



MCL Management Group, LLC
Providing Deliverable-Centered Project Management Services

The NEW Risk Standards for Project Risk Practitioners

A MCLMG eBook

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Proactive Thinking



Original: October 04, 2010
Rev: 201111 November 26, 2011

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Proactive Thinking

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EXECUTIVE SUMMARY

As the importance of project management and business analysis techniques grows in most organizations to a level of strategic impact, the need to update risk management concepts and standards has become increasingly necessary. Risk management has come to the forefront of many recent news stories from the 2005 hurricane Katrina to the 2009 BP/Deep Horizon Gulf oil spill illustrating the limited or ineffective manner in which risk analysis is accomplished by both the government and commercial organizations.

Risk management is one of the primary constraints: scope, time, cost, quality, and risk that impact how projects are defined, planned, and executed. Without understanding the true nature of risk and issue management, projects become susceptible to lower successful outcome potentials as risks and their triggered issues reduce the ability of project management professionals to deal with uncertain future events. Improperly identifying and managing risk potentials side-track project resources, budget, and schedules from the single project goal of producing “fit-for-use” deliverables within the primary constraints of project management.

The current definitions of risk management principles and concepts are not adequately supporting the necessity for proactive risk mitigation, responding to issue impacts, or valuing risk activities. A new specification of risk standards now labeled the New Risk Standards (NRS) is needed to refocus risk professionalism towards the goal of directly managing project risk and issue environments – not just letting risk become project roadblocks. Thus, this white paper will guide the reader in understanding how risk and issue management must be redefined in order to provide new and effective approaches to dealing with and managing project risk profiles.

Beginning with the redefinitions of risk concepts and principles, the reader is shown how these new definitions lead to understanding the correct interrelationships between risks, issues, mitigation strategies, and response plans. Many current risk professionals will find these definitions, concepts, and principles disconcerting or even incorrect; however, the reader is asked to complete the entire paper before making their own judgment rendering.

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Mr. Lohnes holds the PMI's Professional Project Manager (PMP) certification as well as the MCTS for Project 2010. Mr. Lohnes assists their client base in the MD/VA/WDC area in the maturing of their project and risk management programs while identifying aspects needing attention and remediation.

Mr. Lohnes continues to develop quantitative risk management, auditing, and indexing tools that he uses in service of MCLMG's clients and customers.

References and Resources

1	Lohnes & Wilson. " Developing a Flexible, Multi-Level Risk Classification System. " 2010. Link: projectrescue.mclmg.com
2	Lohnes & Wilson. " Establishing a Proactive Risk Management (PRM) Program. " 2010. Link: projectrescue.mclmg.com

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Cheryl A. Wilson has an impressive resume and work history both in and around the Washington, DC area. She is a USAF veteran and a graduate of the University of Maryland with a Bachelor of Arts.

Ms. Wilson is also a holder of a Master's Degree in Management Information Systems from Strayer University.

Being one of the first women to obtain the Risk Management Professional certification from the Project Management Institute, Ms. Wilson is in high demand both as a enterprise risk management (ERM) consultant and risk analysis team leader. She has held several, high-profile portfolio management and business analyst positions at firms contracting with the US Government.

Ms. Wilson provides MCLMG's clients with proactive risk management program initialization and ERM startup services.

1. Definitions

To start the restatement of project risk environments, new definitions of risk and issue concepts need to be offered along with the relationships that risk potentials, issues, and activities share. Without a common definition and understanding of risk terms and definitions, the current confusion within the project risk management discipline will continue to limit effective implementation of proactive risk solutions. The following redefinitions of current risk terms and activities now labeled the New Risk Standards (NRS) are offered to support this goal of achieving proactive-orientation of project risk management.

1.1. UFE

Uncertain Future Event (UFE): the primary classification of a project risk event. All risk potentials are first of all possible future events, i.e., events that have not yet occurred, but are known by understanding some if not all of their characteristics. The uncertain characteristic of these events mean that they are not based on principles of natural laws that have a 100% or axiomatic probability of occurring, but a less than certain probability between 1 and 99% (normalized).

Examples of UFEs are:

Weather events, investments, gambling outcomes, project success, legal proceedings, etc.

1.2. CFE

Certain Future Event (CFE): a classification of future events that are guaranteed to occur owing to their basis in or on natural laws - physics, mathematics, cosmology, or thermodynamics. The need for risk planning does not exist for CFEs since their impact can be accurately planned for due to the probability of their occurrence being 100% for events of this category. The value of impact of such a risk potential can be questioned, but not the probability of its occurrence. Stepping off the edge of an eight (8) story building guarantees a successful test of gravity; the impact of such an event would be the only value in question.

Examples of CFEs are:

Gravity, entropy, energy, matter, cosmology events, etc.

1.3. Risk

A risk: an UFE that will have a NEGATIVE impact on a project's outcome if the risk or risk potential (to be more accurate) triggers into reality. The current definition of a risk includes both the chance of either a negative or positive impact; however, in risk management practice, the time to stop trying to force the project management profession to accept risk as a positive event has arrived. While a risk in academia

can affect either a negative or positive impact, in reality, most risk professionals continue to struggle with the positive impact of a risk. The new risk standards provide the definition of an opportunity (see below) to confine the positive nature of a positively impacting UFE.

