

Rethinking Risk Management: Additional Material #2

Evaluating Your Program: Streamlined Version of the Risk Diagnostic Method

Mission Success in Complex Environments

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Streamlined Risk Diagnostic Method

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Streamlined Risk Diagnostic Method

Introduction

This workbook provides a streamlined version of the Risk Diagnostic method, which is designed to enable you to quickly assess a program's mission risks. The worksheets in this workbook are based on the standard set of drivers for software development and deployment which are the basis for the standard set of mission risks. The workbook is divided into two parts. Part 1 provides worksheets for analyzing impact, probability, and risk exposure for each mission risk. Part 2 provides a worksheet for summarizing the results of Part 1 in a tabular risk profile format.

Streamlined Risk Diagnostic Method

Part 1: Analyzing Mission Risks

Complete the four steps described in the directions below. Criteria for evaluating probability (called *Mission Risk Probability Criteria*), impact (called *Mission Risk Impact Criteria*), and risk exposure (called *Mission Risk Exposure Matrix*) are provided on the next two pages. The criteria are used when completing Steps 1-3 below.

Directions for Part 1

| | |
|---------------|--|
| Step 1 | <p>Before conducting this step, review the following two items: (1) the worksheets provided for Part 1 (starting on p. 7) and (2) the <i>Mission Risk Probability Criteria</i> provided on the next page. Refer to the <i>Part 1 Example</i> on p. 6 for an example of a completed worksheet for this step.</p> <p>Select a mission risk to evaluate, and review the mission risk statement provided. Evaluate the likelihood that the mission risk statement is true by selecting the most appropriate response. Refer to the <i>Mission Risk Probability Criteria</i> for a definition of each probability value, if needed.</p> <p>Document the rationale for your selection of the probability value.</p> |
| Step 2 | <p>Before conducting this step, review the following two items: (1) the worksheet provided for Part 1 (starting on p. 7) and (2) the <i>Mission Risk Impact Criteria</i> provided on the next page. Refer to <i>Part 1 Example</i> on p. 6 for an example of a completed worksheet for this step.</p> <p>Review the mission risk statement for the mission risk you are evaluating. Evaluate the magnitude of the impact on key objectives by selecting the most appropriate response. Refer to the <i>Mission Risk Impact Criteria</i> for a definition of each impact value, if needed.</p> <p>Document the rationale for your selection of the impact value. Note that the impact of each mission risk is assumed to be <i>severe</i>. You are only required to document a rationale for impact if (1) the impact is less than <i>severe</i>, (2) you are unable to determine the impact value (i.e., <i>unknown</i>), or (3) you choose not to evaluate the impact value (i.e., <i>not evaluated</i>).</p> |
| Step 3 | <p>Before conducting this step, review the following two items: (1) the worksheet provided for Part 1 (starting on p. 7) and (2) the <i>Mission Risk Exposure Matrix</i> provided on p. 5. Refer to <i>Part 1 Example</i> on p. 6 for an example of a completed worksheet for this step.</p> <p>Locate (1) the row in the <i>Mission Risk Exposure Matrix</i> corresponding to the probability value you determined in Step 1 and (2) the column in the matrix corresponding to the impact value you determined in Step 2. The mission risk exposure is the value in the box representing the intersection of the values of impact and probability. If either the probability or impact value is <i>unknown</i> or <i>not evaluated</i>, you cannot determine risk exposure for the mission risk; in this case, select either <i>unknown</i> or <i>not evaluated</i> as the value of risk exposure.</p> |
| Step 4 | Complete Steps 1-3 for each driver. |

Mission Risk Probability Criteria

| Probability | Description |
|---------------|---|
| Maximum | The mission risk statement is almost certainly true. Almost no uncertainty exists. |
| High | The mission risk statement is most likely true. There is some chance that the statement could be false. |
| Medium | The mission risk statement is just as likely to be true or false. |
| Low | The mission risk statement is most likely false. There is some chance that the statement could be true. |
| Minimal | The mission risk statement is almost certainly false. Almost no uncertainty exists. |
| Unknown | More information is needed to evaluate probability. |
| Not Evaluated | The mission risk is not relevant at this point in time. It was not evaluated. |

