Project Management Fundamentals

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- P.E. in Maryland and Virginia
- Project Management Professional (PMP)
- Fellow: NSPE, SAME, ASCE
- Currently Vice President at Dewberry
- Formerly VP at AECOM and Baker
- Former Chief Engineer, Virginia Port Authority
- Retired US Army Engineer Officer- 22 years
- NSPE Board of Directors/VSPE Board of Directors
- SAME National Board of Directors/ 2 Post BOD
- BS- Worcester Polytechnic Institute/ MS- NC State University
Today’s Topics:

- WHY Project Management
- Definition of Project Management
- The Project Manager
- The Project Manager’s Tool Kit
- Change Management
- Earned Value Management
- One-Page Project Manager
- PMI Credentials
- Resources for You

- Definition of a Project
- Project Process Groups
- Essential Traits of Successful PM
- Project Management Plans
- Schedules
- Communications Management
- Project Management Institute (PMI)
- USACE and PMP
Accomplish Your Clients’ and Stakeholders’ Objectives:

- On Schedule
- On Budget
- High Quality
- Safety

Accomplish Your Firm’s Objectives:

- Project profitability
- Firm Profitability
- Establishes or Enhances Firm and Staff Reputations

Avoid adding to the History of failure in successful project execution across sectors!
A **Project** is a Temporary Endeavor which creates a unique product, service, or result. The outcome of a project may be tangible or intangible.

The temporary nature of projects indicates that a project has a definite beginning and an end.

The end is reached when the project’s objectives have been achieved or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists.
Project Management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements.
Project Process Groups (per PMI)

- Initiating
- Planning
- Executing
- Controlling
- Closeout

(Just Enough Project Management combines Executing and Controlling)
The Project Manager

- The Project Manager is the person assigned by the performing organization to lead the team that is responsible for achieving the Project objectives.
- The PM works closely and in collaboration with...a business analyst, quality assurance manager and subject matter experts.
- ...effective Project Management requires that the PM possess these competencies: PM knowledge, performance of that knowledge and interpersonal skills.
- The Project Manager must really be the **Project Leader**!
Essential Traits of Successful Project Managers

- Follow through
- Good listener
- Proactive
- On top of all aspects
- Leads the team by example
- Good communicator
- Backs team decisions
- Organized
- Handles multiple priorities well
- Technically proficient

(Source: Sorrentino Consulting)
The Project Manager’s Tool Kit

- Project Management Plan
  - Risk management
  - Quality Management
  - Communications Plan
- Work Breakdown Structure
- Project Schedule
- Earned Value Analysis
- Change Management Process
- Project Financial Plan (project profit)
Project Management Plan Components

- Oversight and Reporting Processes
- Risk Management Plan
- Quality Management Plan
- Client Communications Plan/ RACI Matrix
- Document Management
- Change Management Plan
Configuration Management (change management)

- Have a Plan to Manage Changes that occur during the Project execution.
- Document EVERYTHING
- Managing the Scope of Work (SOW)
- Avoiding Scope Creep
- Equitable adjustments must be justified by fact
- Change Management is the KEY to profitability
Schedules

- Schedules are a critical management tool

- Schedule your work...then work your schedule

- Select the scheduling tool best suited to the complexity of your project:
  - Gantt - MS Excel, the Gantt Project, et.al.
  - Microsoft Project
  - Primavera and other High-End Scheduling Software package
Earned Value Management

- Why we need it - the only real tool to forecast cost and schedule
- Simplified Explanation

Diagram:
- BCWS: Budgeted Cost of Work Scheduled
- BCWP: Budgeted Cost of Work Performed = Earned Value
- ACWP: Actual Cost of Work Performed
- FCST: Forecast of Remaining Work
- BAC: Budget at Completion
- EAC: Estimate at Completion
- ETC: Estimate To Complete

Graph illustrates:
- Cost (WHI) vs Time
- To-Date Schedule Variance
- Target Schedule
- Current Schedule
- Projection of Schedule Delay at Completion
- Projection of Cost Variance at Completion
- ETC: Estimate To Complete

Legend:
- To-Date Cost Variance
- Data Date
Communications Management Plan

- Stakeholders and team member identification, roles and responsibilities (RACI)
- Information to be communicated-format, detail, content
- Frequency and times for communication, e.g. daily, weekly, monthly, or as required.
- Methods of communications and resources: emails, reports, schedule updates, etc.
- Communications constraints and policies
- Information flow charts and distribution
One Page Project Manager © - a tool

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**Project Leaders:** Vennie Reichling and Neal Wight

**Project:** SAME Warrior Transition Task Force

**Date:** 04/18/2014

**Project Purpose:** Investigate opportunities for SAME to contribute to credentialing military engineers while they are in uniform so that they have better opportunities for employment after leaving military service.

