**Risk Plan**

**1 Introduction**

A risk management plan is a document that outlines potential risks that might occur in a project or business process. It also lays out strategies and methods for reducing and controlling risks while ensuring contingency plans are in place.

**2** **Project Risk Indetification**

We have predicted many Risk we may meet during the program,such as low proficiency in technique,sickness during the project,influence of the personal affairs and so on,we use Risk Breakdown Structure(RBS) to classify them into three levels,RBS level 0 means all the risks probably happen in project,level 1 mean the special resource of the risk and level 2 means the specific risk, Project Risk Indetification are shown in following table:

|  |  |  |
| --- | --- | --- |
| RBS level 0 | RBS level 1 | RBS level 2 |
| All risks probably happen in project | Technique Risk | low proficiency in technique |
| External Interface Risk |
| Manage Risk | Someone absent from the meeting |
| Underestimate of the workload and difficulties of a week |
| Cuurent plan is difficult to complete |
| Someone busy in their personal affairs |
| Accidental Risk | Someone get sick，recover in a week |
| The loss of current work |
| Someone get sick，recover for a long time |

Table 1

**3 Project Risk assessment**

In risk assessment, risk probability and risk impact are generally considered comprehensively to assess the risk level of specific risk events, determine coping strategies, and formulate corresponding risk management plans. Therefore, accurate estimation of risk probability is one of the key factors in risk management and decision making, which usually requires analysis and calculation based on reliable data and experience.

**3.1 Quantifying risk probability**

Risk probability can be understood as the probability of occurrence of a certain risk event (such as accident, disaster, etc.) under certain circumstances. We qualitying risk probability into five level,the specific quantifying standards are listed as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Subjective  Rating | Very low | Low | Moderate | High | Very high |
| Probabability | 0-0.10 | 0.11 -0.30 | 0.31-0.50 | 0.51-0.70 | 0.70-1.0 |

Table 2

**3.2** **Quantifying impact**

Risk impact is a measure of the impact that the occurrence of a risk event may have on an organization (or an individual) under certain circumstances. Risk impact usually involves various aspects of an organization, such as finance, operation, reputation, and security. Therefore, you need to consider the impact of different aspects in the process of estimating risk impact and calculate a comprehensive impact indicator. We qualitying risk impact into five level,the specific quantifying standards are listed as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Project  Objective | Very low/0.05 | Low/0.1 | Moderate/0.2 | High/0.4 | Very high/0.8 |
| Time cost | Insignificant  Time  increase | 1 week time  increase | 2 week time increase | 3 week time  increase | 4 week time  increase |
| Scope | Scope decrease barely  noticeable | Minor areas of scope affected | Major areas of  Scope affected | Scope reduction unacceptable to sponsor | Project end item is effectively useless |
| Quality | Quality degradation barely noticeable | Only very demanding applications are affected | Quality reduction requires sponsor approval | Quality reduction unacceptable to sponsor | Project end item effectively useless |

Table 3

**3.3** **probability and impact matrix**

We use the probability and impact matrix constructed from the risk likelihood and risk impact,which is shown as follows.In this table,blue ones means low-level risk,the white one means medium-level risk and the grey onemeans the high-level risk.The stardand of the assessment of risks are shown in table 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Probability | Threats | | | | |
| 0.9 | 0.05 | 0.09 | 0.18 | 0.36 | 0.72 |
| 0.7 | 0.04 | 0.07 | 0.14 | 0.28 | 0.56 |
| 0.5 | 0.03 | 0.05 | 0.10 | 0.20 | 0.40 |
| 0.3 | 0.02 | 0.03 | 0.06 | 0.12 | 0.24 |
| 0.1 | 0.01 | 0.01 | 0.02 | 0.04 | 0.08 |
| Impact | 0.05 | 0.1 | 0.2 | 0.4 | 0.8 |

Table 4

|  |  |  |  |
| --- | --- | --- | --- |
| Subjective Rating | Low-level Risk | Medium-level Risk | High-level risk |
| Threats | <0.05 | >0.05 and  <0.1 | >0.1 |

Table 5

**3.4 assessing the Risks**

We use probability score and impact score in calculate the threat score,thus assessing the risk level.

|  |  |  |  |
| --- | --- | --- | --- |
| Risk Profile | Probability | Impact | Threat |
| low proficiency in technique | 0.5 | 0.1 | 0.05 |
| External Interface Risk | 0.1 | 0.05 | 0.01 |
| Someone absent from the meeting | 0.5 | 0.1 | 0.05 |
| Underestimate of the workload and difficulties of a week | 0.3 | 0.2 | 0.06 |
| Current plan is difficult to complete | 0.1 | 0.4 | 0.04 |
| Someone busy in their personal affairs | 0.5 | 0.1 | 0.05 |
| Someone get sick，recover in a week | 0.5 | 0.1 | 0.05 |
| The loss of current work | 0.1 | 0.8 | 0.08 |
| Someone get sick，recover for a long time | 0.3 | 0.2 | 0.06 |

Table 6

**4 Risk Budget**

For every kind of Risks,we have measures to resolve them.Here are table 7 illustrates the risk counter measures and whether we encounted the risk.

|  |  |  |  |
| --- | --- | --- | --- |
| Risk level | risk profile | Risk counter measures | Encounted? |
| Low level Risk | low proficiency in technique | Allocate time for learning and increase weekly working hours | √ |
| Someone absent from the meeting | Agree on another time to hold the meeting | √ |
| External Interface Risk | Find another useful Interface | × |
| Someone busy in their personal affairs | increase weekly working hours | √ |
| Current plan is difficult to complete | Change the project plan | × |
| Someone get sick，recover in a week | increase weekly working hours or give their work to  others | √ |
| Medium level Risk | Someone get sick，recover for a long time | Find another one to replace him | × |
| The loss of current work | Make backups for the project | × |
| Underestimate of the workload and difficulties of a week | Postpone the commit time and increase weekly working hours | × |

Table 7