EFCOG Report

More Effective Management of Risks by Escalation

Project Delivery Working Group

Risk Management Task Team

September 2021

Approvals

Prepared by:

Richard Lane
Risk Management
Task Team

Date: 9/24/21

Approved by:

Josh Wargo
Risk Management
Task Team Vice Chair

Date: 9/27/21

Gavin C. Winship
Risk Management
Task Team Chair

Date: 9/24/21

Sam Steiman
Project Management Working Subgroup
Vice Chair

Date: 9/29/21

Tim R. Heath
Project Management Working Subgroup
Chair

Date: 10/04/21

Executive Summary

The Energy Facility Contractors Group (EFCOG) is a self-directed group of contractors of U.S. Department of Energy Facilities. The purpose of EFCOG is to promote excellence in all aspects of operation and management of DOE facilities in a safe, environmentally sound, secure, efficient, and cost-effective manner through the ongoing exchange of information and corresponding improvement initiatives.

The EFCOG Project Management Working Subgroup (PMWSG) established a Risk Management Task Team to promote, coordinate, and facilitate the active exchange of successful Risk Management programs, practices, procedures, lessons learned, and other pertinent information of common interest that have been effectively utilized by DOE contractors and can be adapted to enhance operational excellence and cost effectiveness for continual performance improvement by other DOE contractors.

As part of the EFCOG Risk Management Task Team activities initiatives are identified, prioritized and planned. The planned activities are established in advance of the fiscal year start as part of an EFCOG Project Delivery Working Group (PDWG) Annual Work Plan.

One such initiative is the evaluation of how risks may be handled more effectively by escalation to a higher level for management, how this is done throughout the complex, the pros and cons of each methodology and what recommendations may be made.

This report presents the roadmap for investigations and reviews leading to Risk Management Task Team recommendations. This report, when issued as final, will be a deliverable within the EFCOG PWDG FY2021 Annual Work Plan.

Table of Contents

Contents

Figures

N/A.

Tables

Attachments

1.0 Purpose

Throughout the DOE Complex, risks are managed at various levels, e.g., Project, Program, Enterprise, Site and DOE-HQ.

The purpose of this report is to describe the scenarios in which these risks are managed and develop recommendations as to when it may be more effective and efficient to escalate a risk to be managed at a higher level. These recommendations will be targeted at streamlining the process.

The EFCOG FY 21 Work Plan item is shown in Table 1-1:

Table 1-1 EFCOG FY21 Work Plan (Extract)

Investigate the current methodologies being used to manage risk by escalating the risk to a level where it can be more effectively managed	**Methodologies for managing risks via vertical transfer is not discussed in guidance documents. By developing guidance, risks may be consistently handled in a more consistent, effective and efficient manner (once only) at a higher level for multiple projects within a portfolio or sites within the Complex.**	**Investigate how these systemic and sometimes potentially catastrophic risks are being managed by Programs, Sites or DOE-HQ and provide recommendations to streamline the process via an EFCOG White Paper**

This report satisfies the FY21 Work plan deliverable for risk management by escalation.

2.0 Methodology

A roadmap was developed and utilized to plan the path forward of this initiative.

The roadmap is presented in Attachment 1. Each Roadmap activity is described below.

2.1 Develop Roadmap

This initial step is to develop the roadmap which will map out the future activities of this initiative. The roadmap is a living document and can be revised during the execution of this task. The roadmap is shown in Attachment 1

2.2 Define the Need and Desired outcome of the Evaluation

Methodologies for managing risks via vertical transfer is not discussed in guidance documents. By investigating how this process is being used and providing recommendations targeted at streamlining the process, risks may be consistently handled in a more consistent, effective and efficient manner.

The Project Management Institute (PMI) lists Escalation as one of five possible options to respond to a risk. PMI describes escalation as appropriate when the given risk is outside the scope of the project, program or portfolio, or when the proposed response exceeds the manager's authority. PMI's purpose is to define escalation, but they do not provide practical application.

