Project Management For The Enterprise

The Next Evolution In Project Management

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ENPRO

PRIMAVERA SOLUTION PROVIDER

Enterprise Project Management

An Introduction

What Is Enterprise Project Management?

Enterprise Project Management is optimization of Corporate Resources (Capital, Human, Facilities, etc.) through strategic management of the portfolio of projects to maximize Corporate Return on Investment.

Terminology

- **ePM – Enterprise Project Management**
- **Portfolio Management – The Management of the Portfolio of all projects within the enterprise (Corporation or Organization)**
- **PMO – Project Management Office. The Central organization for project management**
- **Organizational Project Management Maturity Model (OPM3, PMM or PM3) – Management tool using 9 areas of PMBOK to assess level of maturity (capability) in managing projects within an organization (OPM3 document to be released by PMI in December 2003)**

ePM - Goal

- Goal of Enterprise PM is to determine how to best apply the resources of the corporation to maximize corporate success (ROI, EPS, Cash Flow)
- We can't do every project, which ones do we select and why?
  - Internal Projects – R&D, new products, new services
  - External Projects – competitively bid, contracted, firm fixed price
  - Assess risks across all projects in the enterprise
- Project Go/No Go decisions are made continuously in an integrated, global context, not one time, separately

ePM vs Traditional Project Management

- **Similarities:** ***Fundamentals don't change***
  - **Project Manage individual projects with valid project data:**
    - **Estimates**
    - **Schedules**
    - **Actual Performance/Status Information**
- **Differences:**
  - **ePM - Integrated management of the enterprise through project portfolio management**
    - **Alignment with strategic planning and capital budgeting**
    - **Project information rolled up at the enterprise level – Executive Dashboards**
    - **Project prioritization and selection – phased go/no go decisions**
    - **Resources requirements and allocation based on requirements of all projects in the portfolio.**
    - **Projectize to maximum extent practical**
    - **PMO catalyst for implementation, standard and consistent application across the corporation**
    - **Project Management Maturity (PMM) continuum**

ePM Drivers – How To More Effectively Manage The Enterprise

Business Success = Project Success™

- **Strategic Alignment – PM & Strategic Planning**
- **Improve ROI and time to market**
- **Six Dimensions of ePM**
  - **Role Based Project Perspectives**
  - **Hierarchical Project Management**
  - **Optimization of Limited, Shared Resources**
  - **Real Time Communication & Feedback Loop**
  - **Visible Project Performance**
  - **Designed to facilitate Integration**

Alignment – Project Management & Strategic Planning

- **Goal – Choose projects with highest market potential. Integrates:**
  - **Strategic project objectives and**
  - **Tactical plans for project implementation**
- **Top level budgeting offers a *"Best Guess"* of funding the project portfolio to meet strategic corporate objectives. Lacks validation.**
- **Bottoms up plan offers *"Reality"* check, determines if strategic project objectives can be met. May offer validation.**
- **Best achieved through portfolio management enabled by an integrated ePM system:**
  - **Supports Go/No Go decisions on investing project funds**
  - **Supports allocation of scarce resources across the enterprise**
  - **During control phase, supports whether or not performance meets project portfolio metrics for Go/No Go**

Improve Time to Market & Improve ROI

- **Corporate Activity – two broad categories:**
  - **Operations – create products/services = today's revenues & profits**
  - **Innovate – create tomorrow's products/services for future profits**
- **Companies are employing ePM to:**
  - **Manage an integrated portfolio of projects for today's operations**
  - **Manage new product/service introductions as an integrated portfolio of projects. Objectives:**
    - **Visibility to strategically authorized funds**
    - **Building firm's competitive future**
- **Case Study – first to market can expect 44%, second 31% and third 25%. In a $100M market, 3 way race, leader generates $40M more in first 3 years. IRR is 44%, 14% and 6% respectively!**

ePM provides true visibility and insight into future earnings!

