



Risk Analysis For Agile

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1 Overview

The purpose of a structured risk analysis is to methodically identify risks that may not be apparent through simple intuition. Identified risks then need to be associated with risk mitigation actions, as part of a risk mitigation plan.

The process is:

- The Scrum Master fills in the risk analysis template and a draft of the risk mitigation plan. The Scrum Master might ask a member of their team to independently fill in another risk analysis, prior to comparing notes.
- The risk analysis is presented to all team members responsible for project delivery, to ensure that it is considered complete. The team should comment on the draft mitigation plan.
- The wider stakeholders are presented with the risk analysis and the draft mitigation plan.
- The Scrum Master produces a completed mitigation plan. Concrete actions for each risk are given to designated people. Deadlines are set for completion of the mitigation actions.

When defining mitigation actions, reference needs to be made to both the likelihood and potential severity of the risk. For example, if a key person is pregnant then arranging maternity cover might be necessary, if her skills are critical. A fire in the server room could have a very serious impact, however, might be less likely.

An important risk mitigation action may be to repeat or update the risk analysis at defined intervals (e.g., once per sprint).

This manual can be downloaded in PDF format, with Microsoft Word templates at: <http://www.plainprocess.com/pdf.html>

2 Filling in the Risk Analysis Template

2.1 Risk Identification

On the Risk Analysis Template, you will step through each of the categories mentioned below, attempting to identify risks. The purpose of these categories is to “force” you to think about the project from perspectives that you may not have previously considered. There is some overlap between the categories and this approach is not guaranteed to identify all risks.

If you cannot identify a risk under a category, move to the next one. If at the end of the risk analysis you have identified no risks whatsoever, ask a member of your team to carry out their own independent risk analysis to confirm that this really is the case.

At the top of the template, note the project title, person completing the form and the date.

2.2 Risk Categories

Listed below are the categories that you need to think about. As you go through each one, maintain an open mind about whether a risk can be identified.

Do not get bogged down in individual questions. You can return to the question later. The list is not intended to be exhaustive. If you identify a risk and cannot find a category to “fit” it in, note it down anyway under Miscellaneous.

2.2.1 Estimation

- Do the individual estimates look accurate, in intuitive terms?
- Is there a particular estimate that just looks wrong? Who came up with it?
- Do the estimates really cover everything?
- Has a change control problem taken place where the project scope has been modified and related estimates were not updated?
- Based on the current scope of the project, have all tasks been identified?
- Did one person carry out estimation?
- Did a second person independently estimate the same tasks?
- What assumptions did these people use, when estimating?
- Does the overall budget look realistic, in intuitive terms?

- Is the contingency realistic?
- Have you been asked to estimate tasks that are too distant in the future? Will the distant future estimates become clearer, at a later stage?
- Is it possible to mark individual estimates in terms of their realism and note dependencies that need to be in place for the estimate to become clearer?

2.2.2 Complexity

- Is the business domain difficult to understand?
- Have enough expert users (who properly understand the business domain) been assigned to support the project? Have their managers accepted the amount of time that this will take?
- Do stakeholders have diverse or conflicting requirements?
- Are users split among different geographical locations? Is a travel budget required?
- Is there one key user / stakeholder driving the project or does consensus need be found in a steering committee?
- Will implementation require new skills that technical personnel have not yet acquired? Has the training been budgeted?
- Are new third party products to be licensed? This was budgeted?
- Is a version “leap” to take place with a third party product? For example, if upgrading from version “6.0” of a product to (say) version “11.0”, have the implementation issues been considered? Does the vendor have a recommended migration path?
- Will existing support contracts with third parties adequately address the needs of the project team?
- Do you need to budget for ad-hoc consultancy work from vendors?
- If the project is to provide localization in various spoken languages, have localization requirements been appropriately identified?
- Will documentation need to be produced in more than one spoken language?

2.2.3 Scale

- Is the system to be heavily utilized?
- Are there undocumented performance requirements?
- Is the project team large enough?

2.2.4 Interaction

- Are there dependencies within the organization that create risk? For example, can testing not begin until a particular business unit supplies reference data that only they have?
- Have you identified all the business units that need to be involved?
- Is there interaction with other systems? Are you on a learning curve with this?