1.3.1. Threats

Another term for a risk potential; usually used in a military context.

1.4. Opportunities

An opportunity: an UFE that will have a POSITIVE impact on a project's outcome if the risk or risk potential triggers into reality. This additional definition from current risk management practices will finally move the project risk discipline into a more colloquial form of term definitions as opposed to the current academic, dictionary-correct definition of a risk.

1.4.1. Investment

Another term for an opportunity; usually used in a financial context.

1.5. Issues

An issue: a risk potential that has triggered into reality following some catalytic event creating an environment where the UFE (a risk potential) ceases to be a future concept and now becomes a real situation or set of conditions are taking place in the present. Upon the conversion of the risk potential into an issue, project management must alter the containment approach from that of mitigation to that of response.

1.6. Trigger

A trigger is an event or action that has caused an associated risk to become a reality; a catalyst for the conversion of a risk into an issue.

1.7. Demarcation Point

The risk/issue demarcation point is where a risk potential becomes a reality through the occurrence of a trigger(s) associated with the risk potential. The point of the triggered event occurring is the point of demarcation between a risk and an issue.

1.8. RPO

The risk probability of occurrence (RPO) is the statistical percentage or scoring of a risk potential's future possibility of becoming an issue. This value can either be expressed as a percentage (1 to 99%) indicating

the probability of becoming a reality or it can be expressed as a normalized value (usually between 1-5) symbolizing a pre-determined range of probabilities. An example of the latter would be:

Risk Probability Occurrence Matrix Mapping (RPO)

RPO Value	Probability Mapping	Description
1	1 -- 19%	Low change of triggering
2	20 -- 39%	Low to medium probability
3	40 – 59%	Medium probability
4	60 – 79%	Medium to high probability
5	80 – 99%	High probability

1.9. RCI

The risk cost of impact (RCI) is the monetary value or scoring or a risk potential's NEGATIVE impact on a project's outcome. This value can either expressed as a monetary value of indicated negative impact, or it can be expressed as a normalized value (usually between 1-5) symbolizing a pre-determined range of monetary value as well as percentage of budgetary negative impact. An example of the latter would be:

Risk Probability Impact Matrix Mapping (RPI)

RPI Value	Budget Impact Map	Description
1	< 5%	Low budget impact
2	5 – 9.9%	Low to medium budget impact
3	10 – 14.9%	Medium budget impact
4	15 – 19.9%	Medium to high budget impact
5	> 20%	High budget impact

Note: the RCI can, if properly componentized, provide a facet that covers impact values of both the schedule as well as the budget. For advanced applications, the RCI could be a weighted value of any number of impact vectors such as schedule, budget, scope, quality, risk, or customized parameter.

1.10. REV

The risk equivalent value (REV) is the product of its RPO and RCI and can be either an integer or monetary value depending on the operands used to create the result.

If RPO and RCI are scoring values usually 1-5 then the REV will be a value between 1 and 25 whereas if RPO is expressed as a percentage (1 - 99) and RCI is a monetary value then REV will be a monetary value.

Note: the scoring systems do not support a mixture of application. In other words, one must decide if the REV is to be an integer or monetary result and utilize the appropriate operands (inputs) to the equations.

1.11. Mitigation

Risk mitigation is the process of reducing a risk's current REV by addressing the major components or characteristics of the risk, i.e., its risk probability of outcome (RPO) or its risk cost of impact (RCI).

The type or severity of a risk's REV can determine the level or intensity of the mitigation actions. The risk mitigation strategies chosen are documented in the risk mitigation plan developed for each risk for which it is decided that the risk's REV warrants just additional planning and mitigation expenditures.

It is impossible to mitigate an issue; one can only mitigate the possible future impact of a risk.

1.12. Response

Issue response is the process of addressing a triggered risk through its resolution by minimizing both the time and cost factor of its impact on a project's outcome. Since all issues are distractions from the normal operation of a project towards its planned successful production of "fit-for-use" deliverables, issues must be addressed immediately and intently to minimize this distraction. Issues are triggered risks that have a negative impact on the project's outcome; therefore, not resolving issues is allowing their continuous negative impact to reduce project monetary resources while weakening the project's schedule flexibility.

It is impossible to respond to an UFE or risk. One can only respond to a current reality or issue.

1.13. Contingency

A contingency by strict etymological tracing is "a chance occurrence," or "unexpected additional expenses;" therefore, in risk management, a contingency is dealing with a chance occurrence which is similar to the definition of a risk potential. In project management, contingency planning is pre-thought and organization given to the possibility of an alternative path being chosen or forced upon the project. As in use cases, a basic flow is the normal process flow given all conditions are normal; however, alternate flows are those that occur when the abnormal is present. A project contingency is planning to deal with an alternative rather than a normal course of action. In finance, a contingency fund is only of value if it is properly aligned with the potential alternative. Thus, in the NRS, a contingency is the planning of an issue alternative response assuming the issue does not unfold as expected in the issue response plan's primary response definition.