Role Based Project Perspectives

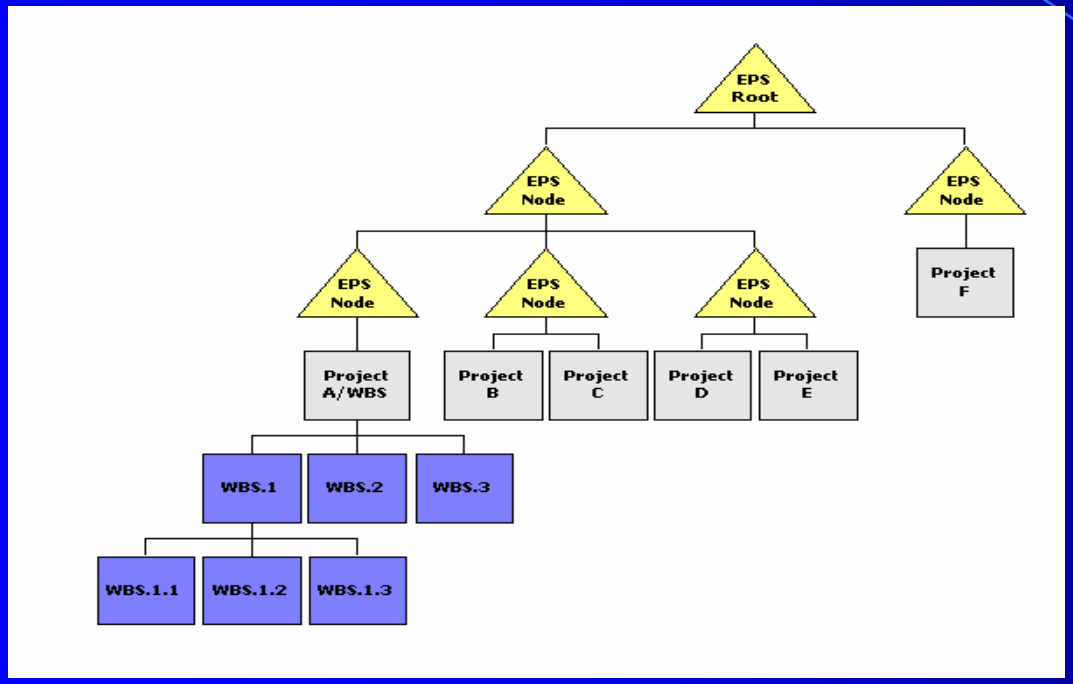
- **Different levels (*"roles"*) within the Project Team must get specific information based on their perspective or role in the project:**
  - **Executives - need summary view of project portfolio (Executive Dashboards)**
  - **Project Managers - model various scenarios to optimize project finish date**
  - **Project Analysts - need to model risks on individual projects, visibility across all projects**
  - **Front line contributors - need web based timesheets and interfaces for updating progress**

ePM provides comprehensive information on all projects across the enterprise to satisfy each Team Members (roles based) needs

Hierarchical Project Management

- ePM supports all projects to be planned, analyzed, and controlled within a single, standardized, consistent framework or hierarchy
- ePM supports *top down* as well as *bottoms up* planning and control. Comparison to ensure tactical plans meet higher level project objectives
- Supports a project breakdown (or Enterprise Project Structure) that makes sense for each group:
  - CFO – view by cost accounting structure
  - Resource Manager – view project and/or resource utilization by functional organization, project, or any roll up within the hierarchy
  - Project Manager – analyze project according to a WBS of deliverables

Enterprise Project Structure



- View project priorities, scope, budgets, and resources across the enterprise.
- Manage projects separately while retaining the ability to roll up and summarize data.
- View resource allocation across projects.
- Security can be assigned at any level of the structure to provide users with appropriate access to project information.