- Will interaction with other systems take place in a batch mode? For example, if your system is to supply data to a data warehouse, will they extract the data or will you export it? Which budget does this come out of?
- Do other projects depend on your success?
- Are you depending on another Scrum Master and are unsure if they are reliable?

2.2.5 Change

- Does the business unit need to learn at the same time as the project delivery team? Are they communicating well enough to learn from each other?
- Is this a radical change in business practice?
- If this is a radical change, is the business conscious that if does not specify requirements early that the change control process will result in budget variances?
- You do have a change control process, don't you?
- Does new procedural documentation need to be written by the business unit to reflect changes in practice?
- Are people to change jobs or roles? They know about this? Are they are to be re-trained?
- Are new third parties to be introduced? Has the nature and scope of their involvement been clearly thought about or budgeted?

2.2.6 Innovation

- Are you introducing a technology platform that you have never worked with (e.g., application delivery to mobile phones)?
- Is the new technology platform “bleeding edge” in the sense that it is a “1.0” release? Are you the first company in your market to attempt to use the new platform?
- Do you have the right skill levels and experience for the technologies chosen? Can you supplement gaps on an ad-hoc basis with third party consultancy firms or contractors?
- Is mentoring needed among your internal people?
- Would a source code branching strategy need to be introduced, to mitigate technical risk?

2.2.7 Concurrency

- Have you “double booked” key people by accident?
- Have you asked for people to give you a list of vacation days that they have booked off?
- Are there differences in the dates of public holidays, at different locations?
- Have environmental dependencies been identified? In particular, are system administration resources required to set up development and test environments? Do they need notice?

- Are there key systems administrators that you need access to? You know when they are available?
- Are developers using a shared resource, which could cause them to block progress with one another's work (e.g., loading/unloading different test data onto one test server)?
- Would a source code branching strategy help?
- Is a load-testing environment required? Does this have special licensing requirements?
- Are you sharing resources with another project? Have you worked out a "system" for sharing the resources without conflict?
- Are there key managers you need who are difficult to pin down or excessively busy?

2.2.8 Location

- Is the project split across locations?
- Are there time zone differences?
- Are access issues understood at each location (e.g., needing to tell a third party security company about out of hours access to a building)?
- Do your team need multiple building passes?
- Are there cultural differences in working practices, at different locations?
- Does a particular location have equipment that is known to have performance issues (e.g., poor network connectivity)?
- Are there differences in desktop support / systems administration practice at different locations?
- Is the travel budget adequate?

2.2.9 Experience

- Are there a very high proportion of new people? Is the Scrum Master one of the new people?
- Is the business unit on a learning curve?
- Are skill levels appropriate to the technologies chosen?
- Are people being asked to perform at a much more senior level, compared to previous assignments? Do they have adequate support or mentoring?
- Are there a very high proportion of new technologies and third part development tools being employed?

2.2.10 Resources

- You have the right people, both in terms of skills and availability?
- Are you dependent on someone who could "disappear" (e.g., pregnancy, illness, serving out notice period after resignation)?
- Does development and testing depend on the supply of third party data?
- Is all equipment scheduled to be available on the dates needed?

- Are nominated users needed for requirements gathering and user acceptance testing?
- Will performance testing require specialist knowledge, tools and environments?
- Have the right desktop support and systems administration people been identified and resourced?
- Will handover of the finished product into the live environment require an acceptance process from systems administrators? Has this been scheduled and are they available?

2.2.11 Contingency

- Does the level of contingency look adequate?
- Have you already started using the contingency at an early stage?
- Is budget variance possible?
- Has change control been implemented to ensure that the budget is in proportion to the project scope?
- Can deadlines be varied?
- Can scope be varied?
- Are you able to bring in extra people, if needed?
- Is there a disaster recovery environment that would allow the project to continue in the event of systems failure?

