

Risk Plan Overview

Risk Event Description

What is the event?

A Source of a risk or hazard – the thing which has the potential to harm or assist e.g. a dangerous chemical, competitors, government.

An Event or Incident – Something that occurs such that the source of risk has the impact concerned e.g. a leak, competitor expands into or leaves your market, new or revised regulations, or some level of observation reaching a particular trigger level.

A Consequence, outcome or impact on a range of stakeholders or assets e.g. environmental damage, loss or increase of market/profits, regulations increase or decreased competitiveness

Risk Drivers

What are the conditions, actions, or events that are likely to trigger the risk event to occur or is a leading indicator to the risk event occurring?

There are two benefits to identifying risk drivers:

- Focus attention on the probable root cause(s) to aid in developing a Risk Response Strategy
- Identify events or trends that should be monitored

Response/ Mitigation Strategy

What action(s) will be taken to limit the likelihood of these event occurring or limiting the impacts?

- Accept:** This response accepts or ignores the risk. This may be the appropriate choice when the impact or likelihood of the risk is so low that it does not warrant further attention or if you have no control whatsoever over the impact or likelihood of the risk. (e.g. the risk that your project will be terminated or be placed on hold due to a company merger).
- Transfer:** This response involves moving all or part of the risk to another party. (e.g. purchase automobile insurance and transfer the risk to the insurance company, for a small monthly fee of course). Transferring risk comes with a cost.
- Mitigate:** This response involves reducing the likelihood that the risk will happen, reducing the impacts of the risk or both. This is what most people are referring to when they are discussing risk management. Most risks can be mitigated with some effort. Although it is unlikely that you can reduce the impact and likelihood of occurrence to zero, this would in essence be eliminating the risk, it is often possible to significantly reduce them. For example, if you have a technical team member who is critical to the success of the project and if that person left, the project schedule would be at risk, you may be able to mitigate the risk by training a backup person to reduce the impact or offer that individual a bonus or incentive to stay reducing the likelihood of occurrence.
- Avoid:** This response focuses on eliminating the risk from the project. This sounds like a great choice, so you might ask why we don't choose this all the time. The reason, it often comes at great cost. To eliminate a risk generally requires that you remove the source of the risk from scope. For example, you may have a schedule risk associated with a new version of software that has not been released yet by the vendor. Although the customer may be expecting this software as part of their project, removal from scope would eliminate this risk.

These general response strategies can be used in combination to address a single risk event. This may be done in the event that your chosen strategy is not working effectively or as a way to attack certain types of risks. For example, you may begin by mitigating a risk reducing both the likelihood and impact. The remaining risk could then either be avoided by a smaller scope reduction, transferred to a vendor or accepted.

Contingency Plan

What action(s) will be taken if this event occurs?

Complete the "Contingency Plan" column for all risk events that the Project Manager deems necessary to adequately address the risks of the project.

The contingency plan describes what needs to be done in the event that the risk actually occurs. When the risk event actually occurs, it is no longer a risk event; it is simply an event and may require a response or plan to be activated. The project manager will need to determine what the criteria are to trigger the need for a contingency plan. One method is to use the "Total Score" column of the risk plan template to determine a threshold that requires the development of a contingency plan. For example, a total score of 85 or higher may be the threshold which triggers the need for a contingency plan to be developed. However, there may be a need to develop a contingency plan for a risk event that scores much lower due to likelihood, but has a high impact. In the end, the project manager must be comfortable with the decision around when to develop a contingency plan.

Risk Timeframe

Critical date(s) or period of exposure

Some risks are related to specific events, milestone dates or time periods. These critical dates should be documented to focus attention on the associated risk at the appropriate time.

| Risk impact level Matrix | | | | | | |
|--------------------------|--|------------|---|----|------------|---|
| Likelihood | Low | | Medium | | | High |
| | Unlikely | | Likely | | | Almost Certain |
| Impacts | Low | | Medium | | | High |
| Schedule | No Impact to Critical Path or Field Work | | Potential to Affect Critical Path or Field Work | | | Certain to Affect Critical Path or Field Work |
| Cost | Less Than | \$ 100,000 | \$ 100,000 | to | \$ 500,000 | Greater Than \$ 500,000 |
| Quality | Minor impact to product deliverables | | Moderate impact to product deliverables | | | Major impact to product deliverables |
| Safety | No Impact to worker safety | | Minor impact to worker safety | | | Major impact to worker safety |
| Scope | < 1% | | 2% to 5% | | | > 5% |

