DOE PROJECT MANAGEMENT NEWS

Promoting Project Management Excellence

January 2024

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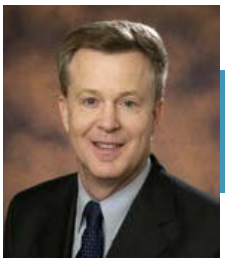


DIRECTOR'S CORNER

With the new year comes new opportunities and challenges. One opportunity that I encourage you to take advantage of this year is to attend the 2024 DOE Project Management Workshop. The Workshop is scheduled for April 2 - 3, 2024, followed by a half-day project controls session in the morning and program office breakout sessions in the afternoon on April 4th. Once again, the Workshop will be held at the Hilton Washington DC National Mall The Wharf, 480 L'Enfant Plaza SW, Washington, DC 20024. Registration is open now. This year's theme is "Beyond COVID – Re-Baselining Project Management." See page 6 for more information on registration and accommodations. Any questions should be addressed to PMWorkshop@hq.doe.gov.

In this month's newsletter, we take a look at risk management, a critical element in project management. Effective risk management allows for early identification of potential problems and the development of mitigation strategies. It improves project planning and decision-making. This leads to better resource allocation, scheduling, and budgeting. Risk management also reduces surprises and delays. It enhances communication and stakeholder confidence. Ultimately, it increases the project's success rate by ensuring all risks, both threats and opportunities, are effectively managed within the project's scope, schedule, and cost constraints. Learn more about DOE's approach to risk management and best practices in the article on page 2.

Additionally, we look at how the risk management plan (RMP) and earned value management system (EVMS) work together to ensure successful project execution. The RMP identifies and assesses potential risks, formulates response strategies, and monitors these risks. This can influence the project's baseline plan tracked by the EVMS. The EVMS, in turn, monitors project performance, analyzes cost and schedule variances potentially caused by identified risks, and uses this data for accurate future forecasting. This helps the project stay within its set parameters. You can gain additional insight into the interface between risk management and EVMS in the article on page 4.

Keep Charging!

Paul Bosco

Introduction to Risk Management Guide

Dave Chisenhall, Office of Project Analysis (PM-20)

The Department of Energy (DOE) Guide 413.3-7A, *Risk Management Guide*, provides processes for the initiation, planning, execution, monitoring, and close-out of risk management throughout the life cycle of the project. This guide provides a suggested framework for identifying and managing key technical, schedule, and cost risks and how it integrates with the development and consistent use of government contingency and contractor management reserve. The DOE Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets,* states that risk management is an essential element of every project. The guide describes risk management as the handling of risks through specific methods and techniques within the bounds of project management. The guide defines risk as a factor, element, constraint, or course of action that introduces an uncertainty of outcome that could impact project objectives. The specific risks to be handled should encompass threats and opportunities. Threats are risks with negative consequences, and opportunities are risks with positive benefits. The guide's suggested risk management process demonstrates a continuous and iterative process that is forward looking, structured, and informative. To ensure the successful execution of DOE projects, the *Risk Management Guide* employs a robust and systematic risk management process that enables the identification, assessment, and management of risks, while ensuring potential issues are proactively addressed, and project objectives are met. As with other facets under the DOE Order 413.3B umbrella, the concepts and practices in the guide may be tailored based upon:

- The project complexity.
- The size and duration of the project.
- The initial overall risk determination of the project.
- The organizational risk procedures.
- The available personnel and their skills levels for performing risk management.
- The available relevant data and its validation.

The guide highlights how the risk management team should be identified using the organizational breakdown structure (OBS) along with team member roles and responsibilities such as for the Federal Project Director, Integrated Project Team, Contractor Project Manager, and DOE/National Nuclear Security Administration Headquarters.

The OBS should serve the following purposes in risk management:

- Highlight the chain of authority, communication structure, and management framework with which risk management and the decision processes will occur.
- Provide a means to map risks organizationally to determine where the greatest number of risks resides and/or the highest-rated risks reside.