Contingency does not have standing when applied to a risk potential since the risk is a UFE.

1.14. Secondary

A secondary risk is a risk potential that is associated with a primary risk with the difference being the focus of the risk practitioner's efforts in mitigation. All risks can be mitigated; however, not all risks will benefit from the expenditure of resources in their mitigation since all risks are not equal. The process of risk identification and scoring defines risks and associated risks in a hierarchy of both importance and priority. A secondary risk is a risk that associated with a primary risk in a manner that if the primary risk triggers there is a scored probability, called the causal probability value (CPV), that the secondary or associated risk will also trigger. Secondary risks can also be similarly associated with tertiary risks.

1.14.1. Causal Probability

Definition: as a new concept in NRS, a CPV indicates the probability that a secondary risk will be triggered upon the triggering of a primary risk. The CPV is associated with the secondary risk, not the primary risk. Thus, in order to understand the REV of a secondary risk, the normal calculation of REV must be altered to include the value of CPV:

EQ 1:

$$REV_s = RPO_s * RCI_s * CPV_s$$

where: s is the secondary risk

This new equivalent value includes the additional fractional potential that the secondary risk possesses as being triggered by the primary risk. Of course, if the secondary risk is a primary risk in its own right, its REV would be sans the CPV_s factor in equation [1].

1.15. Residual

A residual risk is the remaining or new risk that continues after the successful mitigation of a primary risk due to the proactive management of the risk potential by either the PM or risk owner through the application of a planned risk mitigation strategy (avoid, accept, transfer, or convert). The remaining risk is the residual part of the primary risk that was successfully mitigated, and therefore is no longer the same risk. The residual risk should now be tracked on its own characteristics.

The residual risk is now tracked as a new risk with its own need for assessment, scoring, prioritization, and mitigation profiling. Ensure that the original primary risk is linked to the new risk (the residual risk) to ensure a complete traceable history is maintained within the risk management process.

1.16. Proactive

Proactive risk management is the addressing a UFE through planning and mitigation actions to reduce its REV or dollar-denominated impact on a project's outcome. Becoming proactive is a risk maturity or maturation process, and does not occur with a single or individual action. Risk maturation is a planned, continuous upgrading of an organization's willingness and support of risk management and mitigation activities that have a direct impact on the organization's project success ratio.

1.17. Reactive

Reactive risk management is the allowance of an UFE to proceed without planning or preparation to reduce its REV or impact on a project's outcome. This is a risk maturation issue in that organizations at a lower level of risk maturity usually practice risk management reactively only responding to issues as they trigger into reality. Risk identification and scoring without mitigation activity is the norm for organizations at the reactive maturity level.

2. New Risk Concepts

2.1. Primary Risk Concepts

The new risk standards are based on several axiomatic and common sense pillars that need to be described in order to understand why current risk management practices lack the ability to address the risk environment confronting most present day programs/projects.

The primary risk concepts are:

- All risks except systemic risk are the result of human action or inaction,
- The basis for proactive project risk management is the modification of human behavior that will reduce the risk effective value (REV) through successful mitigation activities,
- Risks are UFE with a negative impact on a project's successful outcome, and
- Issues can only be responded to once they have triggered into existence.

2.1.1. Risks as the result of human action or inaction

With the exception of systemic risks as defined in section 2.2.2 below, project risk potentials can be traced back to human participation, interaction or omission of such activity directed towards the project environment. Project team members in this era of permissiveness or political correctness of "not assigning blame" to consequences may be reluctant to objectively determine the root cause of project risks; however, without the willingness to accurately determine the causes of risk potentials, dealing with the possible resultant issues will become an effort in symptomatic treatment application. The underlying causes will persist continuing to distract the project team from producing "fit-for-use" deliverables.

As an exercise in understanding, the reader is asked to use the risk classifications offered in Section 2.2.2 as a starting line to realize that non-systemically classified risks are in fact the result of human action or inaction. This realization is important in order to foster the belief that risks can be effectively mitigated once the underlying cause is determined, and that all risk management is oriented towards the modification of human behavior that is the source of project risk potentials that are not systemic in nature.

2.1.2. Modification of human behavior

Based on the concept of all risk sourcing from human action or inaction except for system risk potentials, it follows logically and directly that successful proactive risk management must therefore seek to modify human behavior in order to impact the REV of project risk potentials. Many times project risk management practitioners fail in their attempts to mitigate risk potentials since they seek to defer

description of the risk in a manner that assigns the root cause to something other than a project-associated human resource or stakeholder. This misguided attempt to “get-along” or “soften the face of risk management” simply reduces the effectiveness of risk mitigation with subsequent decrease in issue response implementation efficiency.

It is not helping the project’s success potential by misdiagnosing the true nature of a risk potential in order to save feelings or soften the assignment of risk sourcing. A proactive risk practitioner’s first allegiance must always be to the project’s success, not to the placation of stakeholders or organizational culture sensibilities. If the latter is more important than proactive risk management effectiveness, the concepts of the new risk standards will NOT assist in the improvement of an organization’s project success rate. Managing project risk like any other difficult business activity must first be accurate and ethical in its application or the outcome is skewed towards failure as the purpose of project management is to serve a political end, not a business goal.

