

## PROCESS-BASED PROJECT PROPOSAL RISK MANAGEMENT

Alok Kumar<sup>1</sup>

<sup>1</sup> Alok Kumar, M.A., MBA, University of West Bohemia in Pilsen, Faculty of Economics, kumar@students.zcu.cz

**Abstract:** We all are aware of the organizational omnipresence. Projects within the organizations are ubiquitous too. Projects achieve their goals successfully if they are planned, scheduled, controlled and implemented well. The project lifecycle of initiating, planning, scheduling, controlling and implementing are very well-planned by project managers and the organizations. Successful projects have well-developed risk management plans to deal with situations impacting projects. Like any other organisation, a university does try to access funds for different purposes too. For such organisations, running a project is not the issue, rather getting a project proposal approved to fund a project is the key. Project proposal processing is done by the nodal office in every organisation. Usually, these nodal offices help in administration and submission of a project proposal for accessing funds. Seldom are these nodal project offices within the organizations facilitate a project proposal approval by proactively reaching out to the project managers. And as project managers prepare project proposals, little or no attention is made to prepare a project proposal risk plan so as to maximise project acquisition. Risk plans are submitted while preparing proposals but these risk plans cater to a requirement to address actual projects upon approval. Hence, a risk management plan for project proposal is either missing or very little effort is made to treat the risks inherent in project acquisition. This paper is an integral attempt to highlight the importance of risk treatment for project proposal stage as an extremely important step to preparing the risk management plan made for projects corresponding to their lifecycle phases. Several tools and techniques have been proposed in the paper to help and guide either the project owner (proposer) or the main organisational unit responsible for project management. Development of tools and techniques to further enhance project acquisition will be the scope for future research in this area.

**Keywords:** Project Management, Project Proposal, Processing, Risk Management Plan, Risk Treatment

**JEL Classification:** D81, G32, H43

---

### INTRODUCTION

Projects are ubiquitous in almost every human endeavour. There is hardly any human pursuit that doesn't involve any project. These projects are conceptualized and implemented at various levels of complexity, i.e. organising a meeting of business partners to launching a satellite into space. As the complexity increases, the need for proper risk management strategy intensifies. A survey of research on the topic by Williams' included 241 references about Risk. Taking a cue from it, one assumes project managers are well aware of the risks at every stage of the project lifecycle. But is that awareness sufficient for organisations to access external funds? Plentiful of literature deals with the topic of risk management. This literature is about the

different phases of the project lifecycle. The abundance is due to organisations focusing a lot on the planning and other phases of the project. Seldom do organisations seem in readiness of a "projectless" scenario. To avoid such a terrible scenario, one sure way is to manage risk for project proposals, so that a "projectless" scenario never looms large on an organisational horizon. Many organisations depend on projects for their smooth functioning. A project is acquired once a project proposal is approved. Rejection of project proposal has consequences for the organisation. To overcome that scenario of "Projectlessness". It becomes incumbent upon the organisation to submit project proposals that obtain necessary approval for funding. So, what are the risks

involved while a project proposal is made is what this paper seeks to answer. At first, a theoretical insight into project risk management will be discussed which will be followed by – the various elements and processes within a project proposal and highlight the importance of project proposal risk management. Thereafter, risk treatment will be applied to project proposals at the University of West Bohemia in Pilsen. A detailed discussion and conclusion will be discussed for an in-depth understanding of the risk management process for project proposals.

Projects are carried out in many countries by project managers who face enormous challenges due to known and many times unknown issues. A study by the Federation of European Risk Management Associations (Sadgrove, 2005) among 289 leading European companies, showed that they saw operational and commercial risks as being the most important, quoted by 55 percent of companies. Thirty-seven percent of the respondents were concerned about the risk of a major crisis. So, what is a risk? Is it sufficient to enumerate risks, or is it important to prepare for risks in the face of their actual occurrence? How does it impact a project proposal process?

