Generic Project Risk List

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| **ID** | **Current Status** | **Risk**  **Impact** | **Prob. of occurrence** | **Risk Map** | **Risk Description** | **Project Impact** | **Risk Area** | **Symptoms** | **Triggers** | **Risk Response Strategy** | **Response Strategy** | **Contingency Plan** |
| 1 | **Closed** | **Medium** | **Low** | **Green** | Scope is poorly defined | Time required to complete may overflow available time | Schedule  Project resources | Poor requirements | Requirements found not make viable project | Avoidance then contingency | Through initial requirement assessments | Redesign appropriate parts of project |
| 2 | **Open** | **Medium** | **Low** | **Green** | Scope creep inflates scope | Time required to complete may overflow available time | Schedule  Project resources | Poor requirements | Member proposes scope increase | Avoidance then contingency | Through initial requirement assessments | Scope changes must be agreed on by all members |
| 3 | **Open** | **Medium** | **Medium** | **Yellow** | Estimates for milestones are inaccurate | Time required to complete may overflow available time | Schedule  Project resources | Estimated to fail to meet project deadline | Failure to meet project milestone | Avoidance then  contingency | Iterative review on expectations to increase accuracy | Overtime or reassessing target milestones |
| 5 | **Closed** | **Medium** | **Medium** | **Yellow** | Finish project too early | Poor allocation of estimations, Project lacks “Substantial challenge” requirement | Schedule  Project resources | Not enough work to do in project | Plan shows project will finish early | Contingency | N/A | Add additional features |
| 6 | **Closed** | **High** | **Low** | **Yellow** | Team member conflict | Failure to complete project milestones or non productive team member misses milestones | Schedule  Project resources | Poor team member interpersonal skills | Team member officially complains | Avoidance then  contingency | Ensure initial healthy team dynamic | Mediation, Team Charter resolution mechanisms |
| 7 | **Closed** | **Medium** | **Low** | **Green** | Poor team dynamics | Disagreements lead to loss of productive work on project | Schedule  Project resources | Poor team member interpersonal skills | Team member officially complains | Avoidance then contingency | Ensure initial healthy team dynamic | Mediation |
| 8 | **Open** | **High** | **Low** | **Yellow** | Member is unavailable | Project work may overload remaining member, milestones required to be redesigned | Schedule  Project resources | Team member expects to be unavailable | Team member is unavailable | Contingency | N/A | Member catch up or reassess milestones |
| 9 | **Open** | **High** | **Low** | **Yellow** | Member is lost | All project work will burden remaining member | Schedule  Project resources | Team member expects to be lost | Team member is lost | Contingency | N/A | Reassess requirements and milestones |
| 10 | **Closed** | **Medium** | **Low** | **Green** | Architecture is not fit for purpose | Extra time required to re-architect the project | Feasibility  Schedule  Project resources | Extra design required during implementation phase | Recurring ad hoc resign during implementation | Avoidance then contingency | Through initial design | Redesign project |
| 11 | **Closed** | **Low** | **Low** | **Green** | Technology components aren't scalable | Final product may have limited use cases by users | Feasibility  Schedule  Project resources | Overhead of algorithm expected to limit number of nodes | Overhead of algorithm limiting number of nodes | Avoidance then acceptance | Through initial design | Reassess requirements |
| 12 | **Open** | **High** | **Low** | **Yellow** | Technology components have security vulnerabilities | Time taken to fix issues may extend project milestones | Feasibility  Security  Schedule  Project resources | Security vulnerability suspected | Security vulnerability confirmed | Avoidance then contingency | Through initial design | Resolve security issues |
| 13 | **Closed** | **High** | **Low** | **Yellow** | Base technology not mature | Extra time required to re-architect the project | Feasibility  Schedule  Project resources | Projection of issues during implementation | Issues during implementation | Avoidance then contingency | Through initial design basing on known suspected tech | Redesign will alternative technology |
| 14 | **Open** | **High** | **High** | **Red** | Code quality issues | Project not fit for release at final milestone, extra time required to resolve issues | Schedule  Reliability  Project resources | Code quality semi regularly fails checks | Code quality regularly failing checks | Avoidance then contingency | Through initial thorough design and test driven development | Perform additional quality checks |
| 15 | **Open** | **Low** | **Medium** | **Green** | User acceptance failure | No uptake by community of final product | N/A | Initial user interest is low | User interest is low | Acceptance | N/A | N/A |
| 16 | **Open** | **Low** | **Low** | **Green** | Users have inaccurate expectations | No uptake by community of final product | N/A | Initial user interest is low | User interest is low | Acceptance | N/A | N/A |

