Risk Management
NEWSLETTER

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The 2002 SoCal Risk Management Symposium

By Mike Wakshull

The SoCal Risk Symposium, which was held from September 12-14 in Long Beach, was successful beyond expectations. The mayor of Long Beach opened the symposium. From the opening presentation by Dr. Bob Charette who was dressed in garb as the High Priest of the new religion of Risk to the final speakers, attendees were impressed by the quality of the speakers' presentations. Dr. Charette's presentation was a play on a religious revival to emphasize how the ability to manage risk has changed society.

Many attendees told this writer that the symposium not only exceeded their expectation, it was the best project management symposium that they had ever attended. The level of the papers exceeded those that are offered at the PMI International Symposia. People were excited to have the opportunity to mingle with a virtual who's who of project risk management. Attendees came from all parts of the United States, Europe, and North America.

The first day ended with a plenary session given by the internationally renowned Dr. Barry Boehm from the University of Southern California. Dr. Boehm, a prolific author, is considered to be the father of Software Risk Management, the spiral model, COCOMO estimating model, and other commonly used software engineering tools and techniques.

The second day opened with Dr. Brian Hagen's presentation of, "A Corporate Tool Kit for Decision and Risk Analysis." Dr Hagen offered excellent insight into what types of value senior executives expect from project management and risk management. He offered that no organization practices comprehensive enterprise level risk management. He demonstrated how portfolio tools, real options, and strategic gaming can be applied to determine which risks should be accepted and which should be managed.

A total of eighteen speakers offered insightful presentations across three technical tracks. Each track offered six presentations over the two days. Three general sessions were offered for all attendees. Eleven of the speakers came from out of town, including Dr. Alexandre Rodrigues from Portugal.

The symposium was a joint venture among the PMI Risk SIG and the Los Angeles, Orange County, and San Diego PMI Chapters. The entire symposium was organized and managed by volunteers from all partner components. Although none of the team leaders had ever worked together, and none had organized a symposium, they were able to make the project work to deliver a quality product in time and on budget. Although there were many skeptics, the symposium managed to be a wonderful success. As project manager, I have only superlatives to express gratitude and thanks to the volunteers whose hard work and selfless dedication made the symposium appear to many attendees to have been run by professional meeting planners.

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FROM THE EDITOR..
Réal G. Ouellette

Sharing What We Have Learned

This special issue of the Risk SIG newsletter provides coverage of the 2002 SoCal Risk Management Symposium and the Risk Track presented at the PMI's 2002 Symposium recently held in San Antonio, TX.

These events carry significant importance to the project risk management community in view of the progress that this practice has made over the recent years, and for the growing recognition it has achieved at a global level in the business community.

Unfortunately, there are still those of us who cannot afford –whether because of time, priorities or (alas), money- to make the annual pilgrimage to the PMI's Seminars & Symposium, or to other major events for that matter. This is where your RiskSIG provides its most valuable services: Through its web site, list server, newsletter, discussion groups and locally organized events, the Risk SIG provides access to information, individuals and resources otherwise inaccessible to a large number of its members.

The recent SoCal Risk Management Symposium is a perfect example of the type of event that offers maximum benefits to a local community, with minimum impact on those members' schedule, priorities or budget. And it was a huge success.

Sharing what we have learned remains the underlying principle of the Risk SIG's activities and with your ongoing support, we will continue to devise innovative ways to bring risk management knowledge to you.

RGO.
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Risk Track Process Highlights Teamwork and Geographic Coverage in 2002

By Angyne J. Schock-Smith, PMP

When David Jacobs, Risk Track Chairman for PMI2002 in San Antonio, approached me to be his Co-chair, my first thought was, "NO Way!"

However, he was a persuasive sort of guy and I had been planning to get more involved, so I slept on it. His email communication, followed up with a friendly phone call, convinced me that I would truly enjoy working with David. He explained that it would just involve the process of supporting the 8 accepted and 4 alternate speakers through the presentation development process. David had already worked with PMI HQ through the selection process, which, from my experience, is the toughest part. He had 24 papers to fill 8 speaker slots and 79 reviewers to help make the selection. When all was said and done, 49 reviewers had prioritized the list. David had to dig deeper than the top 8 for confirmed speakers, since several good talks were conceded to Tracks with lesser turn out. He then judged the next 4 papers eligible for alternate status, which still meant that they would complete the paper development process. David had petitioned PMI HQ for more speaker slots and he knew from last year's experience that we could lose some speakers to work priorities and other conflicting forces.