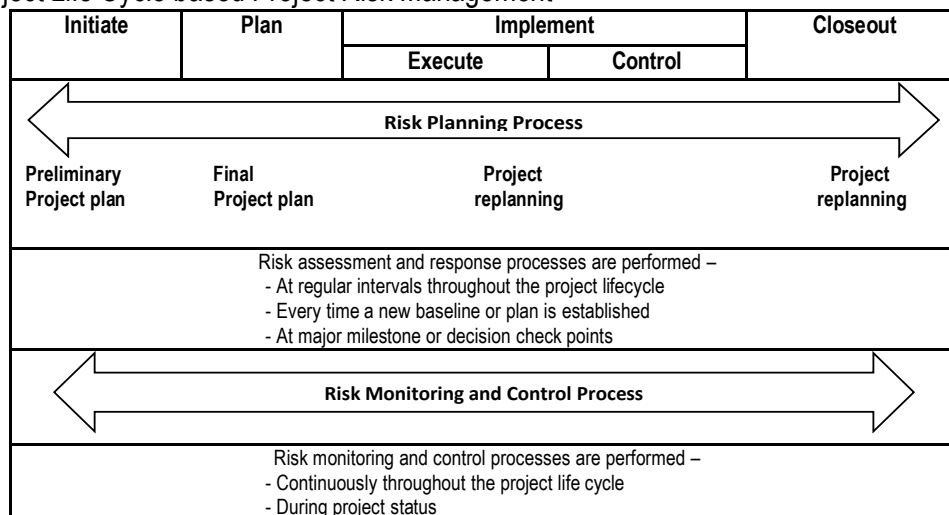
The Project Management Book of Knowledge (PMBOK, 2013) defines risk as an uncertain event or condition that if, it occurs, has an effect on at least one project objective. Objectives can include scope, schedule, cost and quality. "Projects are risky, meaning there is every chance that things won't work out exactly as planned" (Nicholas, Steyn, 2008). The project risks occur due to things that may or may not be under the control of the project manager, i.e. release of funds by the appropriate authority, which may not be able to do so due to new administrative regulations where it is forbidden to release funds without having some approval from a new, binding/ regulatory authority.

## **1. PROJECT RISK MANAGEMENT**

Historically speaking, project risk has its origins in the uncertainty present in all projects. "Many project risk management processes have been proposed in the past. "While Chapman and

Ward suggest a nine-phase process: (1) define; (2) focus; (3) identify; (4) structure; (5) ownership; (6) estimate; (7) evaluate; (8) plan; and (9) manage, Buchan proposes a process comprising: (1) risk identification; (2) risk analysis; and (3) risk response. In terms of several strategies available the PMBOK defines project risk management as consisting of the following four phases: (1) identification; (2) quantification; (3) response development; and (4) response control. The Software Engineering Institute guidebook (Higuera and Haimes) defines a six-phase process: (1) identify; (2) analyze; (3) plan; (4) track; (5) control; and (6) communicate. Buchan proposes a three-phase process: (1) risk identification; (2) risk analysis; and (3) risk response. Further the Project Management Institute Body of Knowledge suggests many strategies to deal with risks within projects such as: avoidance (performing an alternative route that is risk free), transfer ('selling' the risk to a third party, including insurance and contracting), reduction (taking steps so that severity is drastically reduced), containment (going ahead with the original plan while monitoring the risks within), contingency (preparing a rescue plan and extra sum of money in case the risks occur), absorption (executing and modifying a project as if the risk will surely occur), and acceptance (taking the risk effects into stride). It can be safely deduced that the risk management ideally takes a project throughout the phases of risk identification, risk assessment, and risk resolution." (Ben-David and T. Raz, 2001). One common element observed in all of this is that while authors suggest several strategies, there is hardly any suggestion on dealing with risks in certain phases of project proposal preparation. In fig. 1 a project lifecycle based project risk management illustration is made that is extremely useful once a project is acquired, and work on it begins. Note the risk planning, monitoring and controlling processes in fig. 1. Picking up the following figure and applying the illustration to a project proposal risk management wouldn't work. So, something else is needed.

