Risk Assessment Worksheet and Management Plan

Customer/Project Name:	

The Basics

There are four steps to assessing and managing risks, and effective risk management requires all four of them.

1. Identify the risks
2. Qualify the risks
   a. Assess each risk for impact to the project if it does occur
   b. Assess the likelihood of the risk occurrence
3. Plan for risks by creating a watchlist of risk triggers and how to handle the risk if it does occur
4. Monitor and manage risks

To adequately analyze risk, you'll need a detailed plan. So, the best time to perform an initial risk analysis is just prior to starting the project. Don't make the mistake of thinking that risk analysis is a one-time task. You'll want to reevaluate the risk management plan and your risk analysis from time to time throughout the project and whenever major deviations from the plan occur.

Identify Risks

There are numerous ways to identify risks. If you have a limited amount of time, the best ways to identify risks are to:
- Review the following project risk assessment
- Review the project schedule task list looking for:
  - Tasks for which your team has no expertise. The duration and cost estimates for these tasks are more likely to be inaccurate.
  - Duration and cost estimates that are aggressive. Ask the estimators how confident they are in their estimates, especially for critical path tasks.
  - Situations where you have a limited number of resources that can do particular tasks and where those resources are fully allocated, over allocated, or may become unavailable. A resource can become unavailable when it leaves your organization or because of other commitments within the organization.
  - Tasks with several predecessors. The more dependencies a task has, the greater the likelihood of a delay.
  - Tasks with long durations or a lot of resources. The estimates for these larger tasks are more likely to be inaccurate
- Brainstorm and talk with the experts
  - All of your project risks may not be apparent from analyzing the project schedule. It's worth your time to call a brainstorming meeting with key project resources and ask where they see the most risk to the project. You may be surprised at what you uncover.
  - If you have some experienced project managers available, have them review your schedule. Also, talk with people who have expertise in particular areas of the project. For example, if you're planning to use an outside contractor, talk to people who have used that contractor or other contractors.

Qualify Risks

As you go through the following risk analysis, you will be asked to qualify the risk probability and impact in terms of Low, Medium, and High. Qualifying risks is a discipline unto itself and the accuracy of your results is commensurate with the techniques you use and your historical experience with risk analysis.

Before you begin any qualification analysis, you will want to determine your organization's tolerance to risk. Can the organization operate in a high-risk environment or are they conservative and want only low-risk projects? If you work for a small company, an additional project cost of $250,000 or a delay of *two* 2 months may put your entire company at risk. If you work for a large organization, these overruns may be acceptable for a project. How much cost and delay is acceptable? Remember that this isn't your preference; it's just the bottom-line numbers you can tolerate. Determine and write down the company's risk tolerance.

Next, you will want to qualify each risk item by asking:
- What is the impact to the project if the risk item occurs (Low, Medium, High)?
- What is the probability or likelihood of the risk item occurring (Low, Medium, High)?
  - Review archived projects to see if similar tasks from the past have taken longer than your estimates or

have cost more.
  o Find out your team's confidence level. If the resources that will do the work aren't comfortable with your cost or duration estimates, then the risk is more likely to occur.

Once the impact and probability has been determined, you will want to prioritize which risks are going to be actively managed focusing on the following order in priority (you might want to modify this priority table according to your organization's sensitivities):

		IMPACT		
		High	Medium	Low
PROBABILITY	High	1	1	2
	Medium	2	3	4
	Low	4	5	6

Managing Risks

Once you've identified and qualified the risks, you need to plan to manage them. Because risk planning can take a lot of time and energy, you may want to plan for only the high-priority risks (priority 1) or the medium to high-priority risks (priorities 1 to 3). Planning entails:

- Identifying triggers for each risk
- Identifying the plan for each risk

Identify Triggers

Triggers are indicators that a risk has occurred or is about to occur. The best triggers tell you well in advance that a problem will occur.