The guide emphasizes the need for strong leadership commitment and the integration of risk management into the organization's overall culture to ensure coverage across the project life cycle. The following figure from the guide illustrates a view of the risk management process steps versus the critical decision phases of a project. The figure presents a static view of risk management and simply demonstrates when one should initiate certain process steps for the first time. The process, however, is not static.

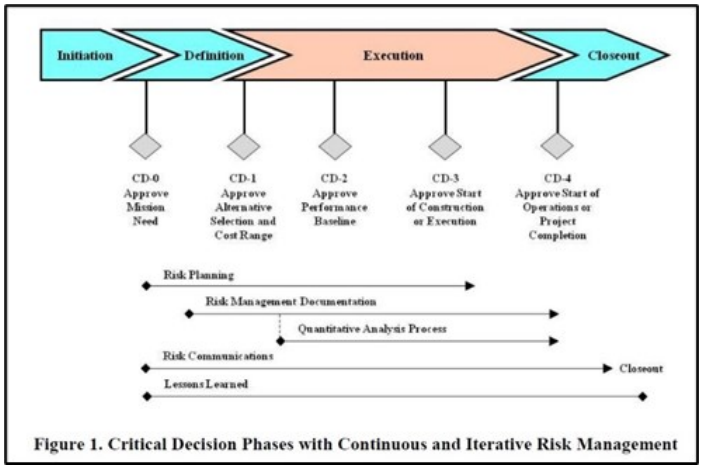


Figure 1. Critical Decision Phases with Continuous and Iterative Risk Management

The following diagram from the guide more readily displays the continuous and iterative risk management process.

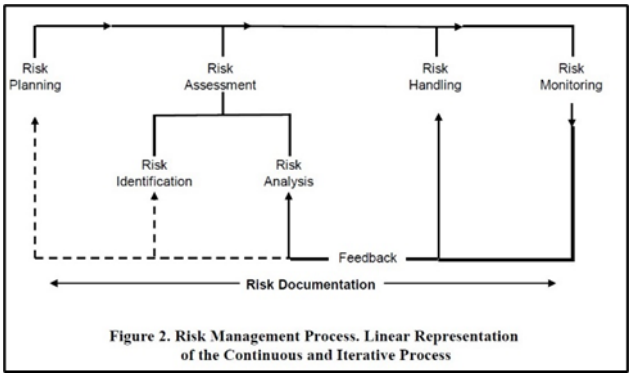


Figure 2. Risk Management Process. Linear Representation of the Continuous and Iterative Process

Continued on Page 3.

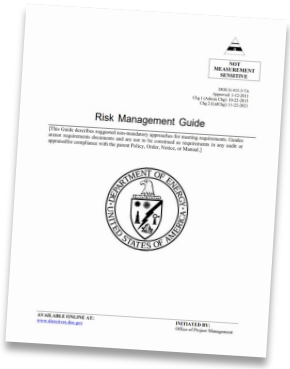
The guide provides a systematic approach to identifying and assessing risks across the diverse range of activities within the DOE enterprise. This involves the development of risk registers, scenario analyses, and the use of qualitative and quantitative methods to evaluate the likelihood and impact of potential risks. The risk identification stage involves recognizing potential risk sources, areas of impact, events, their causes, and potential consequences. The DOE employs various methods for risk identification, including brainstorming sessions, interviews, checklists, past experiences and lessons learned. This comprehensive approach ensures a broad spectrum of risks are identified, including technical, financial, operational, and organizational risks. The risk identification process is not a one-time activity but a continuous process. As projects evolve and new information becomes available, the risk identification process is revisited to ensure all potential risks are accounted for throughout the project lifecycle. This iterative approach ensures that the risk management process remains relevant and responsive to the changing project landscape.