Optimization of Resources

- People's time is scarcest enterprise resource
- Optimizing resources (making the most of people's time), assigning right resources to right tasks, regardless of location, is key to project and corporate success
- ePM provides tools and processes necessary to:
  - Help organization make trade offs with regard to which resource should be applied to what projects and activities
  - Perform long range planning based on roles (roles are generic skill sets associated with resources)

Management of resources across the enterprise is one key to ePM *"added value" and therefore, ePM success!*

Real Time Feedback & Decision Making Loop

- **An ePM Critical Success Factor is ability to provide project stakeholders with timely feedback to make decisions regarding individual projects based on total portfolio of projects**
- **Traditional PM tools, may be too late to provide aggregated project data in time to *"course correct"***

ePM gives access to enterprise project information in *"real time"*

Visible Project Performance

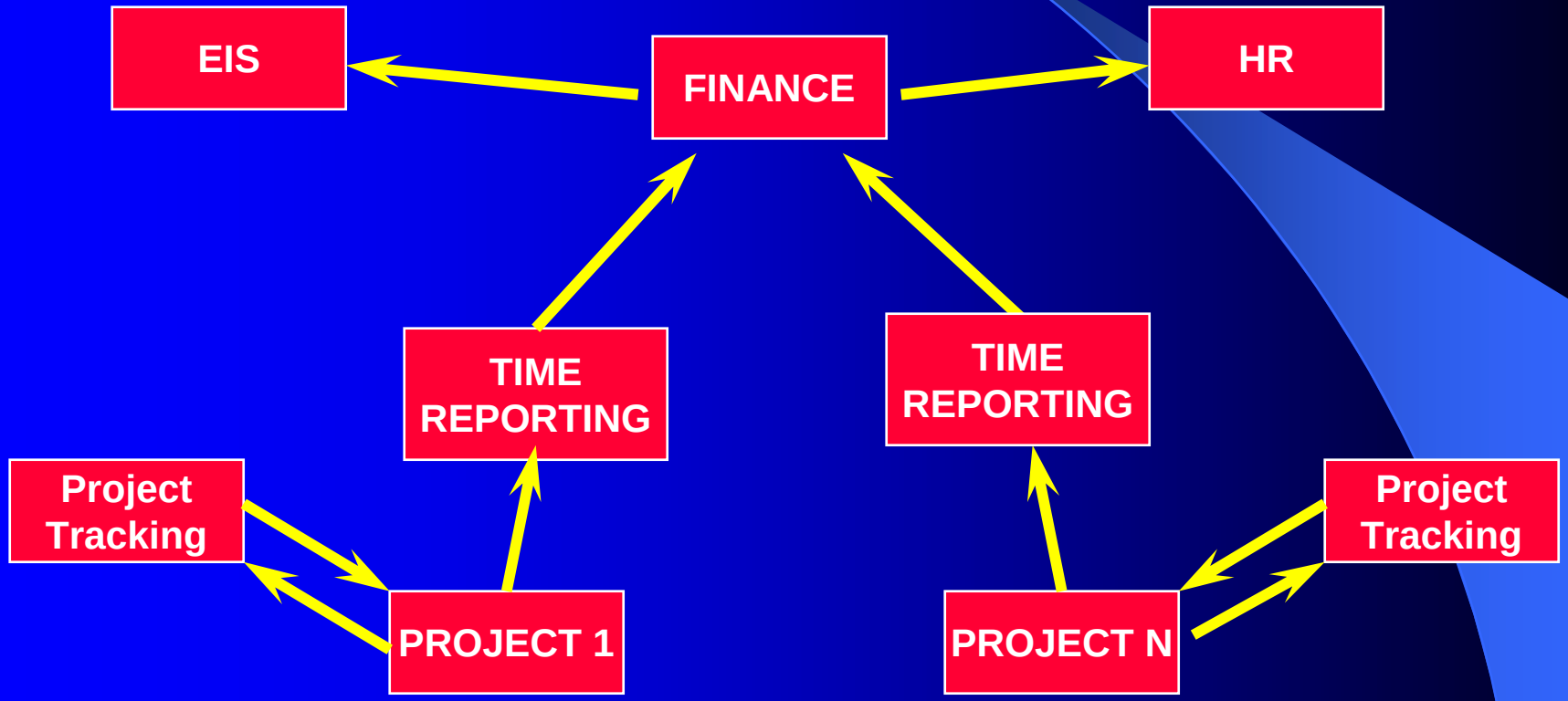
- **ePM focuses on project portfolio performance measurement**
- **ePM provides a comprehensive platform for cross project analysis and performance measurement supporting *"ease of interpretation"* for busy executives, program managers, project managers and project team members**