The final two primary risk concepts, risks as UFEs and issue response, are described and discussed in the subsequent sections.

2.2. Risk

The new risk standards for project management uses the following model:

Risks should be proactively mitigated based on their REV ranking within the context of a project's scope.

As an organization matures, it understands that risks are identified, discussed, investigated, understood, and mitigated to reduce their REV while they are still an UFE. Once a risk potential has triggered into an issue, any chance of mitigation has evaporated; the only activity that makes sense is the response to the impacting issue.

2.2.1. An UFE with a negative project impact

As an uncertain future event, a risk potential has the probability of a negative impact on the successful production of the project’s deliverables. All risks except those that source from a systemic environment should be tied to a project’s deliverables. The reason for this requirement is that risks can disturb the normal project activity flow if they trigger into an issue distracting both the team’s attention and the project’s resources in resolving the issue’s impact. Thus, the best approach in dealing with risk potentials is to correctly identify, score, and prioritize them within the scope of the project in order to apply scarce resources to the highest potential return on investment for mitigation activities.

2.2.2. Risk Classifications

The authors of this white paper have already created a very specific and project-oriented risk classification system that readers can access via the author's web site. The paper, "[Developing a Flexible, Multi-level Risk Classification System](#)"^[1] details how an organization can define a risk classification system that supports projects from both the bits-oriented (Information Technology projects), or atoms-oriented (physical deliverable construction) projects. The NRS implements the same project classification systems as is delineated in this referenced paper.

The NRS provides for new risk classifications that align the risk management process with the primary project goal of producing "fit-for-use" deliverables. All risks and issues should be tied back to the deliverables from which they are derived, or they will be classified as non-deliverable based risks.

The risk and issue identification system should be used whereby the risks and issues can immediately be identified with a specific deliverable unless the risks and/or issues are of the first classification order: non-deliverable based as defined in Section 2.1.2.1.

2.2.2.1. Non-deliverable based risk classifications

Non-deliverable based risks are risk potentials that due to their particular specifics cannot be tied to a particular deliverable, but can negative impact the project or project environment as a whole.

2.2.2.1.1. Systemic

Systemic risks are those risk potentials that are in the universe of the project, but OUTSIDE the control of the project or PM. Every project exists in an environment that introduces risk potentials that can only be addressed as external to the project as well as outside the control of the project team. These risk potentials can be devastating by altering project's existence or reason for existence, but allow little avenue for mitigation due to their external source.

Example: weather, legislative, regulatory, or legal mandate, political, political correctness, social, environmental, etc.

2.2.2.1.2. Organizational

Organizational risks are risk potentials that stem from the organization in which the project is being accomplished. Depending on the type of organizational structure (hierarchical, matrix, or contractor), organizational risks can be either internal or external to the project. Organization risks would be

considered internal if the project team or PM could mitigate the risk through their direct actions; they would be considered external if the project team or PM cannot effect mitigation due to the lack of authority of the project members.

Example, risks from being a USG contractor, risks associated with functional ownership of project resources, or risks associated with organizational-facing projects.

2.2.2.1.3. Project

Project risks are risks associated with the project itself and not any particular deliverable. These risks can be considered method, process or procedural risks due to choices by the project team, business owner, or key stakeholders.

Examples are project management methodology choice, PM choice, choice of deliverable delivery methodology (sequential, iterative, spiral, or agile/scrum), lack of defined authority lines, or type of project (software, hardware, construction, business process, or new product development).

2.2.2.2. Deliverable based risk classifications

These risks are defined and codified in the above referenced risk classification system white paper, but are listed here for information purposes.

2.2.2.2.1. Integration

2.2.2.2.2. Scope

2.2.2.2.3. Time

2.2.2.2.4. Cost

2.2.2.2.5. Quality

2.2.2.2.6. HR

2.2.2.2.7. Communication

2.2.2.2.8. Risk Analysis and Management (RAM)

2.2.2.2.9. Procurement

2.2.2.2.10. Other risks

2.2.3. Pre-Existence Conditions

Pre-existence conditions are conditions that must be met before the project can be defined or chartered into existence. If these conditions are unfavorable, the project is not created or authorized. Therefore, there are no risks or issues prior to the project being created or authorized.

2.2.3.1. Conditions that determine the feasibility of a project

Feasibility risks or issues that pre-exist the creation of a project are usually risks or issues of the organizational project definition or selection process. These risk potentials or issues are dealt with at the business case, pre-charter, or Statement of Work (SOW) stage of project creation. They are outside the project environment since they are part of the project selection stage or business case development stage of organizational operations.

2.2.3.2. Called Go-No Go Conditions

If an issue triggers with this type then a project cannot be defined or authorized until this issue has been resolved in favor of the project's existence. If the issue cannot be resolved in favor of the project's existence, then the project is never chartered into reality.

2.3. Demarcation Point

The point separating risks from issues, i.e., the point where a risk becomes reality due to an associated event called a trigger. The demarcation point is always in the present since it is the trigger that transforms the risk into an issue, and all triggers are current events.