Following the identification phase, the DOE undertakes a thorough risk analysis. This stage delves into the nature of the identified risks, assessing their potential impact and the likelihood of their occurrence. The risk analysis phase is vital for prioritizing risks, focusing attention and resources on the most severe risks. This step involves both qualitative and quantitative risk analysis methods, providing a comprehensive understanding of the risk landscape. Qualitative risk analysis involves assessing risks based on their potential impact and likelihood of occurrence, using a predefined scale. This method provides a quick and straightforward way to prioritize risks. On the other hand, quantitative risk analysis involves numerical techniques to calculate the probability and impact of risks, providing a more detailed and objective understanding of the risk landscape.

Once risks are identified and assessed, the guide offers guidance on developing effective risk handling strategies (acceptance, avoidance, mitigation, and transfer). This involves a careful consideration of both technical and non-technical measures to reduce the likelihood of and impact of identified risks as well as cost/benefit analysis for the chosen strategy. Risk management is not a one-time activity but an ongoing commitment. The DOE's risk management process includes regular risk monitoring and review. This step involves tracking identified risks, monitoring residual risks, identifying new risks, and evaluating the effectiveness of the risk treatment measures.

Regular reporting ensures transparency and allows for timely adjustments to the risk management approach as needed. Continuous monitoring, reporting, and feedback is integral to the success of risk management in capital asset projects. The *Risk Management Guide* encourages the establishment of regular reporting mechanisms to track the status of identified risks, assess the effectiveness of handling strategies, and provide stakeholders with timely and accurate information.

This iterative process allows for proactive decision-making throughout the project lifecycle. The risk monitoring and review process is a critical component of the DOE's commitment to continuous improvement. It ensures that the risk management process is dynamic and responsive, adapting to changes in the project environment and incorporating lessons learned from past projects. Effective communication and consultation are woven into each stage of the DOE's risk management process. Engaging stakeholders in the risk process ensures a shared understanding, promotes consistent treatment, and fosters a proactive management culture within the organization. Communication and consultation are not just about disseminating information but also about fostering dialogue and collaboration. By involving all relevant stakeholders in the risk management process, the DOE ensures that diverse perspectives are considered, and collective wisdom is harnessed.


Risk Management Guide

In conclusion, the DOE *Risk Management Guide* details the Department's risk management process as a comprehensive and systematic approach that ensures risks are proactively identified, analyzed, evaluated, treated, and monitored. This robust process is integral to the DOE's ability to successfully execute challenging capital asset projects. The Department’s commitment to effective risk management is a cornerstone of its project management approach. This article presents a concise overview of the key content within the *Risk Management Guide*. Refer to the guide for additional information.

Project Management Career Development Program (PMCDP) Risk Management Training Classes:

- Project Risk Analysis and Management (Level 1)
- Monitoring and Controlling During Project Execution (Level 2)
- Advanced Risk Management (Level 3)

Interfacing Risk Management and Earned Value Management (EVM) Using an EVM System (EVMS)

David Kester, Office of Project Controls and Policy (PM-30)

Risk management and earned value management (EVM) processes share a common aim of providing project teams with the best information available to make timely and informed decisions. Crucial for unlocking the true potential of each is an Earned Value Management System (EVMS). While EVM establishes the project's performance measurement baseline (PMB) through the integration of scope, schedule, and budget, risk management looks to identify and address threats and opportunities to the PMB. It is the risk management process working together with the EVM process that identifies the impact and probability of a risk threat occurrence and maximizes the exploitation of opportunities. This point is supported by the findings of the Office of Project Management sponsored Arizona State University (ASU) led EVMS academic research study resulting in the Integrated Project / Program Management (IP2M) Maturity and Environment Total Risk Rating (METRR). The study introduces risk management as one of ten management subprocesses[1] (J) for the identification and analysis of risks (J1), and the integration of risks into an EVMS (J2). This is to ensure the technical, schedule, and budget/cost data for the establishment and ongoing control of the PMB, and the development of cost estimates at completion (EACs) are risk informed. Having a risk informed PMB and EACs is imperative to generating reliable, accurate, and complete information. This is a basic tenant and requirement for EIA-748 EVMS compliance.