Built for Integration

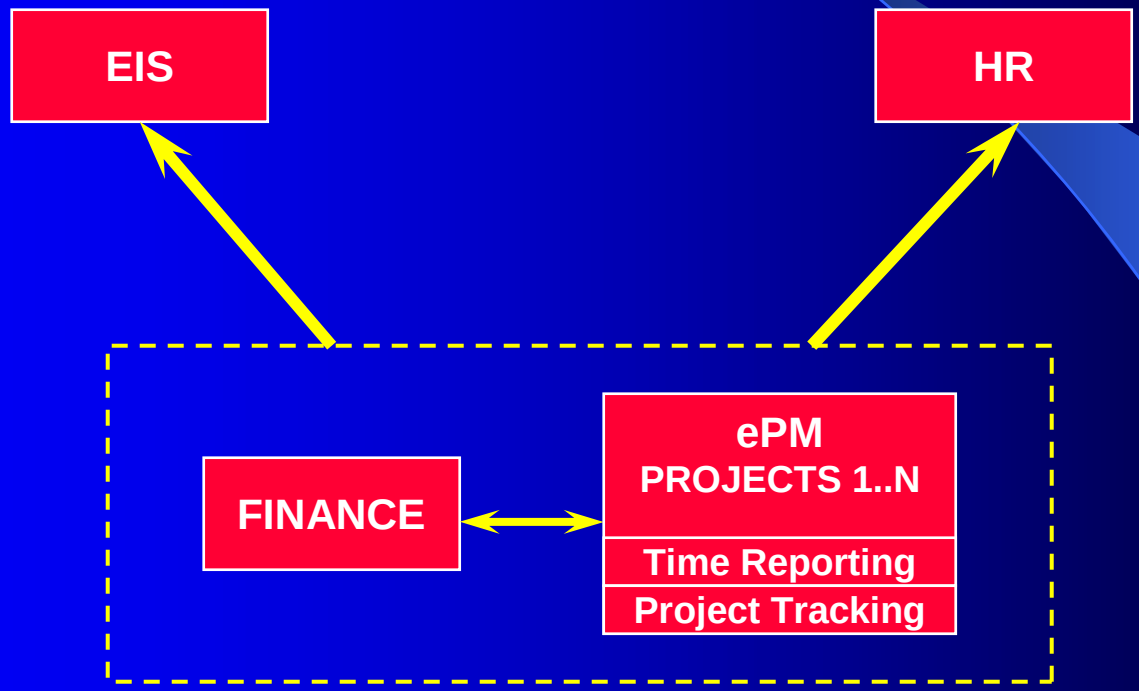
- **ePM systems Open Data Base architecture (such as SQL Server and Oracle) facilitate ease of data sharing and integration with existing corporate systems (accounting, HR, etc) and other enterprise information systems**
- **Integration ensures consistency of data and supports single data entry for data efficiency and accuracy**

Project Management can no longer be done in isolation, ePM systems are built for easy integration with legacy management systems

Typical Corporate IT Configuration



ePM Corporate IT Configuration



Enterprise Project Management

Implementation Experiences

Project Management Business Process (PMBP)
US Army Corps of Engineers(USACE)

- **Complete re-engineering of how the USACE does business, culture change**
- **USACE changing from a *functional* to a *project-centric* organization**
- **5 Major Initiative Areas – Policy (ER 5-1-11), PMBP Curriculum, Pilot Project PM Business Processes, P2 AIS**
- **What is the PMBP? Understanding the Project Management Business Process:**
  1. **One project, one team, one project manager**
  2. **Plan for success and keep commitments**
  3. **The PDT is responsible for project success**
  4. **Measure quality with the goals and expectations in the Project Management Plan**
  5. **Manage all work with the PMBP, using corporate automated information systems (P2)**
  6. **Build effective communications into all activities and processes**
  7. **Use best practices and seek continuous improvement**
- **Roll out of P2 System across 37,000 users in one year. Training and Deployment Teams assigned to each of 8 Divisions, 42 Districts, and 8 Centers**
- **P2 System is a composite of P3e and Oracle Projects integrated with legacy USACE management systems**