2.2.12 Third Parties

- Have you identified all suppliers that need to be involved and the level of support required from each supplier?
- Do the suppliers have “chained” third party relationships with one another where you are dealing with a primary contractor who has multiple sub-contractors?
- Can the primary contractor make sure that the sub-contractors are reliable? Who takes the hit, if the sub-contractors fail to deliver?
- Do you have written down contracts with the suppliers?
- The suppliers have a history of successful delivery? Have you checked their references?
- Are suppliers / third parties at remote locations? Does this impact communication?
- Do contracts with third parties include them supplying adequate documentation?
- Are the third parties carrying out internal quality control, prior to passing deliverables to you?
- Has a third party come into the project without passing due diligence procedures? Why?

2.2.13 Users

- Will key users be available and cooperative?
- Are the users on a learning curve themselves? Who is giving them support?

- Is the project team working well with the users? Does the relationship need monitoring / support?
- Is there hidden conflict among users?
- Are senior users failing to understand junior users? Are they on the same page?
- Are some users working to a hidden agenda? Is this it better to work around this or confront the problem directly?
- Which users have decision-making power?
- Are users pushing decision-making responsibility around among one another?

2.2.14 Standards

- Are there internal standards that you need to work to (e.g., security, systems administration, audit)?
- Is there external regulatory compliance that you need to consider (e.g., reporting standards)?

2.2.15 Phase

- Have you been brought in after the project has already started?
- Was the previous work of acceptable quality?
- Have remediation / additional work requirements been appropriately documented? Has change control been used to vary the budget, based on the new scope?
- Have undocumented risks been identified through early phase project problems? Have you been told all the problems?
- Was someone fired? Do you really understand why? Will taking on this project get you fired?

2.2.16 Relationships

- Are there relationships that need to cease? Will these cause problems?
- Are there interdepartmental politics? Can this be worked around?
- Do some of your team members have a history of working well with the users / stakeholders? Should they be assigned to user-facing roles? Is there someone you should keep away from users?
- As a Scrum Master, are you working well with your team?
- Is bitching taking place among team members? Will this impact their ability to deliver?
- Are there politics among users / stakeholders?
- Have you identified “cooperative” hidden agendas taking place between particular members of your team and particular users /stakeholders?

2.2.17 Timescales

- Are deadlines unrealistically soon?

- Is it possible to know which deadlines are flexible and which are absolute?
- Is it clear who has the power to vary a deadline?
- Do you have a fallback position, for negotiating a deadline extension?
- Is a variation of scope possible, if a deadline cannot be met?

2.2.18 Objectives

- Can requirements be defined, especially with reference to complexity in understanding the business domain?
- Who has the authority to sign off on requirements? Are these the same people who will conduct user acceptance testing?
- If the users are also on a learning curve, are they aware that a change control process will be needed to vary the project scope and budget?
- Are there career development objectives of team members that need to be integrated with the overall project?
- Do the documented requirements look intelligible? Do they need clarification / expansion?

2.2.19 Expectations

- Are users and managers in the business unit clear about what they are getting? For example, were they expecting a workflow system and are about to get document repository?
- Is too much being expected of users who are also on a learning curve?
- Is the business unit clear about what problems the new system can / cannot solve?
- Is too much being expected of some more junior project team members, too early?

2.2.20 Administration

- Is it clear what documentation needs to be produced, by particular dates?
- It is understood how progress of the project should be communicated? How often?
- Have relevant meetings been set up?
- Have repeat room bookings been entered into the booking system?
- Have vacation dates been accounted for in understanding when deliverables will be available?
- Are the right people going to be available, when you need them?
- Could your people be taken off you, without your control? Is something coming up which could cause this to happen?
- All schedules, deadlines and commitments have been noted?

2.2.21 Techniques

- Are multiple new technologies being introduced simultaneously? Can the team learn quickly enough? Is third party support needed?
- Are too many people simultaneously on excessively sharp learning curves?
- Is the approach for system testing understood?
- Do the users understand how to conduct acceptance testing? Do they understand that this means, “signing off” the deliverables?
- Is migration of the application between development and testing environments understood?
- Is source code branching something that needs consideration? Will the data model need to vary on a branch-by-branch basis? Will you need extra development and test servers?