To identify triggers, talk with the people who are most likely to cause the risk to occur and those who are most likely to feel its impact. Ask them how they would know that the problem is occurring. Start with how they would know that the problem has already occurred, and then work backward to determine how they would know before the problem actually occurred. As the project manager, consider how the risk would be reflected in the project schedule. Would the project schedule show overtime for a specific resource on earlier tasks? Would the project schedule show delays in specific tasks?

For each risk you're addressing, create a watchlist that shows the possible triggers, when they are likely to occur, and who should watch for the trigger.

Identify Plans

Once you've identified triggers and created your watchlist, you need to create action plans to manage your risks. You can choose to manage risks in one of four basic ways:

- Avoidance – You can change the project plan and project schedule to eliminate the risk or to protect the project objectives from its impact. More in-depth planning or requirements gathering may be one way to avoid a risk later in a project. Reducing scope to avoid high-risk activities, adding resources, or adding time may be other ways to avoid risk. For example, if you're dependent on a single resource with specific expertise, consider training another resource in that expertise.

- Transference – Risk transference is seeking to shift the consequence of a risk to a third party together with the ownership of the response. It does not eliminate the risk. You can buy insurance to cover the cost of a risk item occurring. Another transference technique is to enter into a fixed price contract, which transfers the risk to the

performing party.

- Mitigation – Mitigation seeks to reduce the probably and/or consequences of an adverse risk event to an acceptable threshold by taking actions ahead of time, thereby decreasing the likelihood of the problem occurring. Many times, it is much more effective to reduce the probability of a risk even occurring than trying to repair the consequences after it has occurred. For example, if you're dependent on an outside vendor making its delivery dates, your contract with the vendor might include penalties for late delivery, in order to offset your potential losses. Risks that seem large enough to threaten the project should lead to an "early prototype or pilot" effort being before full implementation.

- Acceptance – The final technique of dealing with risk is to respond to the risk item with a contingency plan should the problem occur. For example, if a task is at risk of being delayed, your plan may be to add additional resources to the task. Your contingency plan should include any work that must be done ahead of time to make the contingency successful. For example, you'll want to make sure that the additional resources are available in case you need them.

Keep in mind that risk management plans can have unexpected ramifications. The prudent project manager might want to model each plan in their project-scheduling tool to see the plan's impact on the project. Look for new risks that occur as a result of the project schedule and address them.

Monitor and Manage Risks
Your risk management plan is in place. Now your job is to make sure you and others on the project team act on it. Take any actions necessary according to the risk response you have chosen. Monitor your watchlist to see if triggers are occurring, and implement contingency plans as needed. Be sure to reassess your risks regularly. You might find the following ideas useful for monitoring your risks:

- Move your High Risk items into your Issues Matrix to be visited during each project status meeting
- Include a Risks section in status reports and request that resources identify any assumptions they are making, as well as any new risks they see
- Set up regular meetings with team members to reevaluate the risk management plan and to identify new risks to the project
- Each time your project's actual progress varies significantly from the project schedule, reassess the risks and reevaluate your risk management plan

With a little preplanning and thought, you can significantly decrease the risks to your project.

Risk Analysis Plan
Proceed through the following list and assess each item for risk using previous experience with similar products, expert opinions on relevant technologies, and brainstorming with a cross-functional group and assess the severity of the risk for each item.

Risk Factor	Impact Description	Impact Qualification (L, M, H)	Probability Qualification (L, M, H)	Priority (See table)
A) Budget				
1) Estimated total budget for project	L) Less than $100,000 M) $100,001 to $700,000 H) More than $700,000			
2) What is the level of confidence in the accuracy of the budget estimate	L) High M) Medium H) Low			
3) What is the possibility of budget overrun?	L) Not likely M) Moderately possible H) Highly probable			

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B) Duration				
1) What is the estimated elapsed time to complete the project?	L) Less than 2 months M) 2 months to 6 months H) More than 6 months			
2) What is the level of confidence in the accuracy of the project schedule estimate?	L) High M) Medium H) Low			
3) What is the degree of flexibility in the schedule and completion date?	L) High flexibility M) Moderate flexibility H) Limited or no flexibility			
4) What is the life expectancy for the solution?	L) Less than 2 years M) 2 to 5 years H) More than 5 years			

