

## Chapter 1 : Risk and Decision Making - Edumine Online Course

*Risk Analysis and Risk Management Evaluating and Managing Risks Whatever your role, it's likely that you'll need to make a decision that involves an element of risk at some point.*

One way of doing this is to make your best estimate of the probability of the event occurring, and then to multiply this by the amount it will cost you to set things right if it happens. This gives you a value for the risk: So the risk value of the rent increase is: This will help you to identify which risks you need to focus on. Gather as much information as you can so that you can accurately estimate the probability of an event occurring, and the associated costs. It may be better to accept the risk than it is to use excessive resources to eliminate it. Be sensible in how you apply this, though, especially if ethics or personal safety are in question. Avoid the Risk In some cases, you may want to avoid the risk altogether. This could mean not getting involved in a business venture, passing on a project, or skipping a high-risk activity. This is a good option when taking the risk involves no advantage to your organization, or when the cost of addressing the effects is not worthwhile. Remember that when you avoid a potential risk entirely, you might miss out on an opportunity. Conduct a "What If? Share the Risk You could also opt to share the risk " and the potential gain " with other people, teams, organizations, or third parties. For instance, you share risk when you insure your office building and your inventory with a third-party insurance company, or when you partner with another organization in a joint product development initiative. Accept the Risk Your last option is to accept the risk. For example, you might accept the risk of a project launching late if the potential sales will still cover your costs. Before you decide to accept a risk, conduct an Impact Analysis to see the full consequences of the risk. You may not be able to do anything about the risk itself, but you can likely come up with a contingency plan to cope with its consequences. Control the Risk If you choose to accept the risk, there are a number of ways in which you can reduce its impact. Business Experiments are an effective way to reduce risk. They involve rolling out the high-risk activity but on a small scale, and in a controlled way. You can use experiments to observe where problems occur, and to find ways to introduce preventative and detective actions before you introduce the activity on a larger scale. Preventative action involves aiming to prevent a high-risk situation from happening. It includes health and safety training, firewall protection on corporate servers, and cross-training your team. Detective action involves identifying the points in a process where something could go wrong, and then putting steps in place to fix the problems promptly if they occur. Detective actions include double-checking finance reports, conducting safety testing before a product is released, or installing sensors to detect product defects. Plan-Do-Check-Act is a similar method of controlling the impact of a risky situation. Like a Business Experiment, it involves testing possible ways to reduce a risk. Key Points Risk Analysis is a proven way of identifying and assessing factors that could negatively affect the success of a business or project. It allows you to examine the risks that you or your organization face, and helps you decide whether or not to move forward with a decision. You do a Risk Analysis by identify threats, and estimating the likelihood of those threats being realized. This may include choosing to avoid the risk, sharing it, or accepting it while reducing its impact. Subscribe to our free newsletter , or join the Mind Tools Club and really supercharge your career!

### Chapter 2 : Integrating Management of Risk into Decision Making: Focusing on Risk and Control | IFAC

*Developing Strategies. Another aspect of the decision-making process lies in the development of a strategic plan. This plan can give businesses the tools they need to prevent the risks that they can avoid and reduce the damage of those they cannot stop.*

Vlad Sargu How can an organization ensure risk is appropriately considered in decision-making? As I have been saying for quite a while now, decision-making is where risk is taken. We want decision-makers to consider all the potential consequences of a decision in fact, all the potential consequences for each option on the table before making an informed and intelligent judgment. We want to know that the right level of the right risks is being examined. It should not be satisfactory to management to know only after-the-fact that a poor decision was made. So I had what might be a novel idea: Decision-making will therefore affect their compensation and career progression. Decision-Making The ability to make decisions and the quality and timeliness of those decisions. Exceptional decision making abilities. Decisions are made in a timely manner. Above average decision making abilities. Usually makes sound and timely decisions. The five points work well, but we can build on this for our purposes in light of risk management. How about something like this: Decision-Making Makes timely, intelligent and informed decisions after obtaining reliable information and consulting with others including the risk management function as appropriate. Considers options and their consequences. Balances the potential for reward against potential harms and other negative consequences before making significant decisions. Complies with corporate risk and other policies and guidance and stays within established risk limits. What do you think? I welcome your comments. He is also a mentor to individuals and organizations around the world, the author of World-Class Risk Management and publishes regularly on his own blog.