2.2.22 Dependencies

- Are known internal dependencies documented and a critical path defined?
- Are you relying on someone to supply you with a suite of test data or reference data which will block testing?
- Have interfaces between major components been defined?
- Is it clear who has decision-making authority and how the user acceptance phase can be completed?
- Is there some form of clearance process that needs to be undertaken before the system can go live?
- Is there an undocumented acceptance process for systems administrators? How long do they need?
- Are there undocumented system administration requirements? For example, it might be a requirement that when errors occur, the application log should record the physical id of problem database records.
- Are there specific times of the year / month that you are allowed to release the finished deliverable? The users know about this?

2.2.23 Attitudes

- Does the business unit that is commissioning the system really want it? Has it been imposed on them by higher management or an external compliance requirement?
- Are there hidden agendas among users? Is it possible to identify problem users and work around them? Is it worth raising the issue with their managers?
- Is all of the project delivery team working towards the end objective?
- Are users with a hidden agenda collaborating with your team members on some form of project sabotage?
- Do you have a team member who has a vested interest in not seeing the project succeed?
- Is management sufficiently enthused about the project to provide adequate support?

2.2.24 Communication

- Are there issues in the project structure that impede communication?
- Are time zone / location issues relevant?
- Are decision makers communicative? Do they understand their role?
- Have project reporting requirements been defined?

2.2.25 Management

- Is it clear who is managing the project and who reports to whom?
- Are management structures among users understood?
- Is there a single set of expectations among the user community? Do managers have different expectations, as compared to lower level users?
- Does the organization culturally accept that risks exist and need to be managed?

2.2.26 Acceptance

- Has an acceptance test process been defined?
- Have dates and deadlines been set for acceptance testing?
- What support resources need to be supplied for acceptance testing?
- Is there a contingency plan for dealing with users rejecting the system at acceptance test time?

2.2.27 Training

- Do project team members or users require training during project implementation?
- Does a post-implementation training program need to be rolled out?
- Will the project team need to supply user documentation?
- Which budget does training come out of?
- Do people who require training have the time to attend it? Have they been “double booked” by accident?

2.2.28 Lead-times

- Are there lead times associated with configuration of development, test and live environments? Do these block project progress?
- Are there other lead times that have not been considered?
- Is configuration and installation of the system complex? How long does it take?
- Are people on a learning curve? How long will they take to get up to speed?
- Has a critical path been defined?
- Are there communication lead times with third parties that could block the project? For example, an external audit review.

2.2.29 Expertise

- Is the business unit on a learning curve? Are they clearly organized and know what they are doing?
- Are technical people on a sharp learning curve? Is appropriate support available?
- Do management understand their role? Are they up to the job?

2.2.30 Controls

- Has change control been implemented?
- Are the timescales realistic?
- Will interim reviews take place to judge whether timescales remain realistic?
- Has everyone who needs to know about a deadline been told about it? For example, system administrators.

2.2.31 Organization

- Does everybody know what his or her job is?
- Have they had the roles of other people explained to them?
- Which people need which reports on which dates? Is it clear what format you should use to report to them?

2.2.32 Incentives

- Will good job performance by team members be rewarded or ignored?
- Is a team member disgruntled?
- Have perverse incentives been put in place? For example, a manager might be given a bonus as a percentage of under spent project budget, as an incentive to stay within cost. Has this manager cut unacceptable corners, such as creating a fake audit trail during testing to give the impression that the system is “working”?
- Has a third party come into the project without passing due diligence procedures? Why?

3 Risk Mitigation Plan

At the top of the risk mitigation plan, note the project title, person completing the form and the date.

The process for completing the risk mitigation plan is:

- Copy the identified risks from the risk analysis to the risk mitigation plan. Be careful to remove duplicated items.
- Fill in potential risk mitigation actions as best as possible.
- Ask team members, users and other relevant stakeholders to suggest further risk mitigation actions.
- For risks where a mitigation action cannot be determined, note what new information or changed circumstances are needed for determining action. Please note, an action could be to repeat the entire risk analysis exercise at an agreed later date or particular intervals.
- Assign actions to people and agree deadlines.
- At each deadline, follow up on whether the mitigation action has taken place.

When defining mitigation actions, you need to balance the likelihood of the risk occurring and the severity of the impact. A tornado outside the office could have a severe impact but might be unlikely. The absence of a key systems administrator could be more likely and costly, in terms of missing deadlines.