2.3 Identify Scenarios Where Risks are Escalated

The current practices for managing risks by escalation will be identified. This will include DOE, DOD and commercial.

2.4 Discuss the Scenarios

Discuss each Scenario and its pros and Cons

2.5 Develop Recommendations

Develop recommendations targeted at streamlining the process.

2.6 Team Review Final Report

The EFCOG Risk Task Team will review and comment on the final report.

2.7 Finalize and Issue Report

Comments will be resolved, report finalized, approved and issued.

3.0 Purpose of Evaluating Risk Escalation and Management

Knowing when to escalate a risk(s) is crucial. It is important that escalation not be seen as a failure, but as a responsibility. Escalation is necessary when a response exceeds the given person or entity's authority. The person or entity it is escalated to have to choose between four options, all while making sure the objectives will be met:

- Coach and assist the original person or entity with managing the risk
- Take control themselves
- Delegate to another
- Change directions

4.0 Scenarios Where Risks May be Managed by Escalation

Before discussing different scenarios to escalate a risk, there are criteria that need to be defined which determines if escalation is warranted.

- Does the risk impact another project, Program or entity?
- Does the responsible person or entity have the authority to manage the risk?
- Does mitigation require funding from another entity?
- Does mitigation require another entity to perform handling actions?
- Does the risk cross a predetermined impact threshold?
- Does cost impact of the risk could create funding problems for other entities?
- Is this risk applicable to multiple projects/entities?

Answering these questions will help determine if escalation of the risk and handling will be necessary or of additional benefit.

Various EM and NNSA sites have differing methodologies to manage risk by escalation. In this report, those methodologies are presented and discussed with the goal of providing the risk practitioner or risk manager options that can be adopted or tailored to their specific circumstance or institutionalized within the context of a Program.

The methodologies used to manage risk by escalation are found to be generally practiced without specifically formalizing the process. However, within the National Nuclear Security Administration where (NNSA), NA-10 is responsible for the Life Extension Programs (LEPs) a decision diagram to walk through the escalation process is used which illustrates the process from escalating at the site all the way to the Enterprise (see Figure 1).