A National Defense Industrial Association (NDIA) workgroup in 2002[2] explored the integration of risk management with EVM and concluded that although programs would benefit from this integration, 43% of respondents assessed the state of integration as poor or very poor. Respondents identified the most significant barriers to risk management and EVM integration as an inadequate organization structure to accommodate the integration of risk with earned value management, a lack of knowledge, awareness, and expertise, and a customer management culture that is indifferent to risk management and EVM being integrated using an EVMS.

Interestingly, the ASU research study findings and the results of recent and past EVMS compliance reviews since the NDIA workgroup published its results show the removal of these barriers is more difficult than first thought. What remains relevant is the NDIA workgroup's conclusion that what is needed is a linking of risk management and EVM processes within the context of an EVMS.

According to the Department of Energy (DOE) *Risk Management Guide* (DOE G 413.3-7A), the result of the risk planning process is the risk management plan (RMP). The RMP ties together all the components of risk management, which is to say, the identification, analysis, and cataloging of risks. The plan is an integral part of a project's execution strategy that informs all members of the project team and stakeholders how risks will be managed, and who will manage them throughout the life of the project. The guide further states that a companion to the RMP is the risk register which is a document used as a risk management tool acting as a repository for all risks. It is updated continuously and used as a day-to-day guide by the project team. The management of risks (both threats with negative consequences and opportunities with positive benefits) over the life cycle of a project is an integral part of a compliant EVMS. Specifically, it supports establishing the basis for appropriate risk reserves and contingencies. The management of risks also informs generating cost and schedule forecasts to the PMB.

In conclusion, to appreciate the upside of integrating the risk management and EVM processes using an EVMS, one must understand the downside of non-integration. Failure to integrate these processes has resulted in fragmented project teams and management systems pulling in different directions, added costs to manage projects, and ultimately impacting a project's ability to identify, analyze, and possibly mitigate risks that may undermine a project.

[1] Report No. 6, Implementing IP2M ETRR Using EVMS in a Team Environment, July 19, 2022
[2] NDIA 2002: Integrating Risk Management with Earned Value Management

IP2M METRR Training of the Month
IP2M METRR— Workshop B: Evaluating EVMS Maturity?

The Integrated Project/Program Management (IP2M) Maturity and Environment Total Risk Rating (METRR) using EVMS is a novel assessment mechanism developed as part of a DOE-sponsored joint research study led by Arizona State University and representing more than fifteen government and industry organizations.

Click here to view IP2M METRR – Workshop B: Evaluating EVMS Maturity?

Summary: This session presents a continuation of the case study project assessment presented, in which the participants are asked to consider the facts and produce their own maturity evaluation and gaps. It also includes a recorded discussion of multiple teams reporting out on their case study assessment and findings around EVMS maturity for the project at hand, followed by an assessment of the whole project, now that both environment and maturity have been assessed. The intent is to simulate a real-life scenario where practitioners are using the tool to benefit their projects.

Continuous Learning Points (CLPS): Reviewing one hour of snippets will equate to one CLP. To receive credit, FPDs can submit a CLP request under the PMCDP menu in their ESS account. All others may send an email (indicating the snippets viewed) through their respective supervisor to DL-PM-40 to receive a certificate with the appropriate CLPs awarded.

You can find additional IP2M METRR Training at the following links:

https://www.energy.gov/projectmanagement/articles/ip2m-metrr-asu-evms-study
OR
https://community.connect.gov/display/DOEExternal/PM+EVMS+IP2M+METRR+Training

IP2M METRR Publications can be found at https://ip2m.engineering.asu.edu/publications/.