| # | Risk Event Description <i>What is the event?</i> | Category <i>Sub-project, Project Phase, Location etc. (Optional)</i> | Impacts | | | | | | Total Score | Risk Event Drivers <i>What are the conditions, actions, or events that are likely to trigger the risk event to occur or is a leading indicator to the risk event occurring?</i> | Response/ Mitigation Strategy <i>What action(s) will be taken to limit the likelihood of these event occurring or limiting the impacts?</i> | Contingency Plan <i>What action(s) will be taken if this event occurs?</i> | Owner | Risk Timeframe <i>Critical date(s) or period of exposure</i> | Organizational or Cross-Project Impacts | Comments |
|----|--|---|------------|----------|------|---------|--------|-------|-------------|--|---|--|------------|---|---|----------|
| | | | Likelihood | Schedule | Cost | Quality | Safety | Scope | | | | | | | | |
| 1 | Insufficient number of skilled internal technical resources available to support the development of the new system. | Development | H | H | H | M | L | L | 75 | Drivers to monitor: - Development schedules slips - Excessive overtime is needed to keep pace with the schedule - High number of quality errors discovered during the testing cycle Drivers that have occurred: - | Planned Actions: - Train additional internal resources - Hire additional contractors - Add contingency to the budget to allow for overtime work Completed Actions: - | Planned Actions: - Outsource portions of the development to an outside vendor - Adjust project schedule and budget | Jane Smith | 3/1/11 - 6/30/11 | Yes | |
| 2 | Unforeseen ground conditions delaying excavation and foundation work. | Construction | M | H | H | M | H | M | 63 | Drivers to monitor: -Geological surveys indicating potential soil instability -Unanticipated underground utilities or obstructions Drivers that have occurred: - | Planned Actions: - Conduct thorough site investigations before commencing construction - Have contingency plans in place for adapting foundation designs | Planned Actions: -Adjust construction schedule and budget accordingly - | Jane Smith | Ongoing | Yes | |
| 3 | Delays in obtaining necessary permits and approvals from local authorities. | Regulatory | M | H | L | L | M | M | 39 | Drivers to monitor: -Lengthy bureaucratic processes -Changes in local regulations or zoning laws Drivers that have occurred: - | Planned Actions: - Begin permit application process early - Keep close communication with regulatory authorities | Planned Actions: -Have alternate plans for temporary work or storage space if construction is delayed | Jane Smith | Ongoing | Yes | |
| 4 | Supply chain disruptions affecting timely delivery of construction materials. | Procurement | H | H | H | M | M | M | 95 | Drivers to monitor: -Transportation delays.Manufacturer production issues Drivers that have occurred: - | Planned Actions: - Diversify suppliers where possible.Maintain buffer stock of critical materials | Planned Actions: -Source alternative materials or suppliers - | Jane Smith | Ongoing | Yes | |