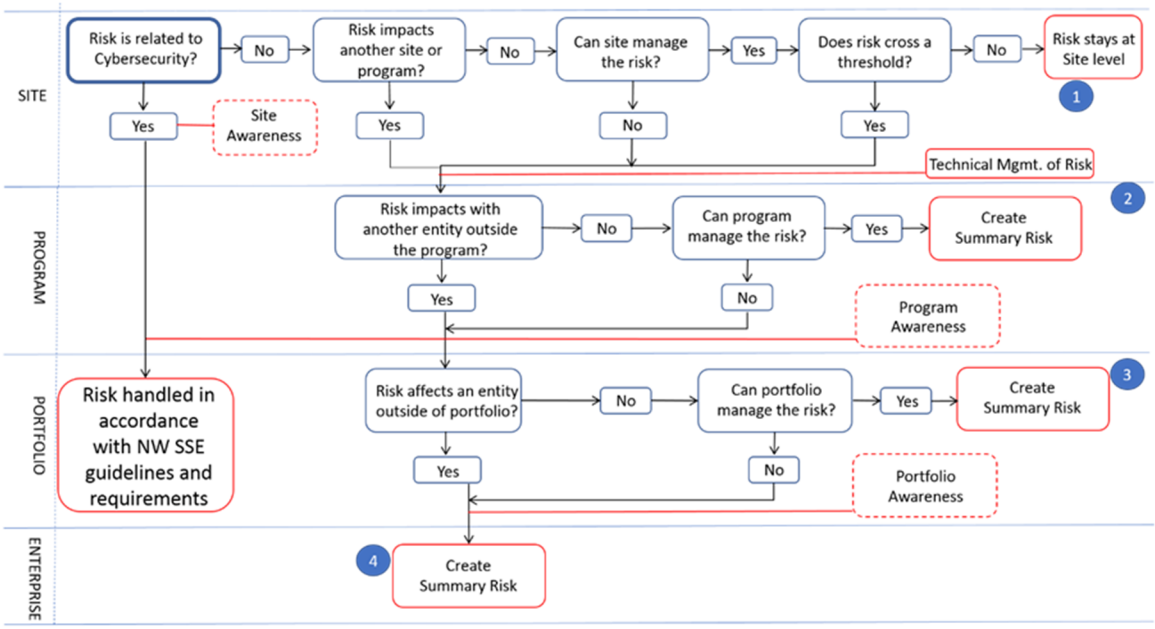


Figure 1: NA-10 Escalation Guidance

The following sections present and discuss both the formalized NA-10 approach and approaches used at other sites throughout the DOE Complex.

4.1 From Project to Program (PBS)

To escalate from a project to the program, a risk would have to either impact another project or the program, need to be managed at a higher level, or cross the program's predetermined impact threshold. Examples of escalation from a project to a program are presented below:

Example 1 Non-formalized Process: An operationally funded project to replace pumps inside a waste tank and perform a bulk waste removal identified a risk that the removal cannot be completed if the intended receipt tank does not have the required space or is not in an acceptable condition to receive the waste (e.g., infrastructure degradation). In the worst case, if this risk is realized the remediation of the receipt tank could cost more than the operations project cost of bulk waste removal. Having a greater amount of Management Reserve (MR) than the actual cost of the project is untenable, therefore while a predetermined impact threshold was not mentioned, it is inherent that the risk is outside of the project manager's authority to manage and needs to be escalated to the program level.

Example 2 Formalized Process (NA-10): Component Z is made by an USA contractor that has made the part for 15 years. But recent production methods have used a new 3D printing technique that has not been destructively tested. Concerns dealing with the parts ability to pass temperature cycling have been raised. Component Z is not used in other DP programs but impacts the Production Agency as it could affect how parts are tested.

Step 1:

- No for cybersecurity;
- Yes, it effects another site or program; which creates a need to escalate to Program via Step 2.
  - A Technical risk will be developed and owned by the site that has the technical expertise to manage it.
  - Evaluate whether the other site effected should also create a risk.
  - The next steps will determine what level the Summary Risk is created at.

Step 2:

- Yes, the program can manage, and there are no impacts with another entity outside the program.
  - A Summary risk will be developed by the Program Risk Manager with the Program Risk Board and will incorporate data from all shared risks. The information will capture Risk IDs, Program ownership, and handling strategies to status and follow all relevant risks. (Do not need to proceed to Step 3.)
  - This summary risk will be owned by the Program Risk Manager.

4.2 Portfolios or Grouped Programs (PBSs)

Example 1 Formalized Process (NA-10): Component Z is made by an USA contractor that has made the part for 15 years. But recent production methods have used a new 3D printing technique that has not been destructively tested. Concerns dealing with the parts ability to pass temperature cycling have been raised. Component Z is used in two other DP programs, as Component B in Program 1 and as Component C in Program 2. It is not a software product.
Risks exist in both programs for Component Z with the same rationale, but different impacts between the programs.

Step 1:

- No for cybersecurity;
- Yes it effects another program, which creates a need to escalate to Program via Step 2.
  - A Technical risk will be developed and owned by the site that has the technical expertise to manage it.
  - The next steps will determine what level the Summary Risk is created at.

Step 2:

- Yes, it impacts another entity outside the program. In this case it impacts two entities in Program 1 and Program 2, which creates a need to escalate to Portfolio via Step 3.
  - This is the results in pushing the escalated risk to the Portfolio Level. Documented for Program Awareness of the decision.

Step 3:

- No, it does not impact another entity and can be manage at the Portfolio Level.
  - A Summary risk will be developed by the Federal Risk Officer with the Federal Risk Board and will incorporate all shared risks (Component Z risks from all programs risk register). The information will capture Risk IDs, Program ownership, and handling strategies to status and follow all relevant risks.
  - This summary risk will be owned by the Federal Risk Officer.