P2 Successes & Challenges

- **Successes:**
  - **Collaborative commitment from all USACE elements (HQ, Centers, Divisions, Districts).**
  - **Managed project using PMBP and P2 system (3,000 activity plan)**
  - **State of the Art P2 System nearing the end of System Integration Testing (SIT)**
  - **Multiple role/team based training classes in final design**
  - **Deploy P2 system and training worldwide starting shortly**
- **Challenges:**
  - **First of a kind system (COTS software components)**
  - **Multiple legacy interfaces (API's)**
  - **System configuration and scope management**
  - **Strict funding and schedule considerations**
  - **Qualified resources – institutional and system expertise**

Southeastern Utility

- **Large Southeastern Utility moving to retail open access model**
- **To facilitate transition, company must divest transmission, distribution, and retail power sales operations**
- **Diversification will require rewrite of major portions of the CRM software.**
- **Company transitioned HR and financial management system from a custom internal system to SAP.**

The Challenge

- **Project Integration - Integrate project plans and schedules for three divisions and four major contractors**
- **Resource Availability - Develop a project plan driven primarily by resource availability**
- **Resource Balance - resource requirements with resource availability working on multiple activities, in different project phases, simultaneously.**

The Approach

- **Project Management Office (PMO) Established**
  - **Analyze and make decisions based on project management system**
  - **Provide the subcontractors with tool to facilitate integration of project management plans with prime contractor**
- **TeamPlay**
  - **Implemented for data integration and resource planning**
  - **Individual resources assigned to support multiple projects across multiple subcontractors.**

The Result

- **Senior management commitment - implement ePM system to facilitate management and project reporting**
- **Common enterprise wide resource pool set up in project management system.**
- **Development of a resource driven project plan based on availability of key resources**
- **Milestone database developed as integration point between the schedules of the owner and subcontractors**
- **implementation was *"qualified"* success due to level of project management maturity**

M&O Contractor

United States Antarctic Program

Decision made to convert from existing to an enterprise project management system. Highest profile project in the program chosen as model for full rollout. Implementation time frame was less than eight weeks from Notice To Proceed.

The Challenge

- **Migrate a relatively immature project control organization from current (P3) to enterprise project management system (P3ec) and build custom applications in less than two months**
- **Convert existing projects from the current system to the integrated system. Develop inter project relationships**
- **Develop electronic interfaces to existing applications**
- **Develop application to manage population transit and housing (material delivery and population housing being key drivers)**
- **Implement and support system in an extremely remote and harsh environment**

The Approach

- Convert projects to P3ec and validate
- Develop application to electronically download data from corporate timekeeping system to P3ec
- Develop and implement P3ec based population transport and housing application. Allow immediate assessment of flight delay impact on room availability
- Develop inter project relationships
- Define process to collect data and update projects
- Convert existing reports to P3ec
- Test update process concurrently on P3ec and P3
- Train users on Population Management P3ec application
- Test data exchange between South Pole & Denver Server

The Result

- Critical projects converted to P3ec and data was validated (7 weeks)
- User support/mentoring provided to input projects into ePM system.
- Timekeeping system interface developed, tested and implemented
- Population management program developed and tested
- Server for the South Pole delivered late resulting in validation of remote/local data exchange interface not being completed
- All P3 reports not converted over
- ENPRO resources traveling to the South Pole to complete implementation in November 2003

Lessons Learned

- Eight weeks is very short time to convert organization from an existing to an enterprise project management system
- With committed project resources, possible to implement conversion in a very short period of time. Higher level of ongoing support required during initial implementation period
- ePM is optimal process with the best supporting tools for managing resource driven projects
- Commitment of all stakeholders critical to success of transition. Ongoing support required to deal with issues not fully addressed during fast track process