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C) Project Team Staffing				
1) What is the expected maximum size of the project team?	L) 4 or less M) 5 to 10 members H) Over 10 members			
2) Is the project staffing level (or expected level) adequate for the project?	L) Adequate level of staffing M) Slightly understaffed, anticipate minor impact on project schedule H) Severely understaffed, will lengthen project schedule			
3) What percentage of the project team can be staffed from existing personnel?	L) 80-100% M) 50-79% H) 0-49%			
4) Due to specialized skill requirements, budget constraints, etc.; how difficult will it be to obtain additional permanent staff or contractors?	L) Not difficult M) Somewhat difficult H) Very difficult			
5) Project Manager availability: full versus part time	L) Full time basis M) Full time w/ minor responsibilities elsewhere H) Equally involved on 1 or more other projects			
6) Shared work experience of team	L) All have worked together before M) Some have worked together before H) None have worked together before			
7) Number of times team has implemented this solution	L) More than once M) Once H) None			
8) Physical location of project team	L) Single location (building) M) Most of team in single location H) Most of team in multiple sites			
9) Contract Help	L) No contract help needed for solution M) The Company is prime with 1 subcontractor H) The Company is prime with multiple subcontractors			

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Risk Factor	Impact Description	Impact Qualification (L, M, H)	Probability Qualification (L, M, H)	Priority (See table)
D) Client-User Staffing				
1) What is the expected maximum size of the client project team?	L) 4 or less M) 5 to 10 members H) Over 10 members			
2) Is the client-user staffing level (or expected level) adequate for the project?	L) Adequate level of staffing M) Slightly understaffed, anticipate minor impact on project schedule H) Severely understaffed, will lengthen project schedule			
3) What percentage of the client-user team can be staffed from existing personnel?	L) 80-100% M) 50-79% H) 0-49%			
4) Due to specialized skill requirements, budget constraints, etc., how difficult will it be to obtain additional permanent staff or contractors?	L) Not difficult M) Somewhat difficult H) Very difficult			

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E) User Departments				
1) How many departments or organizations can be described as primary users for this project?	L) 1 M) 2 H) 3 or More			
2) How many departments are involved as secondary users in this project (e.g., primary to get information for secondary reports.)?	L) None to 1 M) 2 H) 3 or more			
2) Number of different physical locations to implement system	L) 1 site M) 2 to 3 sites H) Over 3			

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F) Administration and Control				
1) Has a project process and related standards been established for this type of project (i.e. application development, infrastructure, etc.)?	L) Yes, project team trained and has applied methodology in past projects M) Yes, first time use by project team H) No, unknown risks & no applied methodology			
2) Project Management change control management procedures	L) Well defined & accepted M) Established but unclear H) Nonexistent			

3) A quality assurance process has been defined and is in place?	L) Well defined & accepted M) Established, but unclear H) Nonexistent			
4) Will the solution be implemented in well-defined phases?	L) Yes H) No			
5) Has a version control system been established for project?	L) Yes H) No			
6) Has a collaboration system been established for documentation and project information?	L) Yes H) No			
7) Will the development effort be continuous?	L) Yes M) No, limited to moderate impact H) No, considerable impact			
8) Has the joint client-user/project development team been identified and established for the project?	L) Yes, with active participation from all departments involved M) Yes, with part-time participation H) No			
9) Has a formal review and approval process been established for the project?	L) Yes, formal procedures M) No, informal procedures H) No procedures			
10) Number of clients or departments involved in final solution	L) Single department or company requesting solution M) Two departments in same company requesting solution H) Multiple departments or more than one company requesting solution			
11) Number of other projects this project depends upon	L) 0 M) 1 H) 2 or more			
12) Number of other projects dependent on this project	L) 0 M) 1 H) 2 or more			