**Chapter 3 : Risk Analysis and Risk Management - Decision Making from [blog.quintoapp.com](http://blog.quintoapp.com)**

*Managing projects means making decisions about the potential and the actual risks that can occur and that can detrimentally affect performance and outcomes. Such decisions, however, vary from project.*

Maximization psychology Herbert A. Further psychological research has identified individual differences between two cognitive styles: Maximizers tend to take longer making decisions due to the need to maximize performance across all variables and make tradeoffs carefully; they also tend to more often regret their decisions perhaps because they are more able than satisficers to recognise that a decision turned out to be sub-optimal. System 1 is a bottom-up, fast, and implicit system of decision-making, while system 2 is a top-down, slow, and explicit system of decision-making. In his analysis on styles and methods, Katsenelinboigen referred to the game of chess, saying that "chess does disclose various methods of operation, notably the creation of predisposition-methods which may be applicable to other, more complex systems. Both styles are utilized in the game of chess. According to Katsenelinboigen, the two styles reflect two basic approaches to uncertainty: The combinational style is characterized by: In defining the combinational style in chess, Katsenelinboigen wrote: The objective is implemented via a well-defined, and in some cases, unique sequence of moves aimed at reaching the set goal. As a rule, this sequence leaves no options for the opponent. This approach is the crux of the combination and the combinational style of play. In playing the positional style, the player must evaluate relational and material parameters as independent variables. The positional style gives the player the opportunity to develop a position until it becomes pregnant with a combination. The terminal points on these dimensions are: For example, someone who scored near the thinking, extroversion, sensing, and judgment ends of the dimensions would tend to have a logical, analytical, objective, critical, and empirical decision-making style. However, some psychologists say that the MBTI lacks reliability and validity and is poorly constructed. For example, Maris Martinsons has found that American, Japanese and Chinese business leaders each exhibit a distinctive national style of decision-making. Several brain structures, including the anterior cingulate cortex ACC , orbitofrontal cortex and the overlapping ventromedial prefrontal cortex are believed to be involved in decision-making processes. A neuroimaging study [44] found distinctive patterns of neural activation in these regions depending on whether decisions were made on the basis of perceived personal volition or following directions from someone else. Patients with damage to the ventromedial prefrontal cortex have difficulty making advantageous decisions. A study of a two-alternative forced choice task involving rhesus monkeys found that neurons in the parietal cortex not only represent the formation of a decision [46] but also signal the degree of certainty or "confidence" associated with the decision. Emotions in decision-making Emotion appears able to aid the decision-making process. The somatic marker hypothesis is a neurobiological theory of how decisions are made in the face of uncertain outcome. Barbey and colleagues provided evidence to help discover the neural mechanisms of emotional intelligence. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed. May Learn how and when to remove this template message During their adolescent years, teens are known for their high-risk behaviors and rash decisions. Recent research[ citation needed ] has shown that there are differences in cognitive processes between adolescents and adults during decision-making. Researchers have concluded that differences in decision-making are not due to a lack of logic or reasoning, but more due to the immaturity of psychosocial capacities that influence decision-making. Examples of their undeveloped capacities which influence decision-making would be impulse control, emotion regulation, delayed gratification and resistance to peer pressure. In the past, researchers have thought that adolescent behavior was simply due to incompetency regarding decision-making. Currently, researchers have concluded that adults and adolescents are both competent decision-makers, not just adults. Recent research[ citation needed ] has shown that risk-taking behaviors in adolescents may be the product of interactions between the socioemotional brain network and its cognitive-control network. The socioemotional part of the brain processes social and emotional stimuli and has been shown to be important in reward processing. The cognitive-control network assists in planning and self-regulation. Both of these sections of the brain change

over the course of puberty. However, the socioemotional network changes quickly and abruptly, while the cognitive-control network changes more gradually. Because of this difference in change, the cognitive-control network, which usually regulates the socioemotional network, struggles to control the socioemotional network when psychosocial capacities are present. Because teens often gain a sense of reward from risk-taking behaviors, their repetition becomes ever more probable due to the reward experienced. In this, the process mirrors addiction. Teens can become addicted to risky behavior because they are in a high state of arousal and are rewarded for it not only by their own internal functions but also by their peers around them. Adults are generally better able to control their risk-taking because their cognitive-control system has matured enough to the point where it can control the socioemotional network, even in the context of high arousal or when psychosocial capacities are present. Also, adults are less likely to find themselves in situations that push them to do risky things. For example, teens are more likely to be around peers who peer pressure them into doing things, while adults are not as exposed to this sort of social setting.