Enterprise Project Management

Where Do We Go From Here?

ePM and OPM3

Implications of ePM on an OPM3 Level 1 or 2 organization:

- **Level 1 - PM processes poorly controlled, totally unpredictable. Senior management does not understand key issues of PM. Project success depends on individual heroic efforts, not effective PM processes. Move to next level, must focus on fundamentals (basic PM management concepts, training, simple processes)**
- **Level 2 – Rolled out the basics, PM processes informal, incomplete. PM data collection and analysis informal and not documented. Planning and management of projects depends on individuals, not teams. Move to next level, must concentrate on documenting processes for the team**

Implementing ePM prior to attaining Level 3 (OPM3) creates added requirements of education and process to enhance capability

ePM and OPM3 - Level 3

- **Not until Level 3 does organization have reliable project data to share across the organization**
- **Focus on ePM system in Level 1 or 2 organization without concurrent project management fundamentals training and process improvement can (and probably will) result in perpetuating wrong or misleading project data**
- **Need to assess the organization's PM Maturity and implications if your processes are not documented**

Companies at Level 3 and above on the PMM continuum can more quickly transition to an ePM model

Active Involvement by Sponsor & Key Stakeholders

- **Introducing ePM will bring about profound cultural change in the organization (including anxiety, fear, reluctance, and resistance)**
- **Critical Success Factor is commitment to elevating your organization's Project Management Maturity**
- **Critical Success Factor is *"active"* involvement by sponsor and key stakeholders, otherwise, success will be limited**
- **Focus should be on the positive impact of ePM**
- **Cultural ramifications may not *"hit you in the face"* until ePM is up and running**

A full ePM implementation will make your processes more efficient!

Don't Expect Full Capability Too Soon

- ePM systems are far more sophisticated than traditional PM packages just a few years ago
- A key component should be web based time reporting (vast majority of personnel will use module)
- Full Implementation could include:
  - Time reporting
  - Resource Management
  - Integration with legacy systems
  - Project planning & scheduling
  - Budgeting/forecasting
  - Custom reports
  - Development of Methodologies that model typical processes or projects
  - Training and documentation

Recommend phased implementation with a pilot project prior to enterprise wide roll out

Provide the Right Resources To Support Implementation

- **Means a strong Project Manager and Project Delivery Team (PDT)**
- **Critical skills will be dictated by the kind of implementation**
- **Common system/technical architecture related skill sets include:**
  - **Network specialist**
  - **SQL Server or Oracle technical expert**
  - **DBA and skilled database programmers**

Make available the right people with the right skills to support your implementation

Critical Success Factors

Good Project Managers know it is all about *"expectation management"*.

- **Identify, acknowledge and be sure to address the organization's weakest process links, first and foremost**
- **Don't expect too much too soon. You'll use a small portion the first 3-9 months unless your well down the PMM continuum**
- **Make sure you have the right resources on hand**
- **Understand your organization's Project Management Maturity, and weaknesses before starting**
- **Manage expectations very carefully including:**
  - **Active involvement of sponsor and key stakeholders is critical**
  - **They will assist in system selection and in supporting the cultural changes that arise**

If you remember nothing else, it's all about expectation management

ePM Expectations

- **Anticipate small, incremental achievements and improvements over an extended period of time rather than a 6-9 month payback**
- **Don’t purchase an ePM system hoping to improve your process or PMM if real issues relate to process**

With right processes and behavior in place, ePM can be a most powerful mechanism in moving to next level of PMM

Enterprise Project Management

Tools

Gartner – 2002 Project/Resource Management Magic Quadrant

- **What PM tools processes, and techniques are required for delivering high quality, on time and on budget applications?**
  - **Strategic planning assumptions:**
    - **By 2005, more than 50% of all project management functions will be packaged as flexibly configurable modular, web based services**
    - **By 2005, 70% of organizations will have adopted a mix of project management application services for portfolio management, collaboration, resource management, tracking, and cost management**
- **Positioning of vendors in the magic quadrant is based on:**