| 5 | Changes in project scope or design requirements. | Scope | M | M | H | H | M | H | 63 | Drivers to monitor: - Client requests for modifications.Design flaws discovered during construction Drivers that have occurred: - | Planned Actions: - Establish clear change management procedures.Regularly review and update project documentation | Planned Actions: -Allocate extra resources and budget for scope changes - | Jane Smith | Ongoing | Yes | |
| 6 | Labor shortages or strikes impacting construction workforce availability. | Human Resources | M | M | M | M | H | L | 45 | Drivers to monitor: -Competitive job market.Disputes over wages or working conditions Drivers that have occurred: - | Planned Actions: -Maintain good relationships with labor unions and workers.Cross-train workforce to handle multiple tasks | Planned Actions: -Utilize temporary labor agencies if necessary - | Jane Smith | Ongoing | Yes | |
| 7 | Equipment breakdowns or failures during construction activities. | Equipment | M | M | M | M | H | M | 51 | Drivers to monitor: -Aging equipment.Inadequate maintenance procedures Drivers that have occurred: - | Planned Actions: - Implement regular equipment inspections and maintenance schedules.Have backup equipment available or access to rental options | Planned Actions: -Arrange for emergency repairs or replacements - | Jane Smith | Ongoing | Yes | |
| 8 | Environmental regulations affecting construction site operations. | Environmental | L | L | M | M | H | L | 13 | Drivers to monitor: -Changes in environmental laws.Ecological sensitivities of the construction site Drivers that have occurred: - | Planned Actions: - Ensure compliance with all environmental regulations.Implement environmentally-friendly construction practices | Planned Actions: -Adjust construction methods or materials as needed to meet regulations - | Jane Smith | Ongoing | Yes | |
| 9 | Subcontractor performance issues leading to delays or quality problems. | Procurement | M | H | H | M | M | M | 57 | Drivers to monitor: -Subcontractor capacity constraints.Poor subcontractor management.Seasonal variations Extreme weather events (storms, hurricanes, etc.) Drivers that have occurred: - | Planned Actions: - Carefully vet subcontractors before selection.Maintain open communication and oversight of subcontractor activities.implement | Planned Actions: -Have backup subcontractors available if needed - | Jane Smith | Ongoing | Yes | |
| 10 | Adverse weather conditions hindering construction progress. | Environmental | M | H | M | L | H | M | | Drivers to monitor: -Seasonal variations Extreme weather events (storms, hurricanes, etc.) Drivers that have occurred: - | Planned Actions: - Implement flexible construction schedules Utilize weather monitoring systems to anticipate and plan for adverse conditions | Planned Actions: -Extend project timeline as necessary - | Jane Smith | Ongoing | Yes | |
| 11 | Inadequate project planning leading to insufficient resource allocation or inaccurate scheduling. (Project Management) | Project Management | H | H | H | M | L | M | 85 | - Lack of detailed project planning and analysis | Planned Actions:-Conduct thorough project planning, involve key stakeholders in scheduling decisions. | Planned Actions:-Reallocate resources, revise project schedule as needed. | Jane Smith | Early stages of the project | Yes | |