2.3.1. Risks are in the future

While this may seem a fairly clear concept, understanding that all risks exist in the future is an important mind set changes for a risk practitioner since one cannot impact the future, only the present. We can plan or prepare for the future, but unless the future unfolds according to our pre-thought (another term for the process of planning), our issue response plans will be of minimal utility. This is why all response planning MUST involve an element or characteristics of flexibility. Rigid plans are fraught with waste and frustration since all uncertain, future events have less than an absolute probability of occurrence.

Risk mitigation plans are of a different vector since the purpose of risk mitigation plans is to impact the effective value of a risk (REV) before it becomes an issue if the REV is of sufficient value to warrant mitigation planning. Thus mitigation planning and implementation is to reduce the nature or characteristic of a risk potential before a trigger morphs the potential into an issue where a response plan is necessary.

This future existence of all risk potentials is particularly the basis for reviewing lessons learned, interviewing experts such as SME, risk managers, key stakeholders, and studying organizational project assets and archives to understand the environment in which projects exists. While one is unable to

predict the future, knowing the probabilities of past events can aid in the planning of the most likely outcomes of UFEs.

2.3.2. Issues are in the present/past

Issues on the other hand are realized risk potentials meaning that they exist in the present and extend into the past. They are brought into existence once the associated triggers event occurs thereby changing the risk potential into an issue that must be resolved. Issues are not UFE only risk potentials are; issues are current realities that are now distracting team member's attention, and draining resource utilizations from the ability of the project to produce "fit-for-use" deliverables. Issues cannot be ignored; they can only be resolved.

Issues are not candidates for project scheduling, base-lining, or any other normal form of project management methodology. Issues are team distractions and resources sinks that need to be resolved by minimizing their cost and time impact to the project. In other words, issues must be responded to in order to resolve their impact in the shortest amount of time for the least amount of cost to the project. If an issue is allowed to continue unresolved, then either it was not an issue in the first place, or it will soon grow to consume more and more of the project's limited resources and management effort. This drain will be felt as the project is pushed further from equilibrium and its ability to produce "fit-for-use" deliverables.

The concept of project equilibrium is the subject of the author's research and proprietary project management solution called "Deliverable-Centered Project Management." Please see the authors for details on this particular white paper.

2.3.3. The trigger(s) define the DP

The point separating risks from issues is the trigger or triggers associated with a particular risk potential. A risk potential can one or more triggers associated with what and how the risk potential is brought into reality. The probability with each trigger, called the Trigger Probability Value (TPV), is the probability that a particular trigger will fire thereby forcing the risk potential into existence across the demarcation point.

The triggers are the most important concepts to the risk owners since the triggers are the events that demand the most attention during the monitoring and management phase of risk management. The triggers need to be monitored, investigated, and updated in the risk register on a frequent basis in order to provide a more complete and compelling perspective of the project's risk profile.

2.4. Issues

The new risk standards for project management use the following model:

Based on their impact ranking within the context of a project's scope, the project team will respond to issues according to the associated response plan. As an organization matures, it understands that once an issue has become a reality, the only actions are to remove the issue as an impediment to the project's normal, planned actions through the minimization of an issue's timeline and cost profile. An issue is not a project planned task, and thus adding issue tasks to the schedule, budget, or WBS is not supported by normal management definitions since an issue impedes the normal work flow of a project and should be resolved as soon as possible for as little cost as possible.

Example: the failure of the Deep Horizon's Gulf of Mexico's blow-out preventer in 2009.

2.4.1. Unidentified risk potentials

A triggered risk potential is the source of a project's issue; however, issues can present themselves without first being tracked as risks. These are the dangerous issues since they were not first managed as risks, but either were unidentified or assessed as much lower profiles so that the team did not plan for their eventuality. In this case, a risk owner was probably not assigned, or a response plan was not developed.

Unidentified or misidentified risk potentials are dangerous is that they occur without having been managed via the normal risk management process within a project or program. A healthy risk management program is one with a number of identified risk potentials, not one that tries to hid risks by simply not identifying them or ignoring their existence as potential impediments to successful production of "fit-for-use" deliverables.

2.4.2. Diverts project action from production of "fit-for-use" deliverables

Since issues can only be resolved using existing project resources (time and cost), they act as deterrents to the normal program/project activities that should be focused on producing "fit-for-use" deliverables. Be sure not to confuse issues with normal program/project operational activities. Issues are those that are the result of identified risks, not activities that must be accomplished by the program/project in a normal course of deliverable production. Issues detract from normal activities, they do not support them.

2.5. Opportunities

Very few organizations ever mature to a point where POSITIVE UFE (opportunities) are managed or planned for during the normal action of project management. Many organizations are designed to exploit opportunities as a normal course of operations (financial institutions, entrepreneurial companies, investment firms, etc.) and thus are not part of the concept of project opportunities. Taking advantage of opportunities within the confines of a program/project constitute such a small part of the normal activities of most organizations that this research artifact does not deal with them beyond defining and classifying them for topic coverage completeness.