4.3 To DOE Headquarters

Example 1 Non-formalized Process: An operationally funded project carries a risk that funding could become unavailable, and the project placed on hold or temporarily suspended. Obviously, the project and other operationally funded projects in the same situation cannot manage this risk and would be re-baselined (cancelled and then re-started based on the ebb and flow of funding availability and priorities at the time). The Program risk register carries a singular risk for funding not being available to execute

the Program to which each the operationally funded project risks refer. At the Program (PBS) level, managing this risk is only practical to the extent of ensuring the execution of the Program with the available funding works to managed priorities. This Program (PBS) risk points to a funding risk in the Federal Risk Register for the site. Similarly, the other Programs (PBSs) within the site portfolio point to the single risk within the Federal site risk register. This risk is then elevated by the site to DOE-HQ.

Example 2 Formalized Process (NA-10): There is a re-compete for operating contractor selection. Depending on the selection, severe delays may be realized in product delivery and quality will be in question. There is another Entity responsible for contracting with the vendor which lies in another Portfolio area.

Step1:

- No to Cybersecurity;
- Yes to another program or site;
  - Create a Technical risk at this level and escalate to appropriate level upward.

Step2:

- Yes to an entity outside the Program (in this case other programs) Pushed to Step 3 Portfolio Level, but documented at Program Level for awareness of decision.

Step3:

- Yes to impacts an entity outside the Portfolio. Pushed to Step 4 Escalation to the Enterprise Level.
  - This results in the creation of a Summary Risk at the Enterprise Level. The summary risk will be created by the Federal Risk Professional with the Enterprise Risk Board and will include data from all the shared risks. The information will capture Risk IDs, Program and Portfolio ownership, and handling strategies to status and follow all relevant risks.
  - This summary risk will be owned by the Federal Risk Professional.

4.4 Between Organizations in an Enterprise

In Enterprise Risk Management (ERM), risks are identified, analyzed and managed with a holistic view of the organization, in order to integration risks into strategic planning of the company's finances, operations and objectives.

Example 1 Formalized Process (CNS): At Consolidated Nuclear Security (CNS), ERM is utilized in managing risks at both Pantex and Y-12 plant sites. Escalation is an essential part of managing these risks. An escalated risk does not transfer ownership. Escalation has one of two primary purposes:

- Provide situational awareness
- Activate the help chain

The process at CSN starts from the Risk Review Boards (RRBs) for each department and when needed is escalated to the next level.

- RRB - Senior Director / Director RRBs
- Level-1 VP RRBs
- Site Risk Review Boards (SRRBs) / Site Performance Review (SPR)
- Enterprise Risk Review Board (ERRBs) / Organizational Health Review (OHR)

This process is described in more detail within Attachment 2

5.0 Discussion

It can be seen there are many ways to escalate a project risk to be managed more effectively at a higher level. There is no one method fits all as organizationally sites are very different. However, the common theme is the ability to identify a risk (or opportunity) that could be better managed by being escalated. This identification is achieved by answering the questions outlined in Section 4.0. The methodology used to escalate and manage the risk, should be tailored to the individual site organization.

6.0 Recommendations

When performing risk identification and assessment, risk practitioners should be sensitive to the potential for these types of risks to emerge. When they appear to be within the risk population, apply the questions identified in Section 4.0 to guide the methodology used to manage those risks. It is further recommended to become familiar with the presented examples of strategies of how these types of risks have been handled and how the unique organizational structure and risk process of the specific risk management environment will lend itself to effective escalation and management. The EFCOG white Paper “Evaluation of Risk and Opportunity Handling Strategy Effectiveness” (Reference 7.1) provides additional guidance on managing the potential risk impacts of Portfolio and Program Embedded Projects and will assist in determining the selection of handling strategies after escalation.