After sleeping on it, I realized that the "NO Way!" reaction just meant that I couldn't do it alone. And something in his email caught my eye. He had mentioned that the Risk SIG was looking for more global reach in its Track profile. I had previously served as a "speaker angel" for the PMI NJ symposium, where we had one angel per speaker. Having done that task, I had a good idea of the investment it required. So, I knew I could manage my time well enough to support about 4 speakers – and knew definitely that I could not do 12. If I could recruit 2 more "angels" and find them in geographic locations to extend our global reach, I could accept the position AND support one of the Risk SIG's objectives.

Well, the idea had its rough spots, but David agreed to work with me to smooth it out, so we had a deal. With David in the southwest US and my location in the northeast US, we needed something outside the continental US, both to east and west. My professional network included two potential candidates – Mr. Stefan Hagen of Austria and Ms. Teresa Newton-Terres of Hawaii, USA. Apparently I have some persuasive powers of my own, since they both agreed!

The rest of the story is typical of global projects, i.e., posing many challenges. We split up the list of speakers using geographic location and interest in the topics. We used email communications primarily, with voice-to-voice when necessary to convey delicate messages. David was incredibly supportive. Teresa and Stefan were outstanding in their responsiveness and flexibility. The speakers, though caught off-guard at first by the team approach, were generally pleased to be kept well informed. When we arrived in San Antonio, the Risk SIG officers, especially Chuck Bosler and Craig Peterson leant their strong support and made the experience even more rewarding.

Unfortunately, the speaker drop out rate was very high. Ultimately, we used up all our reserves and more, having two open slots before we started, then losing one more after we got to San Antonio. Being good risk managers, we had a contingency plan for replacement speakers, however, PMI HQ would not allow replacements outside the process. That said, feedback was very positive from the seven speakers who did present the remaining six papers. They commended the Risk Track Team's performance in general and the "speaker angel" process, both before and during the event. Had there been plans for a Risk Track in 2003, I would have recommended a similar process, with some timely improvements, and have volunteered to be part of it again. Perhaps our team could offer some lessons learned to those in charge of the event scheduled for next year in Baltimore.

Angyne Schock-Smith is president of Phillipsburg, NJ-based Arysta Projex Inc., and was Co-Chair for the Risk Track at PMI 2002 in San Antonio, TX. Angyne can be reached at angyne@arysta.com

The SoCal Risk Management Symposium – It Made Me Think

By Scott Fisher

One of the reasons I enjoy events like the Southern California (SoCal) Risk Management Symposium is that they make me think. That isn't to say that I don't think at other times, but events like this present information and ideas in a different context and remind me of things I don't think about enough. Occasionally, my conclusions aren't the ones the presenter intended, but they make sense to me. The presentations and discussions at the SoCal Risk Management Symposium stimulated a number of "aha" moments for me, some of which I've shared below.

The purpose of risk management is to frame the decision for the decision maker. In his presentation on *The Corporate Tool Kit for Decision and Risk Analysis*, Dr. Brian Hagen stated his belief that the primary purpose of risk management is to help decision makers make better decisions by framing (bounding) the problem – defining its limits and possible outcomes. I usually tell people that the purpose of program risk management is to help programs meet their goals and objectives, and then talk about the enabling processes and activities. But at the end of the day, all of the risk management activities are meaningless if they don't produce information the decision maker can use to make decisions for the benefit of the program.

A decision is a commitment of resources that is only revocable at some cost. Dr. Hagen stressed the fact that decisions include a commitment of resources. Without a commitment of resources, all that has occurred is an interesting discussion (or what he called the "GM nod"). Mandates alone don't mean anything. Failing to allocate and commit adequate resources perpetuates a 'fill in the block' culture where people rush through tasks for the primary purpose of being able to say they did them. Those two "aha" moments dovetailed nicely with Dr. Barry Boehm's presentation.

We commit to major program elements long before we understand the system we are developing. Figure 1, courtesy of Dr. Boehm's *Risk Management Starts on Day One* presentation, shows that we commit to technologies, configurations, performance parameters, cost objectives, etc., long before we have developed the corresponding system-specific knowledge. Since much of the system-specific knowledge is dependent on the technology, configuration, etc. being used, some delay between commitment and understanding is expected. However, I think we often make decisions early in the program – the selection of subcontractors, development languages/environment, etc. – that are based on our experience and comfort level rather than a solid understanding of the system and which of the available alternatives may be best.