Fig. 1: Project Life Cycle based Project Risk Management



Source: ESI International, VA USA

Similarly, a host of tools is highlighted in the different literature about risk management. They range from quantitative and qualitative to mixed tools. But these tools and techniques can't be applied randomly as the focus is different in a project proposal, especially so if the organization is focused on accessing external funds for projects. In what have been suggested in other literature, a risk management plan for the entire project will be useful in case something does or doesn't happen. But it certainly won't be useful and of little applicability in preparing a risk management plan for project proposals. University of West Bohemia (UWB), like many other organisations in the world, works with projects. Some of these projects are acquired after the proposals are submitted to the funding authority for approval. So for organisations such as UWB, project proposal risk management becomes hugely important. Also, a separate risk treatment methodology for project proposal is needed as the currently available project lifecycle based risk management plan would be futile. The existent lifecycle based risk plan assumes the project acquisition, which it rightly does so. But applying the same risk management plan to a project proposal would be entirely uncalled for. In the following section, the author proposes risk treatment of the project proposal process by identifying the core elements present in such a process.

## 2. METHODOLOGY OF RISK TREATMENT IN PROJECT PROPOSAL

The methodology presented in this section is designed to address some of the deficiencies found if the risk management plan meant for project's lifecycle phases is randomly applied to a project proposal. As we can clearly observe that in (fig. 1) the generic project risk management for a project lifecycle, the "initiation" and "closeout" phases of the project lifecycle have very little significance in terms of risk management plans. Figure 2, as given in the succeeding section is a detailed procedure worked out for the project proposal processing at the UWB. The methodology takes many of the core elements of proposal risk management into account. These elements are detailed further below to substantiate the methodology so used. Thereafter an ex-ante approach to project risk management is introduced to overcome risks inherent in project acquisition. The methodology thus worked out, is different from the project lifecycle based project risk management plan.

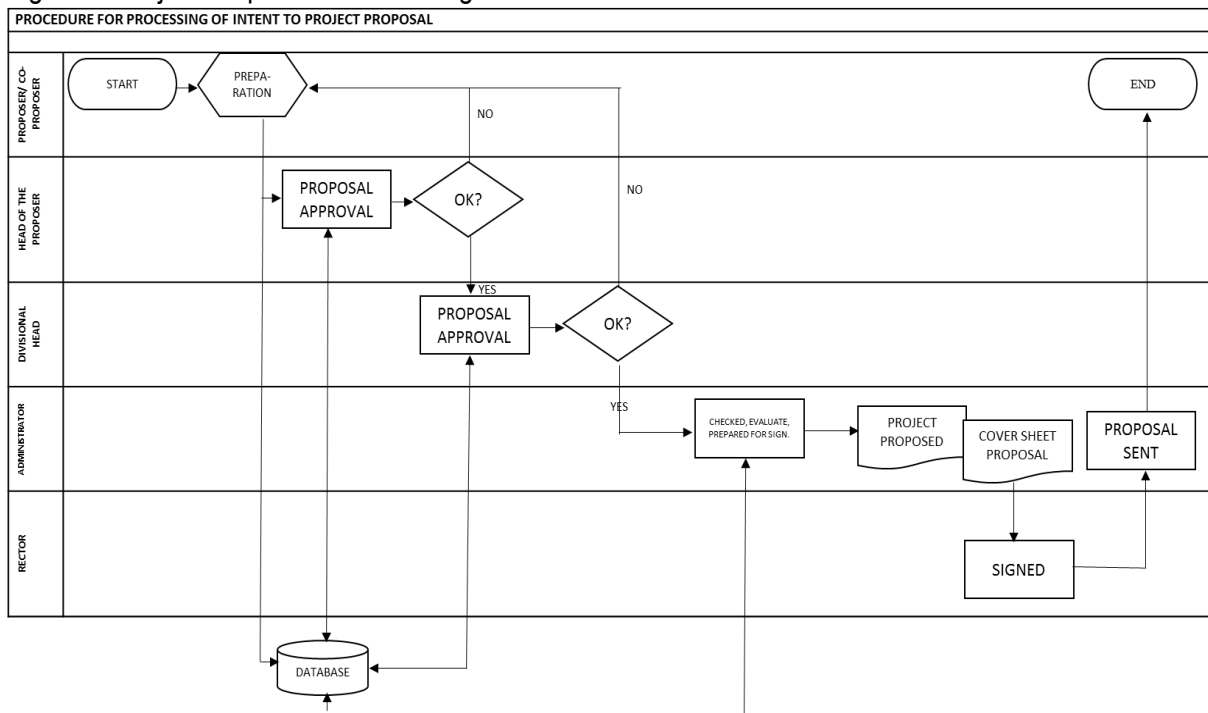
### 2.1 Elements of project proposal risk management

Project risk management plan methodology for project proposals can be as simple as a risk register and a Probability x Impact = Priority. For each risk outlined in the risk register, one would want to create a thorough analysis for

each. This analysis goes in tandem with the project proposal processing as outlined in figure 2, which is the detailed project proposal

process diagram used by the project office of UWB.