Mission Risk Impact Criteria

| Impact | Description |
|---------------|---|
| Severe | If the mission risk statement were true, the effect on program objectives would be extremely strong. The program would almost certainly fail. |
| High | If the mission risk statement were true, the effect on program objectives would be strong. The program would most likely fail; however a small chance of success exists. |
| Medium | If the mission risk statement were true, the effect on program objectives would be moderate. The program is just as likely to succeed as it is to fail. |
| Low | If the mission risk statement were true, the effect on program objectives would be small. The program would most likely be able to succeed; however a small chance of success exists. |
| Minimal | If the mission risk statement were true, the effect on program objectives would be negligible. The program would almost certainly succeed. |
| Unknown | More information is needed to evaluate impact. |
| Not Evaluated | The mission risk is not relevant at this point in time. It was not evaluated. |

| Mission Risk Exposure Matrix | | | | | | |
|------------------------------|---------|---------|---------|---------|---------|---------|
| | | Impact | | | | |
| | | Severe | High | Medium | Low | Minimum |
| Probability | Maximum | Severe | High | Medium | Low | Minimal |
| | High | High | Medium | Low | Minimal | Minimal |
| | Medium | Medium | Low | Minimal | Minimal | Minimal |
| | Low | Low | Minimal | Minimal | Minimal | Minimal |
| | Minimum | Minimal | Minimal | Minimal | Minimal | Minimal |

Part 1 Example

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|---|---|--|---|
| 1. Program objectives (product, cost, schedule) are unrealistic or unachievable. <i>Consider</i> Alignment of technical, cost, and schedule objectives; inherent technical risk; technology maturity; resources available | <input type="checkbox"/> Maximum | <input checked="" type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input checked="" type="checkbox"/> Low | <input type="checkbox"/> Low | <input checked="" type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

Rationale for Probability

Worked with experts in the field to ensure technical goals were reasonable; a small stretch goals. Used independent cost/schedule estimates. Our technology is considered mature or rapidly nearing maturity. Abundance of experience and expertise available through multiple suppliers either already on contract or eager to bid. The uncertainty is with the stretch goal and the "nearing" maturity technology.

Rationale for Impact

1 Program Objectives

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|---|--|--|--|
| 1. Program objectives (product, cost, schedule) are unrealistic or unachievable. <i>Consider</i> Alignment of technical, cost, and schedule objectives; inherent technical risk; technology maturity; resources available | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
|---------------------------|
| |

| Rationale for Impact |
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| |

2 Plan

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|--|--|--|--|
| 2. The plan for developing and deploying the system is insufficient. <i>Consider</i> Acquisition or development strategy; program plan; resources; funding; schedule; roles and responsibilities | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
|---------------------------|
| |

| Rationale for Impact |
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| |

3 Process

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|--|--|---|---|
| 3. The process being used to develop and deploy the system is insufficient. <i>Consider</i> Process design; measurements and controls; process efficiency and effectiveness; acquisition and development life cycles; training | <input type="checkbox"/> Maximum <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/> Minimal <input type="checkbox"/> Unknown <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Severe <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/> Minimal <input type="checkbox"/> Unknown <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Severe <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/> Minimal <input type="checkbox"/> Unknown <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
|---------------------------|
| Empty space for rationale |

| Rationale for Impact |
|---------------------------|
| Empty space for rationale |

4 Task Execution

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|---|--|--|--|
| 4. Tasks and activities are performed ineffectively and inefficiently. <i>Consider</i> Experience and expertise of management and staff; staffing levels; experience with the acquisition and development life cycles | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

Rationale for Probability

Rationale for Impact

5 Coordination

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| | Mission Risk Statement | Probability | Impact | Risk Exposure |
|----|---|--|--|--|
| 5. | Activities within each team and across teams are not coordinated appropriately. | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <i>Consider</i> | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | Communication; information sharing; dependencies; relationships; partners and collaborators | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