2.5.1. An UFE with a positive project impact

The current risk management thinking continues to describe risk as potentials that can have either a negative or positive outcome on a program/project's future. While this may be academically correct, it is not practical since the definition has not taken hold to date, and this paper drops the concept of a "positive-impacting risk" in favor of defining an opportunity as an UFE that has a positive impact on a program/project's future potential for success. The idea of positive risk must be finally altered as the definition of an opportunity.

2.5.2. Business-driven

Opportunities are usually business-driven by either a customer or market force whereby an organization can achieve a positive result (financial, competitive advantage, or market share improvement) from the direct actions of a program/project. For the most part, program/project activities are directed towards the production of "fit-for-use" deliverables and are, thus, fund-sinks (uses of funding), not fund-generators. Opportunities are developed and implemented in specialized programs/projects in those organizations that are cultured to take advantage of such activities.

2.6. Mitigation

The new risk standards understand that a mature risk management organization values the concept of risk mitigation as a process towards improving the successful outcome of a project. Through mature risk management activities and processes, a risk mature organization actively seeks to identify, understand, and manage a risk potential's REV by applying resources and efforts towards either reducing a risk's RPO or RCI. Risk immature organizations identify, classify, score, and monitor a risk's characteristics, but do not take proactive steps that attempt to reduce a risk's REV prior to a trigger event thereby altering a risk potential through its associated issue's impact profile.

2.6.1. Proactive mitigation

The concept of proactive risk management has a pillar in the understanding that risk potentials are managed as UFE through the active reduction of either their RCI or RPO before the risk potential is triggered into reality. After a risk potential becomes an issue, further mitigation activities are of no use

since the trigger morphed the risk into an issue that does not respond to mitigation – only active response activities.

Mitigation to be proactive must be applied to risk potentials in a specific and focused manner thereby reducing the risk potential's REV so if the residual risk (the risk remaining after successful mitigation activities have occurred) does trigger, its REV is less than that of the unmitigated risk potential's REV.

2.6.2. Reduce RPO, RCI, both

Risk mitigation plans have as their primary goal the reduction of a risk potential's REV that is comprised of the product between the risk potential's RPO and RCI. Proactive mitigation strategies that are effective are those that reduce either the RPO, RCI, or hopefully, both in order to arrive at a residual risk potential of much less REV-impacting force to a program/project's successful production of "fit-for-use" deliverables.

2.6.3. Applied to risk potentials only

Proactive mitigation can only be applied to risk potentials as the concept of "issue mitigation" like the concept of "risk response" does not make logical or intuitive sense. A project team cannot respond to a future event nor can it mitigate a current event. The only correct codification of risk management concepts is that one mitigates a risk while responding to an issue.

2.7. Response

The new risk standards suggests that once a risk potential has experienced an associated triggering event a risk mature organization will immediately implement the planned issue response plan (for higher REV risks), or the standard response plan for those issues that due to their scoring as risk potentials did not demand a response plan be developed. In any case, once a risk becomes an issue, a risk mature organization seeks to minimize the time and cost impact of an issue so that the project team can return to the planned project execution activities that seek to provide "fit-for-use" deliverables on schedule and on budget.

2.7.1. Prepared action against issue

Since a project team can only respond to an issue, preparing action against the possible event of an issue is the proactive nature of issue response planning. The number and intensity of such issue response plan design, development, and implementation (practice and feedback) activities will be determined by the associated risk potential's scoring of its overall impact on the project's successful outcome.

2.7.2. Applied to issues only

As with mitigation activities only being applied to risk potentials, the concept of response planning and implementation only makes sense when applied towards possible issues. Response towards a current event such as a triggered-risk should be oriented towards the minimization of both the amount of time (schedule resources), and cost (budget resources) that a project team expends towards the elimination of the issue's impact on a project's normal activity of producing "fit-for-use" deliverables.

3. New Risk Standards Process Flow

The following steps are necessary to proceed correctly in applying NRS approaches for risk management:

1. Plan risk management approaches
 - a. Inputs
 - i. Expert judgment
 - ii. Lessons learned
 - iii. Organizational project assets and archives
 - iv. Risk categorizations and/or classifications
 - v. Stakeholders register
 - b. Tasks
 - i. Review previous project's archives and lessons learned
 - ii. Research organizational project assets such as PMO resources and templates
 - iii. Meet with project team and key stakeholders for risk planning discussions
 - iv. Interview and apply expert judgment
 - c. Outputs (# common inputs to all subsequent risk management steps)
 - i. #Risk management plan (RMP)
 - ii. #Risk register (initial layout and attributes)
 - iii. #Issues log (initial layout and attributes)
 - iv. Updated stakeholders register
 - v. Tailored risk categories and/or classifications

2. Identify project risks and triggered issues
 - a. Inputs
 - i. Expert judgment
 - ii. Stakeholders register
 - iii. Organizational project assets and archives
 - b. Tasks
 - i. Interviews with key stakeholders (business, SME, team)
 - ii. Review of project and organizational documentation
 - iii. Review of project archives
 - iv. Assign risk owners
 - v. Communicate risk programs to key stakeholders
 - c. Outputs
 - i. Updated risk register
 - ii. Updated issues log