  Vendor viability, management team , track record in delivery and support, functional depth, support capability, sales and marketing, vision of technology and market, consulting and service commitment, team collaboration features, resourcing, ERP support and package breadth

Gartner – 2002 Project/Resource Management Magic Quadrant

- **Challengers**
  - **Computer Associates**
- **Niche Players**
  - **Tivity**
  - **Planisware**
  - **Kintana**
  - **Rational Software**
- **Visionaries**
  - **Changepoint**
  - **Scitor**
  - **BST Software**
  - **Welcom Software**

Gartner – 2002 Project/Resource Management Magic Quadrant

- **Leaders**
  - **Microsoft**
  - **Primavera**
  - **Business Engine**
  - **Artemis**
  - **PlanView**
  - **Niku**

Gartner Bottom Line:

Project Management applications with functionality beyond scheduling and online communication are vital to reliable project delivery in complex, multi-project environments, especially in projectized organizations. Enterprises burdened with multiple, legacy point systems should consider more integrated PM packages

Gartner – Leaders in Engineering/Construction Segment

- **Artemis – European market**
- **Welcom – OpenPlan Schedule and COBRA cost management tool for earned value analysis**
- **ViaNovus – Paragon**
- **Citadon**
- **Primavera continues to lead this segment with it's legacy P3 and P3e (P3 for the enterprise) and recently, P3e/c (for construction) and TeamPlay (for IS/IT market)**
  - **Supplemental PrimeContract and Expedition with web based contract management, design approval, and collaboration is positioned to become the *de facto* standard**
  - **Recently recognized by AGC as it's recommended e-commerce communication and control solution**

Overview

- Founded in 2000
- Principals have 20+ years experience each in major DOE, DOD and private sector project management
- Areas of specialization:
  - Enterprise/Traditional Project Management
  - Management Consulting
  - System Implementation & Integration
  - Training
- Primavera Solution Provider (PSP):
  - Only PSP located in Tennessee, certified in 7 adjoining states and one of a small number of firms in southeast recently certified by Primavera to train/consult on P3e, P3ec and TeamPlay, their enterprise project management software products

Project Management Consulting

- Alstom Power (ABB) – project management support and training – TVA projects
- DOE Emergency Response Exercise Planning – Y-12
- DOE BCLDP Optimized PEP – Batelle-Columbus
- DOE Paducah DMSA Project Plan – WESKEM
- DOE DUF6 Proposal Schedule – Honeywell
- US Army Corps of Engineers Project Management Business Process (PMBP) Implementation – Confidential Client
- Construction Schedule Re-Baseline – New Orleans Channel Bridge - PCS
- ePM Implementations
  - US Army Corps of Engineers
  - Raytheon
  - Entergy
  - Principal Financial Group

Primavera System Training

- **Certified to train/instruct on Primavera Enterprise, P3ec, TeamPlay, P3, and SureTrak project management software**
- **Courses offered include:**
  - **Risk Management – compliant with all DOD/DOE guidance (PM Order 413.3 and PM Practice Standards) – 3 Days**
  - **Primavera Enterprise (P3e)**
    - **P100 - Methodology Manager – 1 Day**
    - **P102 - Basic Course – 3 Days**
    - **P106 – Advanced Course – User Defined**
  - **Primavera TeamPlay**
    - **T100 – Methodology Manager – 1 Day**
    - **T102 – Basic Course – 3 Days**
    - **T106 – Advanced Course – User Defined**
  - **Primavera Project Planner (P3)**
    - **601 – Planning and Scheduling with P3 – 3 Days**
    - **602 – Resource & Cost Analysis with P3 – 1 Day**
    - **603 – Managing Project Data with P3 – 1 Day**
  - **Primavera SureTrak**
    - **401 – Introduction to SureTrak Project Manager – 2 Days**
  - **Primavera Expedition**

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