Rationale for Probability

Rationale for Impact

6 External Interfaces

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|---|--|--|--|
| 6. Work products from suppliers, partners, or collaborators will not meet the program's quality and timeliness requirements. <i>Consider</i> Applications; software; systems or sub-systems; hardware | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
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| Rationale for Impact |
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7 Information Management

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| | Mission Risk Statement | Probability | Impact | Risk Exposure |
|----|---|--|--|--|
| 7. | The program's information is not managed appropriately. | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <i>Consider</i> | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | Usability; confidentiality; integrity; availability | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

Rationale for Probability

Rationale for Impact

8 Technology

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|--|--|--|--|
| 8. The program team does not have the tools and technologies it needs to develop the system and transition it to operations. <i>Consider</i> Software applications; infrastructure; systems; databases | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

Rationale for Probability

Rationale for Impact

9 Facilities and Equipment

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|---|--|--|--|
| 9. Facilities and equipment are insufficient to support the program. <i>Consider</i> Building; physical work spaces; support equipment; supplies; other resources | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

Rationale for Probability

Rationale for Impact

10 Organizational Conditions

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| | Mission Risk Statement | Probability | Impact | Risk Exposure |
|-----|--|--|--|--|
| 10. | Enterprise, organizational, and political conditions are hindering completion of program activities. | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <i>Consider</i> | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | Stakeholder sponsorship; actions of upper management; effect of laws, regulations, and policies | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

Rationale for Probability

Rationale for Impact

11 Compliance

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|---|--|--|--|
| 11. The program does not comply with all relevant policies, laws, and regulations. <i>Consider</i> Policies; laws; regulations; standards of care | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
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| Rationale for Impact |
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12 Event Management

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|--|--|--|--|
| 12. The program has insufficient capacity and capability to identify and manage potential events and changing circumstances. <i>Consider</i> Risk management plan, process, and tools; schedule slack; funding reserve; risk mitigation plans; program continuity and contingency plans; opportunity management plan, process, and tools | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
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| Rationale for Impact |
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13 Requirements

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|---|--|--|--|
| 13. System requirements are not well understood. <i>Consider</i> Customer, user, and stakeholder requirements and needs; functional and non-functional requirements; operational requirements; system growth and expansion needs; technology maturity | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
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| Rationale for Impact |
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14 Design and Architecture

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|--|--|--|--|
| 14. The design and architecture are insufficient to meet system requirements and provide the desired operational capability. <i>Consider</i> Interfaces; dependencies; software and system architecture; operational requirements; technology maturity | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
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| Rationale for Impact |
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15 System Capability

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|--|--|--|--|
| 15. The system will not satisfactorily meet its requirements. <i>Consider</i> Functional; performance; operational; reliability; security; safety; usability; maintainability; technology maturity | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
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| Rationale for Impact |
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16 System Integration

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|--|--|--|--|
| 16. The system will not sufficiently integrate and interoperate with other systems when deployed. <i>Consider</i> Interfaces; applications; tools; hardware; data; technology maturity | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
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| Rationale for Impact |
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17 Operational Support

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|---|--|--|--|
| 17. The system will not effectively support operations. <i>Consider</i> Business and operational workflows; support of organizational and enterprise missions; operational risk mitigation; disaster recovery, contingency and business continuity plans; technology maturity | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
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| Rationale for Impact |
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18 Adoption Barriers

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| Mission Risk Statement | Probability | Impact | Risk Exposure |
|--|--|--|--|
| 18. Barriers to customer/user adoption of the system have not been managed appropriately. <i>Consider</i> User acceptance; stakeholder sponsorship; transition to operations; user support | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
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| Rationale for Impact |
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19 Operational Preparedness

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| | Mission Risk Statement | Probability | Impact | Risk Exposure |
|-----|---|--|--|--|
| 19. | People will not be prepared to operate, use, and maintain the system. | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <i>Consider</i> | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | Policies; procedures; training | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
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| Rationale for Impact |
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20 Certification and Accreditation

Directions:

1. Evaluate the likelihood that the mission risk statement is true. Refer to the *Mission Risk Probability Criteria* for a definition of each probability value.
2. Evaluate the magnitude of the impact on key objectives if the mission risk statement were true. Refer to the *Mission Risk Impact Criteria* for a definition of each impact value.
3. Use the *Mission Risk Exposure Matrix* to determine risk exposure using the values of probability and impact.
4. Document your rationale for the probability value and, when appropriate, the impact value you selected above.

| | Mission Risk Statement | Probability | Impact | Risk Exposure |
|-----|--|--|--|--|
| 20. | The system will not be appropriately certified and accredited for operational use. | <input type="checkbox"/> Maximum | <input type="checkbox"/> Severe | <input type="checkbox"/> Severe |
| | | <input type="checkbox"/> High | <input type="checkbox"/> High | <input type="checkbox"/> High |
| | <i>Consider</i> | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium | <input type="checkbox"/> Medium |
| | Compliance with policies, laws, and regulations; acceptable mitigation of risk | <input type="checkbox"/> Low | <input type="checkbox"/> Low | <input type="checkbox"/> Low |
| | | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal | <input type="checkbox"/> Minimal |
| | | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown | <input type="checkbox"/> Unknown |
| | | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated | <input type="checkbox"/> Not Evaluated |

| Rationale for Probability |
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| Rationale for Impact |
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Part 2: Documenting the Mission Risk Profile

Directions: Record the values of impact, probability, and risk exposure for each mission risk in the *Mission Risk Profile* table on the next two pages. An example of a completed *Mission Risk Profile* spreadsheet is shown below.

Mission Risk Profile

| Mission Risk | Impact | Probability | Risk Exposure |
|--|--------|-------------|---------------|
| 1. Program objectives (product, cost, schedule) are unrealistic or unachievable. | Severe | High | High |
| 2. The plan for developing and deploying the system is insufficient. | Severe | Low | Low |
| . | . | . | . |
| 11. The program does not comply with all relevant policies, laws, and regulations. | Low | Low | Minimal |
| . | . | . | . |
| 19. People will not be prepared to operate, use, and maintain the system. | Severe | Low | Low |
| 20. The system will not be appropriately certified and accredited for operational use. | Severe | High | High |

Streamlined Risk Diagnostic Method

Mission Risk Profile

| Mission Risk | Impact | Probability | Risk Exposure |
|--|--------|-------------|---------------|
| 1. Program objectives (product, cost, schedule) are unrealistic or unachievable. | | | |
| 2. The plan for developing and deploying the system is insufficient. | | | |
| 3. The process being used to develop and deploy the system is insufficient. | | | |
| 4. Tasks and activities are performed ineffectively and inefficiently. | | | |
| 5. Activities within each team and across teams are not coordinated appropriately. | | | |
| 6. Work products from suppliers, partners, or collaborators will not meet the program's quality and timeliness requirements. | | | |
| 7. The program's information is not managed appropriately. | | | |
| 8. The program team does not have the tools and technologies it needs to develop the system and transition it to operations. | | | |
| 9. Facilities and equipment are insufficient to support the program. | | | |
| 10. Enterprise, organizational, and political conditions are hindering completion of program activities. | | | |

Streamlined Risk Diagnostic Method

Mission Risk Profile (cont.)

| Mission Risk | Impact | Probability | Risk Exposure |
|--|--------|-------------|---------------|
| 11. The program does not comply with all relevant policies, laws, and regulations. | | | |
| 12. The program has insufficient capacity and capability to identify and manage potential events and changing circumstances. | | | |
| 13. System requirements are not well understood. | | | |
| 14. The design and architecture are insufficient to meet system requirements and provide the desired operational capability. | | | |
| 15. The system will not satisfactorily meet its requirements. | | | |
| 16. The system will not sufficiently integrate and interoperate with other systems when deployed. | | | |
| 17. The system will not effectively support operations. | | | |
| 18. Barriers to customer/user adoption of the system have not been managed appropriately. | | | |
| 19. People will not be prepared to operate, use, and maintain the system. | | | |
| 20. The system will not be appropriately certified and accredited for operational use. | | | |