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G) User Support				
1) Is there a client analyst (subject matter expert-SME) assigned to the project?	L) Yes, active participation M) Yes, minimal participation H) No			
2) How knowledgeable is the SME in the proposed solution area?	L) Substantial experience in the area M) Understands concepts, but has no experience H) Limited			
3) Does the client's top management support the project?	L) Well supported M) Somewhat supported H) Limited support			

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H) Project/Development Team Qualifications				
1) What is the experience of the project manager with projects of similar type?	L) Demonstrated performance within this company with similar solutions M) Demonstrated performance within this company but with different type of solutions H) Prior experience with similar solutions but no experience at this company or no prior experience			
2) What is the experience of the project manager with projects of similar size?	L) Demonstrated performance within this company with similar solutions M) Demonstrated performance within this company but with different type of solutions H) Prior experience with similar solutions but no experience at this company or no prior experience			
3) What is the project team's demonstrated performance in implementing project of this type?	L) Excellent M) Adequate H) Limited			
4) What is the project team's demonstrated performance in implementing project of this size?	L) Excellent M) Adequate H) Limited			
5) What is the project team's functional knowledge of the client's business in the solution area?	L) Excellent or Good M) Fair H) Poor			
6) Project Team expertise requirements:	L) No subject matter expert required for solution or subject matter expert on staff already M) Local subject matter expert required for solution H) Out of District or location subject matter expert required for solution			

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I) Functional Requirements				
1) The new solution may be described as:	L) Replacement of an existing automated system M) Replacement of an existing manual system H) Totally new system			
2) What percentage of the new solution's functions are one-for-one replacements of the existing system's functions?	L) 67-100% M) 34-66% H) 0-33%			
3) To what degree can the user requirements definition be based on existing system documentation?	L) To a large degree M) To a moderate degree H) To a minimal degree or no existing documentation			

4) New solution relationship to client's business strategy	L) Tightly coupled to business strategic plan M) Somewhat coupled to business strategic plan H) Minimally coupled to business strategic plan			
5) To what degree has the project team documented the client's requirements?	L) Well understood and documented M) General understanding but not documented H) Not well documented			
6) To what degree will the client-user depend on the technical staff to define system requirements (system inputs, outputs, processing requirements, data base contents, etc.)?	L) Minimal dependence M) Moderate dependence H) High dependence			
7) How well defined is the project scope?	L) Well defined and documented M) General understanding but not documented H) Not well defined			
8) How likely to change are the project scope and requirements?	L) To a large degree M) To a moderate degree H) To a minimal degree			
9) How diverse are the requirements of the different client-user groups?	L) Identical requirements or only one user group M) Similar requirements H) Somewhat diverse requirements			
10) How well are the project deliverables or objectives defined?	L) Well defined and documented M) Defined in name, but not content H) Vague			
11) How well defined are the benefits of new solution?	L) Defined, quantified or strategically important M) Defined in general, not quantified H) Not defined, unclear			

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J) Impact on User Operations				
1) To what degree will the client depend on the new solution for normal operations?	L) Not required for normal operations M) Moderately dependent H) Extremely dependent			
2) Will change in the client organization be required as a result of the new solution?	L) Minimal or no change M) Moderate change H) Major change			
3) To what degree will the new solution impact client operations and procedures?	L) Minimal change M) Moderate change H) Major change			
4) What is the general attitude of the operational client to the new solution?	L) Positive M) Neutral, Somewhat skeptical or unknown H) Negative			
5) How familiar is the client with the technology being used?	L) Very familiar M) Somewhat familiar or unfamiliar, but easy to adapt H) Unfamiliar, requires extensive user education			

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K) Sponsorship & Commitment				
1) Project Sponsor (Champion) is:	L) Identified, enthusiastic, strong user influence, and supports the project M) Identified but passive H) Unknown			
2) What is the experience of the project sponsor with projects of similar type?	L) Extensive experience within this company with similar solutions M) Extensive experience within this company but with different type of solutions c) Prior experience with similar solutions but no experience at this company d) No experience			
3) What is the experience of the project sponsor with projects of similar size?	L) Extensive experience within this company with similar solutions M) Extensive experience within this company but with different type of solutions H) Prior experience with similar solutions but no experience at this company or no experience			