Congratulations To Our Newly Certified FPDs!

Level I

Jaime Hrzic (SC)
Waqas Iqbal (EM)
Christopher Tartaglia (SC)

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Rate Your Experienace with the PM Newsletter

Your feedback is valuable to us! Please rate your experience with this edition of the newsletter on a scale of **1 to 5** (rating of 5 stars being highly satisfied and 1 star being highly dissatisfied).

☆☆☆☆☆

Click here!

PMCDP FY2024 Training Schedule

The training schedule is posted on PM-CONNECT. Save the direct link to the Project Management Career Development Program training schedule to your favorites: https://community.connect.gov/x/BgZcQw

Course Title	LN Code	Dates	CLPs	Details
Cost & Schedule Estimation	001044	January 8-12, 2024	40	10:30am-4:30pm ET Webinar Daily
Executive Communications	001031	January 16-18, 2024	24	10:30am-4:30pm ET Webinar Daily
Program Management and Portfolio Analysis	001025	January 29-February 2, 2024	40	10:30am-4:30pm ET Webinar Daily
Capital Planning for DOE 413.3B	002152	February 6-20, 2024	16	12-3pm ET Tuesdays/Thursdays
Leadership Through Effective Communication	002366	February 13-15, 2024	24	10:30am-4:30pm ET Webinar Daily
Advanced Earned Value Management Techniques	002689	February 27-March 1, 2024	32	10:30am-4:30pm ET Webinar Daily
Project Management Systems and Practices	001024	March 4-8, 2024	40	10:30am-4:30pm ET Webinar Daily
Project Management Simulation	001029	March 11-15, 2024	40	10:30am-4:30pm ET Webinar Daily
LEED for New Construction and Existing Buildings	001936	March 19-21, 2024	20	10:30am-4:30pm ET Webinar Daily
Strategic Planning	001043	March 26-28, 2024	24	10:30am-4:30pm ET Webinar Daily

Registration Is Open!

Beyond COVID – Re-Baselining Project Management

2024 DOE Project Management Workshop

April 2-3, 2024 ***Washington DC***

**** Plus: Optional Project Controls Session April 4, 2024***

More information about the workshop, including the agenda, workshop registration, and hotel booking link, is available online:

2024 Department of Energy Project Management Workshop | Department of Energy

Find up-to-date information and resources anytime!

All PMCDP Course Descriptions and Course Materials can be found in the Course Catalog on PM-CONNECT

Save the direct link to your favorites: **https://community.connect.gov/x/UAT3Rw**

Or, download the Interactive Curriculum Map: **https://community.connect.gov/x/sQd1Qw**

Have a question, bug or glitch in a PMCDP online course, or want to provide feedback? Submit your questions through: **PMCDPOnlineCourseSupport@hq.doe.gov**.

Contact Us!

The Office of Project Management welcomes your comments on the Department's policies related to DOE Order 413.3B. Please report errors, omissions, ambiguities, and contradictions to: PMpolicy@hq.doe.gov. Propose improvements to policies at: https://hq.ideascale.com.

If you have technical questions about PARS, such as how to reset your password, please contact the PARS Help Desk at: PARS_Support@Hq.Doe.Gov. And, as always, PARS documentation, Frequently Asked Questions (FAQs) and other helpful information can be found at Support : PARS Support (doe.gov). The current PARS reporting schedule is located on PM-MAX at the following link: https://community.connect.gov/x/m4lIY

Need information to apply for FPD certification? The Certification and Equivalency Guidelines (CEG) can be found here: https://community.connect.gov/x/IQd1Qw

Can't put your finger on a document or information you were told is available on PM-CONNECT? Looking for information on DOE Project Management? Submit your questions and queries to: PMWebmaster@doe.gov.

To reach the Professional Development Division (PM-40) team:

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If you would like to contribute an article to the Newsletter or want to provide feedback, please contact the Editor at DL-PM-40.