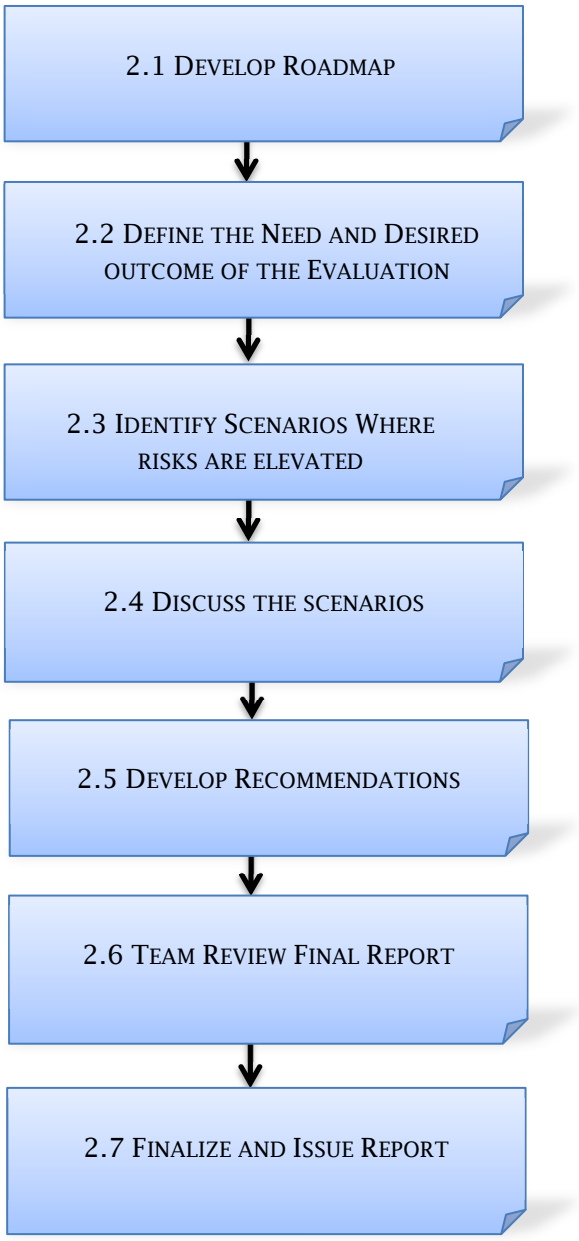
7.0 References

7.1 Evaluation of Risk and Opportunity Handling Strategy Effectiveness, EFCOG, July 2020.

7.2 The Standard for Risk Management in Portfolios, Programs and Projects, PMI, 2019.

7.3 T057: Risk and Opportunity Management Methodology Guidance, Defense Programs Business Process System (DPBPS), 2021.

Attachment 1 – More Effective Management of Risks by Escalation Roadmap



Attachment 2 – Consolidated Nuclear Security (CNS), Enterprise Risk Management (ERM)