*About the Author. Norman Marks, CPA, CRMA is an evangelist for "better run business," focusing on corporate governance, risk management, internal audit, enterprise performance, and the value.*

Risk Management is the process of identifying, analyzing and responding to risk factors throughout the life of a project and in the best interests of its objectives. Proper risk management implies control of possible future events and is proactive rather than reactive. An activity in a network requires that a new technology be developed. The schedule indicates six months for this activity, but the technical employees think that nine months is closer to the truth. If the project manager is proactive, the project team will develop a contingency plan right now. They will develop solutions to the problem of time before the project due date. However, if the project manager is reactive, then the team will do nothing until the problem actually occurs. The project will approach its six month deadline, many tasks will still be uncompleted and the project manager will react rapidly to the crisis, causing the team to lose valuable time. Proper risk management will reduce not only the likelihood of an event occurring, but also the magnitude of its impact. I was working on the installation of an Interactive Voice Response system into a large telecommunications company. The coding department refused to estimate a total duration estimation for their portion of the project work of less than 3 weeks. My approach to task duration estimation is that the lowest level task on a project whose total duration is 3 months or more should be no more than 5 days. So this 3 week duration estimation was outside my boundaries. Nevertheless, the project team accepted it. It appeared an unrealistic timeline for the amount of work to be done but they were convinced that this would work. No risk assessment was conducted to determine what might go wrong. Unfortunately, this prevented their ability to successfully complete their tasks on time. The system must also be able to quantify the risk and predict the impact of the risk on the project. The outcome is therefore a risk that is either acceptable or unacceptable. If risk management is set up as a continuous, disciplined process of problem identification and resolution, then the system will easily supplement other systems. This includes; organization, planning and budgeting, and cost control. Surprises will be diminished because emphasis will now be on proactive rather than reactive management. Risk Management is a Continuous Process Once the Project Team identifies all of the possible risks that might jeopardize the success of the project, they must choose those which are the most likely to occur. They would base their judgment upon past experience regarding the likelihood of occurrence, gut feel, lessons learned, historical data, etc. Early in the project there is more at risk than as the project moves towards its close. Risk management should therefore be done early on in the life cycle of the project as well as on an on-going basis. The significance is that opportunity and risk generally remain relatively high during project planning beginning of the project life cycle but because of the relatively low level of investment to this point, the amount at stake remains low. In contrast, during project execution, risk progressively falls to lower levels as remaining unknowns are translated into knowns. At the same time, the amount at stake steadily rises as the necessary resources are progressively invested to complete the project. The critical point is that Risk Management is a continuous process and as such must not only be done at the very beginning of the project, but continuously throughout the life of the project. Risk Response Avoidance is eliminating a specific threat, usually by eliminating the cause. Mitigation is reducing the expected monetary value of a risk event by reducing the probability of occurrence. Acceptance is accepting the consequences of the risk. This is often accomplished by developing a contingency plan to execute should the risk event occur. In developing Contingency Plans, the Project Team engages in a problem solving process. Contingency plans will help to ensure that they can quickly deal with most problems as they arise. Once developed, they can just pull out the contingency plan and put it into place. Why do Risk Management? The purpose of risk management is to: Provide a rational basis for better decision making in regards to all risks. Assessing and managing risks is the best weapon you have against project catastrophes. Additionally, continuous risk management will: Ensure that high priority risks are aggressively managed and that all risks are cost-effectively managed throughout the project. Provide management at all levels with the information required to make informed decisions on issues critical to project success. There are

many sources and this list is not meant to be inclusive, but rather, a guide for the initial brainstorming of all risks. By referencing this list, it helps the team determine all possible sources of risk. Various sources of risk include: Project Management Top management not recognizing this activity as a project Too many projects going on at one time Impossible schedule commitments No functional input into the planning phase No one person responsible for the total project Poor control of design changes Problems with team members.