| 12 | Unforeseen ground conditions delaying excavation and foundation work. | Construction | H | H | H | L | M | H | 75 | - Geological surveys indicating potential soil instability - Unanticipated underground utilities or obstructions | Planned Actions:Conduct comprehensive site investigations before commencing construction. | Planned Actions:-Adjust foundation designs and construction schedules accordingly. | Jane Smith | Ongoing | Yes | |
| 13 | Insufficient contingency budget for unexpected project expenses. | Finance | M | H | M | M | L | L | 62 | - Lack of comprehensive risk analysis - Inadequate allocation of contingency funds | Planned Actions:-Conduct comprehensive risk analysis to identify potential cost overruns. Set aside contingency funds based on risk assessment. | Planned Actions:-Reallocate budget from other project areas or seek additional funding sources. | Jane Smith | Throughout the project | Yes | |
| 14 | Lack of coordination among project teams leading to communication breakdowns and delays. | Communication | M | H | M | M | M | M | 68 | - Inadequate communication channels and protocols - Lack of regular project team meetings and updates | Planned Actions:-Implement regular project team meetings and status updates. Establish clear communication channels and protocols. | Planned Actions:Assign dedicated team members responsible for communication management. | Jane Smith | Ongoing | Yes | |
| 15 | Uncertainty in material costs due to market fluctuations. | Procurement | M | M | H | H | M | M | 68 | - Volatility in commodity prices - Changes in trade policies or tariffs | Establish long-term contracts with suppliers - Monitor market trends and adjust procurement strategies accordingly | Planned Actions: -Seek alternative suppliers or materials if cost increases exceed budget constraints - | Jane Smith | Ongoing | Yes | |
| 16 | Inadequate stakeholder engagement leading to conflicting project requirements. | Communication | M | M | M | M | M | H | 68 | - Lack of communication with stakeholders - Changes in stakeholder priorities | Develop clear communication channels and engage stakeholders early in the project - Regularly update stakeholders on project progress | Planned Actions: -Establish a mediation process to resolve conflicts and ensure alignment with project objectives - | Jane Smith | Ongoing | Yes | |
| 17 | Unanticipated changes in government regulations affecting project timelines and costs. | Regulatory | M | M | H | L | L | M | 56 | - Changes in legislation or policy directives - Regulatory delays or extensions | Stay informed about regulatory changes and their potential impact on the project - Maintain flexibility in project planning and budgeting | Planned Actions: -Lobby for regulatory exemptions or extensions if necessary - | Jane Smith | Ongoing | Yes | |
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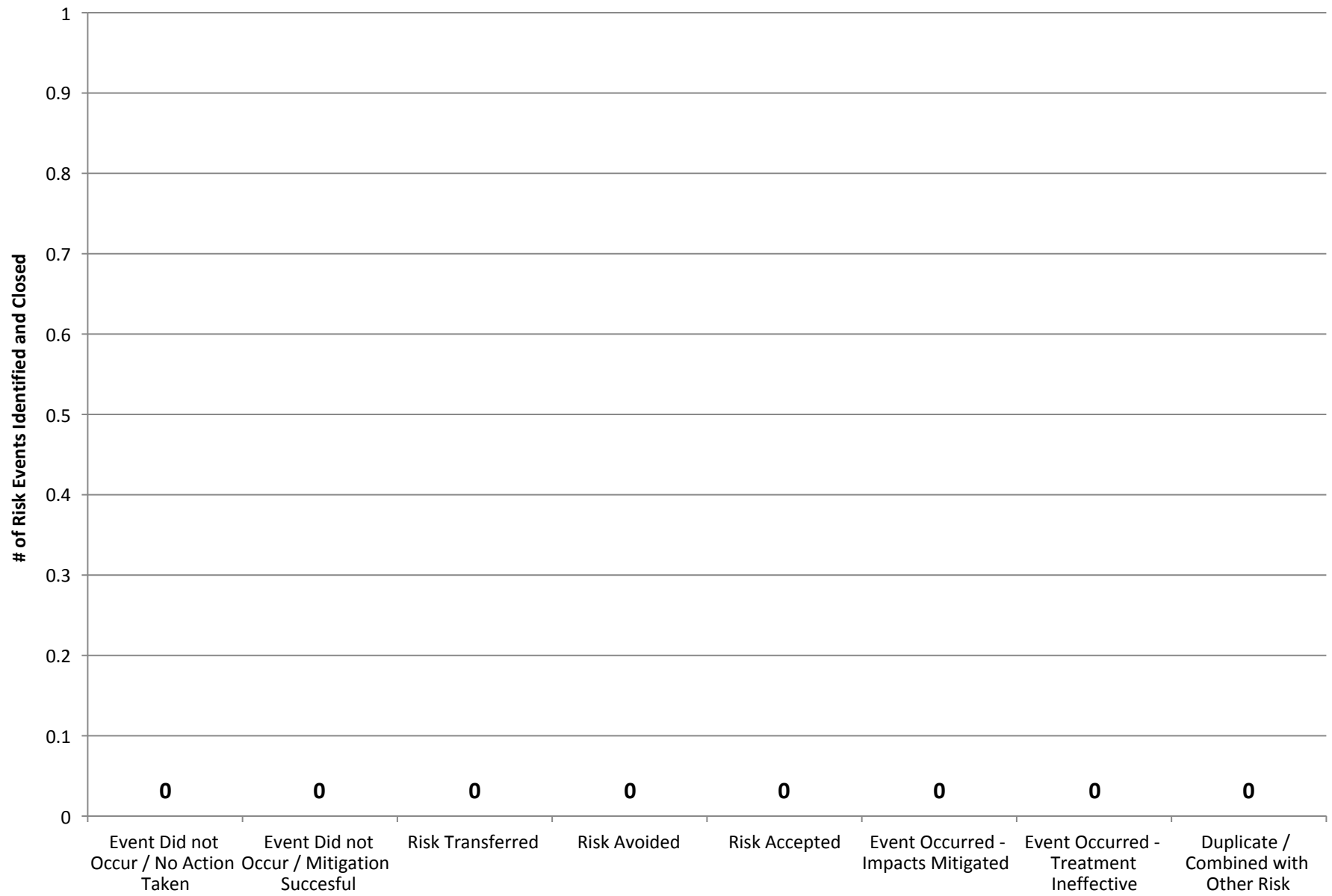
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| Closed Risks | | | | | | | | | | | | | | | | |