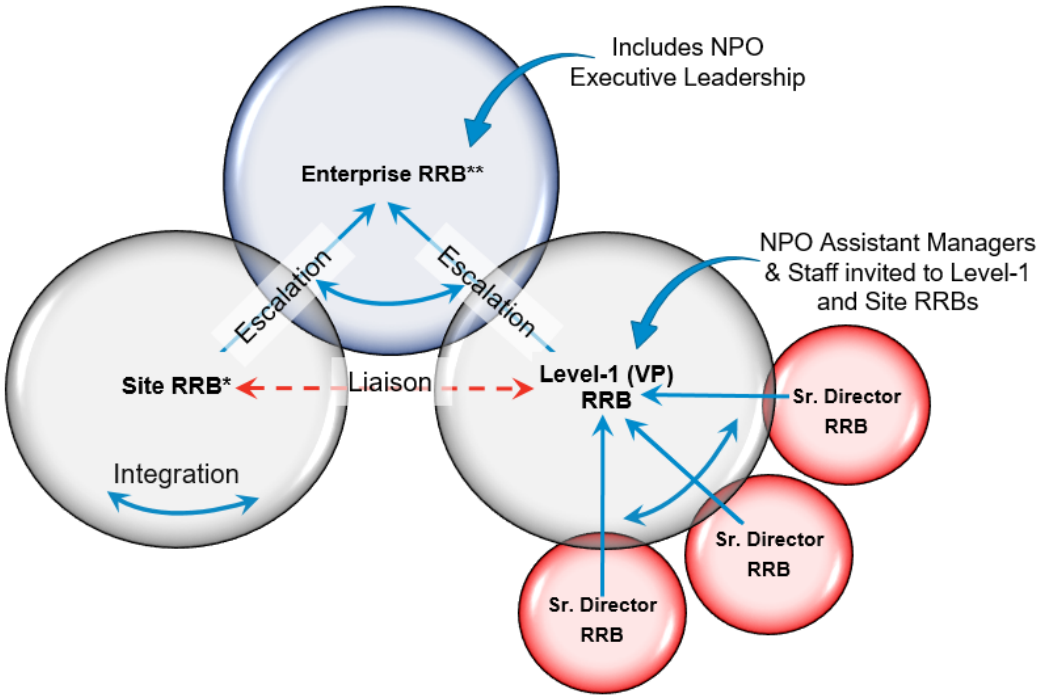


Figure 2: CNS ERM Escalation Process

- **RRB - Senior Director / Director RRBs**
  - Purpose: Identify, Monitor and Control Risks at the Portfolio-level RBS. e.g. Y-12 Operations RRB, ERM RRB
  - Audience: Senior Director / Director, Managers, and key staff
  - Escalation: Level-1 VP RRBs
  - Cadence: Monthly
- **Level-1 VP RRBs**
  - Purpose: Identify, Monitor and Control Risks at the Portfolio-level RBS
  - Audience: Functional Vice President and Senior Directors / Directors
  - Escalation: Site RRB, ERRB
  - Cadence: Monthly

- **Site Risk Review Boards (SRRBs) / Site Performance Review (SPR)**

  - Purpose: Site impacting risks are presented and reviewed during the Pantex and Y-12 Site Performance Reviews. The SRRB is an agenda item covered within the SPR. The SRRB provides a forum for CNS Site Managers to review and act upon risks that may affect operations at each respective plant. The forum improves focus on prevention strategies and improves predictability of organizational performance due to proactive management of threats and opportunities.
  - Audience: Pantex or Y-12 executive and senior level management
  - Escalation: ERRB
  - Cadence: Monthly
- **Enterprise Risk Review Board (ERRBs) / Organizational Health Review (OHR)**
  - Purpose: Cross-site impacting risks are presented and reviewed during the OHR. Enterprise risk visibility is woven into overall OHR meeting agenda. It is the expectation that each organization presenting at OHR, include risk as part of their organizational health discussion. Any risk that is discussed should meet the escalation criteria for either:
    1) situational awareness OR
    2) activating the help chain
  - Audience: Pantex and Y-12 executive and senior level management, NPO
  - Escalation: Highest level Pantex/Y-12 RRB – escalation to CNS and NPO Executive Leadership Teams (ELTs)
  - Cadence: Monthly
- **Deep Dives**
  - Purpose: Each NPO/CNS Top 10 Risk (10 Threats and 10 Opportunities) is presented on a rotating cycle by the Risk Owner (RO), to inform the enterprise of progress made, barriers encountered, and solicit guidance, as necessary.
    - Part of being an NPO/CNS Top 10 risk is routinely presenting deep dive before the OHR audience
  - Audience: Pantex/Y-12 executive leadership and NPO executive leadership
  - Escalation: Highest level Pantex/Y-12 RRB – escalation to CNS and NPO Executive Leadership Teams (ELTs)
  - Cadence: *T*ypically occurs immediately following monthly OHR meeting