3. Assess identified risks and issues
 - a. Inputs
 - i. Expert judgment
 - ii. Risk management plan
 - b. Tasks
 - i. Perform quantitative analysis on identified risks
 - ii. Perform qualitative analysis on identified risks
 - iii. Score identified risks
 - iv. Prioritize scored risks
 - v. Prioritize current issues
 - vi. Communicate risk program progress to key stakeholders
 - c. Outputs
 - i. Updated risk register
 - ii. Updated issues log
 - iii. Risk baseline (approved risk register/issue log, placed under control)

4. Implement risk mitigation strategies and issues response plans

- a. Inputs
 - i. Risk management plan (RMP)
 - ii. Organizational project assets and archives
 - b. Tasks
 - i. Develop risk mitigation strategies for prioritized risks
 - ii. Develop issues response plan for current issues
 - iii. Obtain approval for mitigation strategies and response plans
 - iv. Deploy mitigation strategies and response plans
 - c. Outputs
 - i. Updated risk register
 - ii. Updated issues log
 - iii. Updated risk baseline for approved risk management plan changes
5. Monitor and manage project risk environment
- a. Inputs
 - i. Organizational project assets and archives
 - ii. Lessons learned
 - b. Tasks
 - i. Monitor risk triggers for activation or modification
 - ii. Monitor and manage issue response plans to completion
 - iii. Manage risk mitigation strategies
 - iv. Improve risk management processes from lessons learned
 - v. Manage risk management plan change requests
 - c. Outputs
 - i. Updated risk register
 - ii. Updated issues log
 - iii. Updated risk management plan with approved changes
 - iv. Update risk baseline for approved changes

4. Goals

As described in the previous section, and only listed here for emphasis and discovery, the primary goals of the new risk standards is to 1) simply modify human behavior towards the successful mitigation of risk potentials before they trigger into issues by reducing the risk potential's REV; and 2) support proactive risk management whereby risks are actively identified, investigated, understand, and successfully mitigated.

The new risk standards seeks to simply the current risk management environment by assisting risk management practitioners and project key stakeholders in understanding the true relationships and necessary actions that risks and issues require in order to improve a project's success profile.

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5. Supporting Concepts

In support of the new risk standards, proactive risk management practitioners need to understand the correct relationship between the project's primary constraints under which all projects must exist in order to achieve the production of "fit-for-use" deliverables. In addition, the author offers a brief description of their innovative project management approach called "Deliverable-Centered Project Management™" that ties all project activities including risk management back to the most important outcomes for any successful project: the production of "fit-for-use" deliverables.

5.1. Primary Constraints

In the past, many project team members have limited their understanding of project constraints to the trite "triple constraints," "iron triangle," or "constraint triangle" where only scope, time, and cost were seen as the project's primary limitations. In practice, successful project managers have come to realize that the interaction of project constraints actually involves a more complex interactive environment involving not just scope, time, and cost, but also quality and risk.

The more limited "iron triangle" is slowly being replaced by more realistic primary constraints diagram:

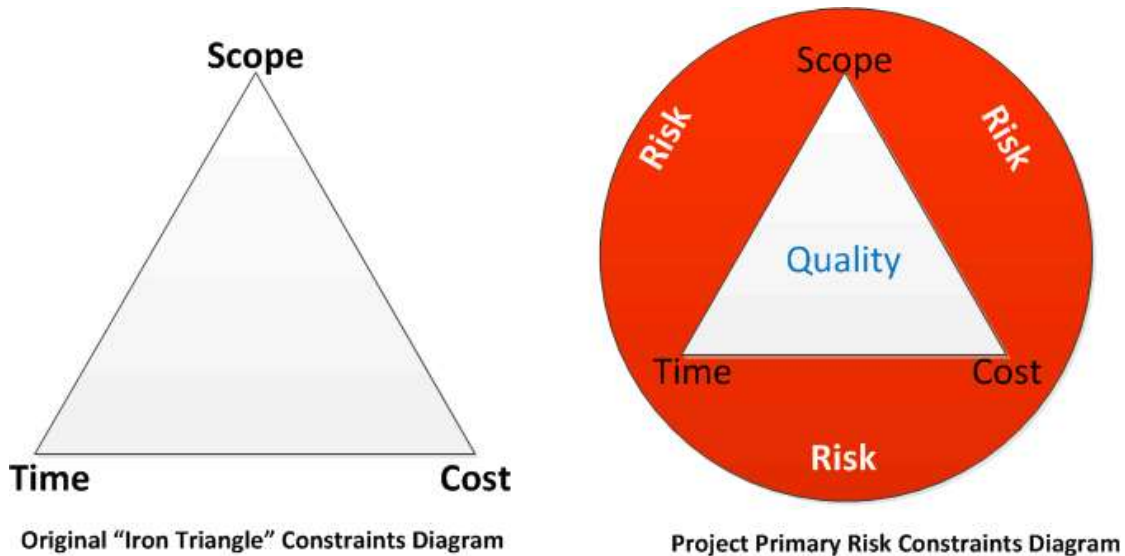


Figure 5.1

The reality of project management now understanding the interaction of the primary constraints to be:

- Scope
- Time
- Cost
- Quality
- Risk

5.1.1. Scope

The primary constraint of scope is usually combined with the effective and accurate management of determination of the project deliverable requirements. Without deliverables there is no project, so the concise, complete, and accurate identification of the requirements for project deliverables define the scope of the project.