Open Item

Completed Activity

Risk Mitigation Results



Risk Categories to Consider

| | |
|----------------------------------|--|
| Capital Project Portfolio | |
| 1 | Funding availability (likelihood of approval) |
| 2 | Project justification (IRR, need, fleet strategy...) |
| 3 | Timing of the project |
| 4 | Regulatory influence |
| 5 | Commitment to the project (FosGen, GenOpts) |
| Engineering | |
| 6 | Overall project concept |
| 7 | Scope (definition, supporting documentation, realistic goals, stability...) |
| 8 | As-built conditions (known, assumed, documented...) |
| 9 | Technology (existing at DTE, established, new concept...) |
| 10 | Design (complexity, integration, past similar experience...) |
| 11 | Configuration management |
| 12 | ESO resources (availability, experience, knowledge, track record...) |
| 13 | A/E resources (availability, experience, knowledge, track record...) |
| 14 | Schedule (likelihood to meet agreed upon deadlines) |
| 15 | Cost (likelihood to control the engineering cost within the agreed upon budget) |
| Project Management | |
| 16 | Project team composition (experience level, competence and skills, compatibility, track record...) |
| 17 | Roles and responsibilities (established, understood, agreed...) |
| 18 | Communication (stakeholders identified) |
| 19 | Scope (expectations understood and agreed upon, realistic goals, stability...) |
| 20 | Plant Management commitment to the project |
| 21 | Weather (impact on outdoor construction work) |
| 22 | Past experience on a similar project (lessons learned incorporated...) |
| 23 | Plant operational constraints |
| 24 | Outage constraints (limited flexibility and opportunities, labor and contractors mandates, micro management, additional requirements...) |
| 25 | Cost estimating (scope quality, WBS, task duration, unit costs, labor plan, outage project or not...) |
| 26 | Scheduling (scope, WBS, task duration, dependencies, integration with outage or plant operation...) |
| 27 | Adherence to the PMP process by all project team members |
| Supply Chain Management | |
| Material | |
| 28 | Lead time |
| 29 | Raw material (availability, cost fluctuation...) |
| 30 | Material origin (logistics, imports...) |
| 31 | Competitive situation |
| 32 | Vendor performance (level of service, reliability, track record...) |
| 33 | Technology (existing at DTE, established, new...) |
| 34 | Schedule (likelihood to meet agreed upon deadlines...) |
| 35 | On site storage requirements |
| Contracted Labor | |
| 36 | Competitive situation |
| 37 | Vendor selection (new or well established relationship, past performance, reliability...) |
| 38 | Availability and workload (contractor, supervision, key personnel...) |
| 39 | Union labor (availability, productivity, skills...) |
| 40 | Safety record |
| 41 | Construction permits |
| 42 | Contract terms (firm bid, T&M, ...) |
| 43 | Cost (potential for exceeding contracted labor budget...) |
| 44 | Schedule (likelihood to meet agreed upon deadlines...) |
| Construction | |
| 45 | Access to site |
| 46 | Access to equipment (lifting, rigging, scaffolding...) |
| 47 | Weather |
| 48 | Safety requirements |
| 49 | Training requirements (safety and other) |
| 50 | Labor plan (DeCo labor or contractor) |
| 51 | DeCo labor (availability, crew consistency, productivity, ...) |
| 52 | Lay down areas |
| 53 | Plant operational constraints (equipment availability, shut down potential...) |
| 54 | Outage constraints (limited flexibility and opportunities, equipment availability, shut down potential...) |
| 55 | Site conditions (soil quality...) |
| 56 | Cost (potential for exceeding the construction budget...) |
| 57 | Schedule (constraints, deadlines, key dependencies...) |
| Other | |
| 58 | Soil Assessment |
| 59 | Excavation |
| 60 | Planning and Coordinating with Vendors |
| 61 | Inclement Weather |
| 62 | Regulations and Policy |
| 63 | Inadequate Bearing Soil Layer |
| 64 | Working on or near Water |
| 65 | Special Equipment Availability |
| 66 | Improper Engineering |
| 67 | Improperly Trained Workforce |
| 68 | Poor Planning |
| 69 | Communications Problems |
| 70 | Logistics |
| 71 | Theft |
| 72 | Craft Shortage |
| 73 | Permit Delay/Inspection Delay |
| 74 | Hazardous Materials |
| 75 | Missing/Inadequate Drawings or Specifications |
| 76 | Scope Creep/Change Requests |
| 77 | Late Delivery of Material/Supplies |
| 78 | Lay down/Confined Space |
| 79 | Contract Award Process |
| 80 | Technological Advancement |

High = 5

Medium = 3

Low = 1

Total Score = (Schedule + Cost + Quality + Safety + Scope) x Likelihood