**Analysis and Risk Management Plan**

Risk identification and analysis

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| Risk | Risk type | Risk affects | Description | Probability | Impact |
| Server unavailability | Tools / Organiza-tional | Project | A server-side architecture with the required performance for the determined budget won't be available. | High | Catastrophic |
| Product competition | Requirements | Business | The envisioned product is not competent enough due to a new software release in the field. | Low | Catastrophic |
| Technological advancement | Technology | Business | A used technology is replaced by a more advanced one. | Very low | Catastrophic |
| Time underestimate | Estimation | Project, product | The required time to develop the desired outcome is underestimated. | High | Serious |
| Team member unavailability | People | Project | Due to some reasons one or more teammember is unable to work on the project. | Moderate | Serious |
| Specification delays | Tools | Project,  Product | Crucial implementation specification will be delivered late. | Moderate | Serious |
| Client-side resource unavailability | Tools | Project | At some cases there won't be enough client side resource for the web application or won't supports well the browsers used by the target audience. | Low | Serious |
| Lack of knowledge | People | Project, product | The required knowledge to realize the project is unavailable. | Very low | Serious |
| Specification change | Requirements | Project, product | Due to unforeseen consequences the specification of the delivered software will be changed. | Low | Serious |
| Size underestimate | Estimation | Project | The scope of the application is larger than it was forecasted. | Moderate | Tolerable |
| Technology undeperformance | Technology | Product | One of chosen technologies cannot deliver the estimated performance. | Low | Insignificant |

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| --- | --- |
| Legend for specific columns of the table above | |
| Column name | Possible values |
| Risk affection types | project, product, business |
| Risk type | technology, people, organizational, tools, requirements, estimation |
| Risk probabilities | very low (< 10%), low (10–25%), moderate (25–50%), high (50–75%), very high (> 75%) |
| Risk impacts type (with description) | catastrophic (threaten the survival of the project), serious (would cause major delays), tolerable (delays are within allowed contingency), insignificant |

Risk planning

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| --- | --- |
| Risk | Strategy |
| Server unavailability | Indicate in requirement change that this project's outcome is a prototype which will run on localhost during the demostration, but won't be available for public use. |
| Product competition | Create a mayor change of features that overcomes on the new product if possible. Alternatively use the available marketing tools to gain increased market share over the competent software. |
| Technological advancement | Currently used technologies will still be able to deliver the proper outcome of the project, but the launch of a process thread which aims the replacement of the old technology in the near future is necessary. |
| Time underestimate | Investigate possible code reuse or integratation of already written components. Look for proven solutions, solid implementations of the emerging problems. Invest more working hours into the project to deliver the outcomes on time. |
| Team member unavailability | Possibly assign multiple members to different development processes, raise the members overalll understanding of the project. Allocate the unavilable person's work in the given time period between other team members. |
| Specification delays | Look for another component that can be further pushed toward the final state, while the required specification arrives. If it isn't possible raise the number of persons working on the specification. |
| Client-side resource unavailability | Develop the application in a performance efficient way and try to minimize the use of client side resources. |
| Lack of knowledge | Add an other member with proper insight on the given topic to the people currently working on the problem, or reallocate work according to the emerged uncapabilities. |
| Specification change | Properly research and define both present and the most possible customer requirements. Prepare the project in a way that it's extension won't come at a high price. |
| Size underestimate | Create a detailed and well organized implementation plan and a proper project scope can be defined. |
| Technology undeperformance | Chose implementation methods, languages and tools with proper insight on their performance, integratibility and compatibility. |

Reference: Ian Sommerville.2011.Software Engineering.9th edition.Pearson