### Key Tasks

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Key Tasks</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Evaluate options</td>
<td>A. Establish a relationship with SAME</td>
<td>Complete</td>
</tr>
<tr>
<td>2. Evaluate options</td>
<td>B. Establish a relationship with other organizations</td>
<td>Complete</td>
</tr>
<tr>
<td>3. Evaluate options</td>
<td>C. Establish a relationship with the federal government</td>
<td>Complete</td>
</tr>
</tbody>
</table>

### Milestones

<table>
<thead>
<tr>
<th>Key Tasks</th>
<th>Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Establish a relationship with SAME</td>
<td>A. Initial meeting with SAME leadership</td>
</tr>
<tr>
<td>B. Establish a relationship with other organizations</td>
<td>B. Initial meeting with other organizations</td>
</tr>
<tr>
<td>C. Establish a relationship with the federal government</td>
<td>C. Initial meeting with federal officials</td>
</tr>
</tbody>
</table>

### Summary & Forecast

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Costs</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Establish a relationship with SAME</td>
<td>Capital: 0</td>
<td>Revenue: 0</td>
</tr>
<tr>
<td>B. Establish a relationship with other organizations</td>
<td>Capital: 0</td>
<td>Revenue: 0</td>
</tr>
<tr>
<td>C. Establish a relationship with the federal government</td>
<td>Capital: 0</td>
<td>Revenue: 0</td>
</tr>
</tbody>
</table>

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**NOTES:**

- Responsibility (R)
- Coordination (C)
- Action (A)
- Information (I)
- Verify (V)

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**RASIV MATRIX**

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**Graphs and Diagrams:**

- Bar charts
- Line graphs
- Pie charts
- Scatter plots
- Network diagrams

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**References:**


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Project Management Institute is the world's leading not-for-profit professional membership association for the project, program and portfolio management profession.

Founded in 1969, PMI delivers value for more than 2.9 million professionals working in nearly every country in the world through global advocacy, collaboration, education and research. 51 Million people worldwide are engaged in managing Projects.

- PMI had 439,000 members in 2013
- PMI Credentials are recognized in 195 Countries worldwide!
- 628,400 PMI Credentials in force
PMI Credentials

Why are they useful?
- Establish credibility
- Demonstrates Basic level of competence
- Proven processes- ANSI Accredited credential

Project Management Institute Credential Family
- Certified Associate in Project Management (CAPM)® certification
- PMI Agile Certified Practitioner (PMI-ACP)® certification
- PMI Risk Management Professional (PMI-RMP)® credential
- PMI Scheduling Professional (PMI-SP)® credential
- Program Management Professional (PgMP)® credential
- Portfolio Management Professional (PfMP)® credential
- PMI Professional in Business Analysis (PMI-PBA)® credential
- **Project Management Professional (PMP)® credential**
Position Requirements for USACE Employees

- Project Manager – PMP preferred – GS 12 and GS 13
- Account Manager – PMP required – GS 13/14
- Program Manager – PMP required – GS 14 and above
- Project Engineer – PE preferred – GS 12 and below
- Resident Engineer – PE, RAIA, DAWIA level II required – GS 13 and above
- Area Engineer - PE, RAIA, DAWIA level II required – GS 14
- Supervisory Engineer (Section/Branch Chief) – PE required – GS 13 and above, preferred to have cross trained background in at least 2-3 other branches
- Construction Manager - PE, RAIA, DAWIA level II required – GS 15, only on large complex projects

Position Requirements on USACE Contracts

- Project Managers – PMP Level I preferred, PMP level II encouraged
- A/E and Construction Contracts – PE required for Chief A/E Manager on design team
References for You

- *The New One Page Project Manager* by Clark C. Campbell and Mick Campbell, 2013, John Wiley and Sons
- Earned Value Management one Page Summary by Mike Griffiths, 2009, [www.leadingAnswers.com](http://www.leadingAnswers.com)
- Gantt Project Planner Template, Microsoft Excel
- Gantt Project- free project scheduling and management application: [www.Ganttproject.biz](http://www.Ganttproject.biz)
- Sample Project Plans: First Time Quality, LLC, website: [www.firsttimequality.com](http://www.firsttimequality.com)