Figure 2: Project Proposal Process Diagram



Source: Project Office of University of West Bohemia

A careful look at fig. 2 would give us a fair idea about the decision points in the project proposal process. Depicted by a rhombus or a diamond shape, these decision points are crucial in a project proposal process. Their importance lies in their ability to greatly impact a project submission and hence approval. If at any of these decision points, a negative value is returned, it may impact a proposal processing a great deal. So, the methodology includes a carefully laid out list of risks concerning each of the processing phases and the concerned decision points. A risk register is established by the nodal office responsible for project proposal administration, facilitation, and submission in the organisation. Brainstorming would yield a list of risks connected with proposal processing and the entire project proposal risk management plan could be enumerated. The quality and genuineness of the risk analysis require that values for risk probabilities and their impacts are determined. The methodology for project proposal risk management plan includes the following items:

- 1. Risk Events** – A risk event is a discrete happening that if it occurs, will affect the project proposal. I assume that it either happens or doesn't happen at all. To ascertain such risk events a close analysis of the entire project proposal is carried out and the risk events are brainstormed and shortlisted.
- 2. Probability** – The value of probability is taken as the percentage between and 1 and 100. A probability in percentage term each is assigned to every risk event.
- 3. Impact** – It is the consequence of a risk event that is assigned a value between 1 and five; with 1 being of least consequence and 5 having the maximum consequence to a project proposal submission and approval. Thus an appropriate scale for each of the risk register event item is created.
- 4. Priority** – A Probability x Impact will give us a definite clue to prioritising the risk event. Higher priority risk event should be mitigated and planned for before lower priority ones.
- 5. Risk Response** – Based on the score of Probability X Impact, a risk event register could be created having substantial risk response

tasks of avoidance, mitigation or elimination could be developed.

A thorough and detailed risk management of project proposal can be established in the following section by taking the case of project proposal at UWB in Pilsen.

### 3. PROJECT PROPOSAL CASE STUDY

As enumerated in figure 2 the project proposal is a one-off affair where any one person or a

team of university employees may propose a project. Public-private partnership project proposal is also a possibility but it is beyond the scope of this paper and hence is not discussed here. Based on the processing diagram (fig. 2) of the project proposal and as enumerated in the previous section of methodology a tabular presentation of the partial risk register can be readily achieved which may appear as follows:

Tab. 1: Project Proposal Risk Register

ID	Risk Event
1	Call information not received by project office staff
2	Call information received close to deadline
3	Proposer doesn't have any previous experience of project propositioning

*Source: Self-Processed*

Once a risk register is developed as a result of intense brainstorming session (s), it'd be time to prioritise each of these risk events by assigning a percentage based on their likelihood of occurrence. As outlined in the methodology section, the impact of each risk event's occurrence on the project proposal submission can easily be addressed by assigning a score between 1 and 5, with 1 for the lowest impacting risk event and 5 assigned to the

highest impacting risk event on the project proposal. This is done to highlight the importance of an event impact the project proposal processing.

Building upon the case study, a table could further be developed with each risk event having a probability and a corresponding impact assigned. Once this treatment is meted out, the risk register would appear somewhat as depicted in table 2 below:

Tab. 2: Project Proposal Risk register with Probability and Impact

ID	Risk Event	Probability (1-100%)	Impact (1 - 5)
1	Call information not received by project office staff	50	1
2	Call information received close to deadline	80	2
3	Proposer doesn't have any experience	90	5

*Source: Self-Processed*

Building upon the aforesaid this risk register table could be further developed as shown below:

Tab. 3: Risk Management Plan for Project Proposal at the University of West Bohemia