Risk Factor	Impact Description	Impact Qualification (L, M, H)	Probability Qualification (L, M, H)	Priority (See table)
L) Project Technology (Hardware & Software)				
1) How experienced is the project team with the hardware being used?	L) Very experienced M) Moderately experienced H) Slightly or not experienced			
2) How experienced is the project team with the software being used?	L) Very experienced M) Moderately experienced H) Slightly or not experienced			
3) How experienced is the project team with the development tools and techniques being used?	L) Very experienced M) Moderately experienced H) Slightly or not experienced			
4) To what extent will the success of the new solution depend on technology with which the project team has limited experience (including hardware, software, development tools and techniques)?	L) Not at all or not enough to cause a problem M) To a moderate extent H) To a great extent			
5) Are backup personnel available with similar experience and skills?	L) Yes H) No			
6) Requirements for new/non-standard hardware/software for solution	L) None M) Existing plus additional H) All new			

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7) Hardware/software available for testing	L) Guaranteed M) Reasonable assurance H) No assurance			
8) Hardware/software ordered and available	L) Hardware/software onsite M) Hardware/software ordered with firm delivery date H) Hardware/software not ordered or no delivery date			

Risk Factor	Impact Description	Impact Qualification (L, M, H)	Probability Qualification (L, M, H)	Priority (See table)
M) Technical Approach				
1) Is the solution a network application?	L) No M) Networked to a central system H) Networked to multiple types of systems			
2) The development effort on this solution would be described as:	L) Primarily a package implementation, with only minor modifications to the package anticipated M) Software packages will be skeletons for new development H) Primarily new development			
3) Is the success of the system dependent on hardware new to the organization?	L) Not dependent M) Somewhat dependent H) Heavily dependent			
4) Is the success of the system dependent on software new to the organization?	L) Not dependent M) Somewhat dependent H) Heavily dependent			
5) To what degree will the success of the system depend on technology with which the vendors have limited experience?	L) Limited degree or not applicable M) Moderate degree H) Significant degree			
6) What is the expected vendor support of the technology?	L) Good or not applicable M) Limited problem H) Serious problem or unknown			

Risk Factor	Impact Description	Impact Qualification (L, M, H)	Probability Qualification (L, M, H)	Priority (See table)
N) Development Environment				
1) Will the project team have difficulty obtaining adequate hardware resources, software resources, or development tools?	L) No problem anticipated M) Limited problem H) Serious problem			
2) To what extent are changes in development hardware or software expected to impede progress on the subject?	L) Limited impact M) Moderate impact H) Considerable impact			

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O) Technical Requirements				
1) What is the anticipated complexity of the conversion effort?	L) No conversion effort required or straightforward M) Average H) Complex			
2) Will the new solution be required to meet stringent performance requirements (e.g., response time, availability)?	L) Reasonable expectations H) Stringent requirements			
3) How important are the security/privacy considerations to the new solution?	L) Limited importance M) Moderate importance H) Extreme importance			
4) With how many different existing applications or systems must the new solution interface?	L) None or 1 M) 2 to 4 H) More than 4			

Risk Factor	Impact Description	Impact Qualification (L, M, H)	Probability Qualification (L, M, H)	Priority (See table)
P) Account Readiness				
1) The account environment is ready for the new solution?	L) Yes M) Maybe, with some changes H) No			

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Risk Management Plan

After you have completed your risk assessment, use the following worksheet to identify the trigger point and management plan for each high-risk item. High-risk items should also be moved to the Action Items / Issues Matrix to allow review on a weekly basis. The impact and probability should be listed as H – M – L and the Cost is the cost to the project if the risk occurs.

Risk Mitigation Plan				
Item#	Impact	Probability	Cost	Trigger Point, Mitigation Strategy, and Comments