**Chapter 5 : NPS Essential Competencies: Leadership: Decision-Making & Risk Management**

*An excellent textbook for upper-undergraduate and graduate students, Engineering Decision Making and Risk Management is appropriate for courses on decision analysis, decision making, and risk management within the fields of engineering design, operations research, business and management science, and industrial and systems engineering. The book.*

In this interview he discusses the most significant issues in risk management today, offers tips on how to develop a risk management plan, and more. What are the biggest issues in risk management today? How do you expect them to evolve in the future? There are a couple of issues in terms of risk management we see most often. A lack of risk decision making structure and lack of accountability for risk decisions in an organization. For example, a project manager may accept a large information security risk that can lead to compliance and reputational issues simply because they only thing they get incentivized on is getting the new product out the door. However, the executive in charge of the business unit, accountable for sustained results may make a very different decision. Organizations need to develop a structure so that the important risk-based decisions are made by the right people, those who are accountable for the impacts – good or bad. This typically means some kind of risk governance structure that defines what decision making powers each level of the organization has and an oversight structure and escalation path for those risks that need monitored or managed higher up in the food chain. The lack of meaningful risk assessment process. There are organizations that consider risk management something they have to do from a compliance standpoint who conduct superficial risk assessments. A meaningful process enables the identification of risks based on the goals of the organization and describes those risks in business terms either qualitatively or qualitatively through a common risk taxonomy. Enabling risks to be compared as apples-to-apples is extremely important for decision makers who need to be able to allocate resources across complex organizations. In terms of risk assessment effectiveness, organizations who take a control based approach to risk assessment are often missing the business context required to make the right decisions. A true, goals-based risk management strategy facilitates a more effective allocation or risk mitigation resources and sometimes even saves money! A lack of an open, risk -ware culture. In order to build a culture where business managers are willing to be transparent to their executives, the executives have to be careful to craft the kind of culture that fosters this transparency. What are the first steps in figuring out how to develop a risk management plan for a medium-sized organization? The obvious, and very true, answer to this is to perform a real, goals-based risk assessment where the organization looks at its long term strategies and goals as well as operational necessities and identifies those threats which may cause uncertainty. However, before being able to do this, the proper risk management framework needs to be put in place. This includes a risk oversight and governance structure, a common risk universe used to categorize and scope the assessment, a common risk taxonomy to describe risks and their impacts in a manner so that business leaders can compare risks across the company, the establishment of a risk assessment process, and clear articulation of the short and long term goals of the company. What risk management issues are often overlooked? Often times risk assessments are structured so that business managers only capture the known risks. Bringing in outside expertise to contribute to or facilitate risk assessments and including as wide an array of skill sets, employee levels, and functions can help identify those unknowns. The other important piece is to also be prepared for those black swan, unforeseeable events. You may not know or understand specifics, but you should have a general process for dealing with them when they happen. As stated before, I also think the importance of a risk taxonomy, how you describe and rate risks, cannot be understated. What is the best way to explain the importance of risk management to senior executives? I actually think most senior executives understand risk management and the good ones practice it instinctively. In the former case, there may be a real lack of an ability for that middle manager to communicate in business terms or the organization is lacking the right taxonomy to facilitate that communication. In the latter case, the organization is missing the right governance structures so that the risk acceptance can be formally communicated and accountability assigned appropriately. I think explaining the importance of risk management to these executives needs to be

in the context of assuring the ability to meet and exceed company goals while minimize the amount of volatility and variability.

**Chapter 6 : Risk management issues, challenges and tips - Help Net Security**

*(1) A decision-making process for managing day-to-day schedules when there are conflicts \*\* (2) A decision-making process for identifying hazards and controlling risks both on-duty and off-duty (3) A tool for leadership to manage workflow and activities while on-duty.*