ID	Risk Event	Probability (1-100%)	Impact (1 - 5)	Priority
1	Call information not received by project office staff	50	1	50
2	Call information received close to deadline	80	2	160
3	Proposer doesn't have any experience	90	5	450
4	Proposer doesn't know how to convert an idea into a proposal	75	4	300
5	Proposer has limited access to proposal formulation data	30	5	150
6	Supervisor doesn't agree with the proposal	35	5	175
7	Supervisor isn't available to approve the proposal	20	4	80
8	Supervisor has no method to know if someone is working on a proposal	25	5	125
9	Supervisor doesn't know how to approve/ advice corrections in a proposal	25	4	100
10	Supervisor and proposer are mired in conflict	55	1	55
11	Divisional or departmental head is unavailable to check the proposal	15	5	75
12	Divisional or departmental head doesn't know how to check the proposal	10	4	40
13	Divisional or departmental head doesn't approve of the proposal	5	5	25
14	Divisional or departmental head takes unusually long to approve the proposal for registration	10	3	30
15	Project office staff lacks the skill to assess the project	15	5	75
16	Project office doesn't communicate with the proposer	5	3	15
17	Project office makes intermittent changes which demotivate the proposer	20	3	60
18	Project office wants too many changes close to the submission deadline	65	4	260
19	Assessment is positive but no funds are allocated	60	5	300
20	Project Call is withdrawn	5	5	25

*Source: Self-processed*

As the author worked out the risk event probability and Impact values, it became apparent to suggest a "Priority risk register". Such a register having each risk event scored is achieved by multiplying each risk event's probability with its corresponding impact score. Understandably, it implies that whenever the occurrence of both is large, those risk events would be considered riskier- hence requiring urgent action. On the contrary, the small size of both would result in a relatively fail-safe risk event. The score thus obtained would also help in organising each of the risk event items on a priority basis. The administrator at the project office of UWB can easily create a "Priority Risk Register" and schedule action for the same to have maximum effectiveness, which is to have the proposal for every project made within the deadline with maximum chances of success.

#### 4. DISCUSSION POINTS

The project proposal risk management plan enumerated in the previous section can be expanded further in many ways. Some of them will be given here while other points would be subject to further research by the author. Risk management plan for project proposal can be further developed by identifying the decision points or decision gates within the project proposal processing. It can be readily achieved by charting out a lifecycle of the proposal into discrete phases with the start phase being the proposer documenting an idea in a rough form and the final phase ending with the proposal submission. Another valuable tool that could be based on project proposal risk management plan is to produce a "Risk Severity Matrix". In such a matrix the risk events would be easily identified with the high probability and high impact risk event appearing in the top right corner of the matrix.

Among other things, based on the priority, as shown in table 3, a substantial risk response could be developed. Such a “Risk Response” table could appear as shown in table 4 below:

Tab. 4 Risk response to risk events in project proposal

ID	Risk Response
1	Expedite information access
2	Allocate staff to help in proposal preparation
3	Immediate training organisation wide organised
4	Proposer is trained by specialists to organise ideas coherently
5	Cross-check proposer's access limitations to allow adequate access
6	Seek detailed report from the supervisor for disagreement
7	Assign deputy-in-charge for approval
8	Update supervisors about staff proposal regularly
9	Train supervisors on approval method regularly
10	Develop conflict resolution mechanism in the organisation
11	Install alert system that updates supervisors about a proposal receipt deadline
12	Train divisional heads on approval method regularly
13	Seek detailed report from the divisional head for disagreement
14	Install alert system that alerts a divisional head about a proposal receipt deadline
15	Update staff by training them adequately and regularly
16	Organise meetings of divisional heads with the project staff
17	Intermittent changes should be implemented with active input from project office staff
18	Project office should help the proposer in suggested changes
19	Other funds are proposed by the project office for accessing
20	Direct the proposal for similar call and that must be redone from the very start

*Source: Self-processed*

Project proposal risk management appears to be an extremely important part as it appears to be the most crucial for any project. If the financials and the schedules of proposals are adequately risk-treated, there would be less likelihood of failure in getting approval. No wonder why proper risk management has been designated as one of the eight main knowledge areas of the Project Management Body of Knowledge (PMBOK) by the Project Management Institute. The methodology of risk treatment of project proposal within an organisation such as the one at the university of West Bohemia would greatly benefit the project office that is responsible for processing all project proposals at the university. This methodology can be further replicated at other organisations with suitable adaptations worldwide.

