EPM solution and be able to understand its developmental nature.



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