Risk-based decision making Risk-based decision making Decisions evolve around the need to make choices, either to do or not to do something, or to select one option from a range of options. The choices available are often constrained by social, technical, business, safety and environmental requirements and objectives. A typical framework for the decision making process is illustrated in Fig. The importance of the change dictates the extent and formality of assessment, documentation, review, consultation and approval. Risk-based decision making process The overall decision making process steps remain the same in Risk Based Decision Making - define the issues, examine the options and implement the decision. What is different is that the decision is arrived at by a structured understanding of the risk-reward balance and uncertainties, illustrated by Fig 2. The options available will be based on one or more of the "4Ts" risk response strategies: Terminate, Treat, Tolerate, Transfer. A well designed risk response portfolio will focus not only on reducing the likelihood of a risk occurring, but also includes plans for stabilisation and recovery to ensure business continuity and effective reputation management. It may also be possible to reduce the potential for financial loss by hedging techniques or insurance purchase. Next, an evaluation of the risk response options is required, taking into account their cost, benefits and views of relevant stakeholders. Whilst risk responses which are not cost-effective i. Ultimately, a decision is made. Often the decision is clear-cut: At other times there is no clear answer, requiring further investigation of the underlying issues or a simple consensual decision. Any decision requires an assessment of whether the "residual" risk is acceptable, given the risk appetite of the organisation which, while difficult to quantify, is surprisingly well understood, if subconsciously, within most organisations. Practical difficulties Whilst this process is reasonably straightforward in principle, in practice there can be demanding issues to overcome, for example: Ensuring the options have been properly selected and defined. Setting assessment criteria, and objectives and their relative importance. Identifying risk issues and perceptions. Assessing the performance of options against aspects that may not be quantifiable, or which may involve judgements and perceptions that vary or are open to interpretation. Dealing with differences in the uncertainties of estimates, data and analyses - it may not be able to provide a fair reflection of the actual differences between the options being considered. Managing or avoiding hidden assumptions or biases. Ability to plan and take risk based decisions for the long term. Effective risk based decision making forums both within single companies and cross industry. Clear understanding of the required inputs for and pride in the output of risk decisions. Positive management of the media and transparency of risk based decision making. Ability to take rapid risk based decisions to operate under degraded modes. Co-operation with the regulator s leads to co-ordinated risk based decisions. Evidence from experts provides a sound basis for risk based decisions. Conclusion Many organisations in commerce, industry and the public sector have learnt the need for structured Risk Based Decision Making processes after some very painful lessons. Few would state their processes are fully evolved and functioning without problems. Many other organisations are really only now starting their journey. Successfully applied, though, risk based decision making can be both powerful and cost effective.

## Chapter 7 : Risk-based decision making | Risktec

*Poorly managed outsourcing decisions may ultimately increase, rather than decrease, total risk for an enterprise. An ERM approach to risk management is appropriate for managing the complexity of risks associated with outsourcing decisions.*

If one particular alternative is clearly better than the rest, your choice will be obvious. However, if you still have several competing options, there are plenty of tools that will help you decide between them. If you have various criteria to consider, use Decision Matrix Analysis to compare them reliably and rigorously. Or, if you want to determine their relative importance, conduct a Paired Comparison Analysis. Decision Trees are also useful when choosing between different financial options. These help you to lay options out clearly, and bring the likelihood of your project succeeding or failing into the decision-making process. When anonymity is important, decision-makers dislike one another, or there is a tendency for certain individuals to dominate the process, use the Delphi Technique to reach a fair and impartial decision. This uses cycles of anonymous, written discussion and argument, managed by a facilitator. Finding This Article Useful? But now, more than ever, is the time to "sense check" your decision. Your final decision is only as good as the facts and research you used to make it. This will help you avoid confirmation bias, a common psychological bias in decision making. Discuss your preliminary conclusions with important stakeholders to enable them to spot flaws, make recommendations, and support your conclusions. Listen to your own intuition, too, and quietly and methodically test assumptions and decisions against your own experience. Use Blindspot Analysis to review whether common decision-making problems like over-confidence, escalating commitment, or groupthink may have undermined the process. And consider checking the logical structure of your process with the Ladder of Inference, to make sure that a well-founded and consistent decision emerges at the end. Get them involved in implementing the solution by discussing how and why you arrived at your decision. The more information you provide about risks and projected benefits, the more likely people will be to support your decision. There are many tools and techniques that you can use as part of making a good decision. If you use them all, however, you could wind up spending a very long time making a very small decision. Pick and choose tools appropriately, depending on the nature and scale of the decision you want to take. Key Points Although problem solving and decision making are different processes, it is often necessary to combine them when making a complex decision. Systematically incorporating problem-solving and decision-making tools can help you make fully-informed decisions, either individually or as part of a group. The seven-step strategy is: Create a constructive environment. Investigate the situation in detail.

## Chapter 8 : Effective Risk Management Starts With Better Decision-Making

*Since , the Stanford Strategic Decision and Risk Management Certificate Program has been a high-quality, decision-making professional education program for leaders around the world.*

## Chapter 9 : How to Make Decisions - Decision Making Tools From [blog.quintoapp.com](http://blog.quintoapp.com)

*Risk Management is the process of identifying, analyzing and responding to risk factors throughout the life of a project and in the best interests of its objectives. Proper risk management implies control of possible future events and is proactive rather than reactive.*