### Project Specific Risk List

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| **ID** | **Current Status** | **Risk**  **Impact** | **Prob. of occurrence** | **Risk Map** | **Risk Description** | **Project Impact** | **Risk Area** | **Symptoms** | **Triggers** | **Risk Response Strategy** | **Response Strategy** | **Contingency Plan** |
| 1 | **Closed** | **Hign** | **Low** | **Yellow** | Bug found in consensus algorithm | Additional time required to resolve | Schedule  Project resources | Bug suspected in algorithm, algorithm is unproven | Bug found in consensus algorithm | Avoidance | Basing on proven consensus algorithm | Redesign, implementing different consensus algorithm |
| 2 | **Closed** | **High** | **Low** | **Yellow** | Project isn’t feasible in general | Fatal impact to project | Project | Not finding any successful implementation | Confirming project is theoretical or no successful implementation exist | Avoidance | Confirmed other implementation of library successful and project is practically possible | Shutdown project |
| 3 | **Open** | **High** | **High** | **Red** | Poor software quality | Additional time required to resolve | Schedule  Project resources | Projection of issues during implementation | Issues during implementation | Avoidance then contingency | Focus on code quality (unit testing, TDD, code review, pair programming) | Perform additional quality checks |
| 4 | **Closed** | **High** | **High** | **Red** | Networking library issues | Additional time required to resolve | Schedule  Project resources | Projection of issues during implementation | Issues during implementation | Avoidance then contingency | Through initial thorough design and TCD and focus on code quality | Redesign networking library |
| 5 | **Open** | **High** | **High** | **Red** | Security too complex | Additional time required to resolve | Schedule  Project resources | Projection of issues during implementation | Issues during implementation | Avoidance then contingency | Early completion in project, code designed to support later addition if required | Resign network security |
| 6 | **Open** | **High** | **Medium** | **Red** | Prototype failure | Additional time required to resolve | Schedule  Project resources | Estimated to fail to meet project deadline | Failure to meet project milestone | Avoidance then contingency | Initial design, accurate time estimation of milestones, TCD | Overtime or reassessing target milestones |
| 7 | **Closed** | **High** | **Low** | **Yellow** | Tech stack not compatible | Additional time required to resolve | Schedule  Project resources | Projection of issues during implementation | Issues during implementation | Avoidance | TCD | Redesign required components |
| 8 | **Closed** | **Low** | **Low** | **Green** | Logging library of project too hard to implement | Additional time required to resolve | Schedule  Project resources | Projection of issues during implementation | Issues during implementation | Avoidance then contingency | Prototype completed to confirm difficult of usage | Additional time required to implement or deciding on alternative library |
| 9 | **Closed** | **Medium** | **Low** | **Green** | Project library is too difficult to implement | Additional time required to improve usability | Schedule  Project resources | Projection of issues during implementation | Issues during implementation | Avoidance | Focussing design of library interface on usability | Redesign project to focus on usability |
| 10 | **Closed** | **Medium** | **Medium** | **Yellow** | Software introduces unreasonable additional surface area for failure | Additional time required to resolve | Schedule  Project resources | Projection of issues during implementation | Issues during implementation | Avoidance | Focusing on code quality and minimal design | Perform additional quality checks |
| 11 | **Closed** | **Medium** | **Low** | **Green** | Consensus algorithm add unreasonable overhead for timely response | Additional time required to resolve | Schedule  Project resources | Projection of issues during implementation | Issues during implementation | Mitigation | Basing design on algorithm with provable consensus speed | Redesign required components |
| 12 | **Open** | **High** | **High** | **Red** | Multithreading introduces high level of difficult in troubleshooting | Additional time required to resolve | Schedule  Project resources | Projection of issues during implementation | Issues during implementation | Avoidance then contingency | Team members sufficiently skilled at debugging at this level | Additional time required to resolve issues |
| 13 | **Closed** | **High** | **Medium** | **Red** | Network level security issues related to usage of UDP | Additional time required to resolve | Schedule  Project resources | Projection of issues during implementation | Issues during implementation | Avoidance then contingency | Designing to avoid UDP reflection issues | Additional time required to resolve issues |