In addition, the necessity of understanding and defining the deliverable requirements aids in the monitoring and management of the inevitable change requests that beset all projects. Without a clear understanding of the requirements that define the “fit-for-use” deliverables, the project is without an understanding of its existence, appropriate progress metrics, or how to achieve a positive end game rendering.

5.1.2. Time

Unfortunately, many project management professionals continue to fixate on the project schedule as the primary artifact of project progress and monitoring. In reality, the project schedule should only be a minor demonstration of the project’s progress since once the project schedule is published is almost immediately becomes historic in nature with many project teams constantly updating, tweaking, and just fiddling with the schedule to make it match reality as opposed to the other way around: the schedule should be used to direct project activities and resources.

The tyranny of time can also become a millstone around the neck of an inexperienced project team in that the schedule is overly detailed at very early stages of the project lifecycle. The level of detail of the project schedule should match the current level of project knowledge in both the work breakdown structure detail as well as the activity list. The project schedule is NOT the place where every project event such as meetings, telephone calls, discussions, etc. is copiously mapped out 3 days after the project charter has been approved. The schedule should serve the project, not the reverse.

5.1.3. Cost

In government projects, the overarching artifact of important and project progress metric has become the project budget. Talking to many government project managers, the authors have been told that in these days of limited resources that their management superiors and project sponsors would rather have projects on budget even if they were delivered late.

The constraint of cost as defined by the approved budget (the cost baseline) can be one of the most difficult constraints to de-stress since everything can be reduced to a corresponding value of cost so discovering the root cause for the out-of-balance constraint can be difficult. The simplest approach to re-balancing a cost constraint is to ensure the project team is dealing with a true budget issue and not a re-cast constraint in cost terms.

5.1.4. Quality

The constraint of quality will cause the most confusion given the following understanding that there is little if anything that a project team can do to DIRECTLY impact the quality of deliverables. What this means is that the quality constraint is the result of some other action or inaction (INDIRECT), and not the impact of a direct action or inaction.

An example of this may assist in understanding this constraint. Training is offered many times as the most important method for improving the quality of anything from car production to surgery outcomes; however, training does not directly impact the quality of any outcome since it cannot be guaranteed that the training will produce an improvement in the quality of the deliverable. You can provide training to any number of project team members and the quality of the deliverables can remain without improvement. It is only if the training is effective in improving the skills, knowledge, or capabilities of the team members who can then apply their newly acquired faculties to deliverables improvement. Again, even in this case, the impact on quality is indirect, not direct.

5.1.5. Risk

Finally, risk is probably the most misunderstood project constraint for two reasons: 1) it is the newest constraint to be described as important to most project successes, and 2) risk deals with UFE for which many consider a waste of project resources. The risk constraint, however, is usually the constraint that must become the de-stressor once one of the other constraints is modified without managing the result. For example, in many projects, the budget is reduced by a certain amount, say 15%, but none of the other constraints are allowed to de-stress the budget reduction. Project sponsors simply tell the project team to make do with the current scope, schedule, and quality, but with 15% budget resources. While this mandate can be made without taking into account the other constraints, if nothing is allowed

to take up the budget cut, it will ultimately fall to the risk constraint to restore equilibrium by increasing the risk profile.

This can be understood logically since if the project budget is reduced without a corresponding reduction in scope or quality, or a corresponding increase in schedule then the risk of not producing “fit-for-use” deliverables must increase since there is now only 85% of the original budget available to produce the same scoped project deliverables at the same quality level, within the same time frame. This reduction in budget without offsets in the other constraints forces the risk constraint to increase to maintain project equilibrium.

5.2. DCPM

In closing, the authors are going to briefly describe their newly developed project management environment that will bring a new era of definitive monitoring and management to the practice of project management. The authors have called this new environment:

Deliverable-Centered Project Management (DCPM)

DCPM uses the concept of project equilibrium to define how a project maintains its ability to produce “fit-for-use” deliverables as the center of all project activities. The authors have defined the concept of DCPM to be rooted in the point that all project activities in monitoring and management of the primary constraints flow from and towards the production of “fit-for-use” deliverables. This concept of project equilibrium means that if an event causes the project constraints to be imbalanced then the ability of a project team to product “fit-for-use” deliverables is reduced. In order to regain this ability, the project must restore its equilibrium through the use of stressor rebalancing. This simply means that for every off-balancing stressor on a particular project constraint, there must be an equal, and opposite stressor that restores the project equilibrium to some new set or combination of project constraints.

The authors have completed the research and are in the process of developing the details of this new, and very innovative environment for project management.

6. Acronyms & Glossary

DCPM (Deliverable-Centered Project Management)

An innovative project management environment from MCLMG, LLC whereby all project management activities, artifacts, and actions are tied back to the production of “fit-for-use” deliverables.

RVM (Risk Value Management)

A risk program valuation methodology developed by Mr. Lohnes for determining the value-added return that a risk management environment provides for a project, program, portfolio, or enterprise.