## CONCLUSION

With the advancement in project management studies and techniques, risk management has taken centre-stage in the project life cycle; in most cases at the outset of the project itself. Project proposals are the beginning of a process that ends with the approval or disapproval of a project. A cash-strapped organisation could be dependent on accessing external funds which could entail a long and enduring process of accession. Such organisation could be in private businesses or public sector organisations such as a university or an institution for certain cause. Handling risks that emanate due to poor detailing, not focusing on the financial aspects, etc. may prove to be extremely vital. Accessing funds for research would be key to managing proposals for the project office. By nature, most risks are latent and not apparent and sometimes not so ubiquitous either. But preparedness for an unknown event's occurrence could be

extremely vital and help in saving a lot of cost and time. If the proposers of projects are aware of the risks themselves, it would be far more easy for them to prepare a realistic project that would win approval, thereby bringing the much-needed funding to the organisation. Organisations, where these funds are vital, would be a great deal successful in funding themselves to achieve their organisational goals.

Every project is unique. It is something that is unlikely to repeat in future. Yet the focus at the initiation stage of a project lifecycle is the same and almost repetitive in nature. But despite having such premise, the common elements in different project proposals are ignored. When these are set aside, every new project proposal is dealt with differently, thus creating a huge issue with the project office which embroils itself in focusing only on correcting the formal aspects of project submission rather than helping the proposal maker to focus on areas that would clinch the approval for funding. Tools like risk event register, tabular outlining of risk event prioritisation can go a long way in establishing a smooth and effective processing of a project proposal. Taking a cue from these, risk severity matrix and relative or numerical scale for risk events can be developed that would be of great help not only to the project managers but also for the organisations that need funding from external sources. If such funds are to be externally procured from, the task of risk management assumes enormous significance. A coherent risk strategy would increase the probability of project funding for such proposals a great deal. In the summary that was published as part of proceedings published in an ESA-NASA joint conference in Noordwijk, the Netherlands (2002), Taylor and Vantine wrote "Risk considerations are critical in most project proposals of all sorts of organizations. To win a proposal, the proposal team must exhibit a clear, concise understanding of the risks associated with the risk program, and document a structured, a well-defined process of risk management". Gray, Larson and Desai (2011) readily opine that "the chances of a risk event occurring are greatest in the initial phases of a project

lifecycle" and go on to say that "clearly, identifying project risk events and deciding a response before the project begins is a more prudent approach than not attempting to manage risk. It's time organisations started spending time on a risk management plan for project proposal, to be able to fund their project activities.

## REFERENCES

- Ackermann, F., Eden, C., Williams, T., & Howick, S. (2006). Systemic risk assessment: A case study. *J Oper Res Soc Journal of the Operational Research Society*, 58(1), 39-51.
- Ben-David, I., & Raz, T. (2001). An integrated approach for risk response development in project planning. *J Oper Res Soc Journal of the Operational Research Society*, 52(1), 14-25.
- Chapman, C. B., Ward, S., & Chapman, C. B. (2011). How to manage project opportunity and risk: Why uncertainty management can be a much better approach than risk management. Chichester, West Sussex: Wiley.
- Coleman, L. (2009). Risk strategies: Dialling up optimum firm risk. Farnham: Gower.
- Cooper, D. F. (2005). Project risk management guidelines: Managing risk in large projects and complex procurements. Chichester: Wiley
- Garlick, A. R. (2007). Estimating risk: A management approach. Aldershot: Gower.
- Gray, C. F., Larson, E. W., & Desai, G. V. (2011). Project management: The managerial process. New Delhi: Tata McGraw Hill Education
- Nicholas, J. M., & Steyn, H. (2008). Project management for business, engineering, and technology: Principles and practice. Amsterdam: Elsevier Butterworth Heinemann.
- Project management body of knowledge (pmbok guide). (2008). Pennsylvania (USA): Project Management Institute (Global STANDARD).
- Sadgrove, K. (2005). The complete guide to business risk management. Aldershot: Gower.
- Taylor, W. and Vantine, W. (2002). Risk Management in the Proposal Development



Process, ESA-NASA Space flight Safety  
Conference Noordwijk (NL).

Webb, A. (2003). *The Project Manager's  
Guide to Handling Risk*. Abingdon (Oxon),  
Gower Publishing Limited.