How often does someone make an unfortunate business decision under the pressure of a proposal schedule because no one properly framed the issues? More often than we like to admit. Teaming with a competitor to 'get him off the street' may not technically be a commitment of resources, but it is certainly a decision that has cost consequences – especially if the teaming arrangement ceded a profitable, relatively risk free portion of the job.

How can we improve this situation? Is there a way to change the 'Commitment to Technology, Configuration, Performance, Cost, etc." curve to bring it closer to the 'System-Specific Knowledge' curve? Perhaps it should resemble a step function with a series of

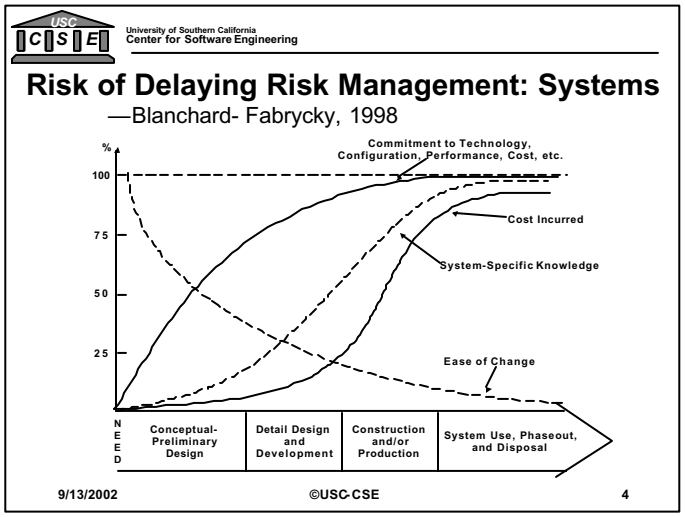

Figure 1

decision points that are far enough apart so we can understand the implications of prior decisions before making the next. The next two "aha" moments below suggest that there might be a way to do this.

Never make a decision today that can be put off until tomorrow. This statement, which Dr. Boehm credited to Dr. Sample of USC, is a double-edged sword because of the difficulty of determining which decisions can, in fact, be put off until tomorrow. I don't spend enough time thinking about the risks of making decisions too early. I like to decide things quickly, so follow-on activities can proceed rapidly and we don't have to rush to meet a deadline. But, sometimes my decisions are not the best and the resulting changes require a lot of work to be done quickly. How can I balance my desire to accomplish things quickly while minimizing the consequences of my errors?

A performance range or goal is sufficient to get started. During her presentation on *Risk Roadmaps – A Method for Understanding Technology Insertion Risks*, Ms. Susan Roth related her experiences in starting technology projects by specifying a performance range or goal rather than a specific value. Achievable performance values will emerge, as will (better) estimates on the break points and costs associated with moving up the curve. This might be the key I've been seeking. Performance ranges can allow the program to keep moving forward while still allowing the flexibility to adapt to new information.

Cost as an Independent Variable (CAIV) based procurements give contractors flexibility when proposing systems, but the inherent flexibility often disappears as contracts are negotiated or the requirements are allocated to subsystems and components. The use of performance ranges should reduce program risk by eliminating the need to meet difficult, specific (perhaps arbitrarily assigned) values that don't adversely affect the users' functional requirements. Can we put off making decisions about specific requirements until our system-specific knowledge allows us to make a good one? Can we adapt to the use of ranges instead of specific values in requirements and design reviews? I don't know, but it is something to think about.

Scott Fisher is completing his first year as a Risk Management practitioner. His previous experience includes working as a Systems Engineer on Tactical Command and Control Systems and as a Combat Developer for the U.S. Army.

Risk Topics at PMI 2002 in San Antonio

The Risk Track at PMI2002 in San Antonio delivered an excellent program for PMI symposium goers. The 24 abstract submittals were whittled down to 8 confirmed speakers and 4 alternates. David Jacobs, Risk Track Chair, led a team of 49 volunteer reviewers through the selection process.

All 12 of the selected abstracts were developed into papers / presentations per the PMI HQ process. During the process, David convinced HQ to open two additional slots for Risk Track speakers. That gave us only 2 alternates, which turned out not to be enough. For various reasons, several speakers needed to withdraw. Because of the HQ decision not to allow presentations from previous symposia, we were unable to make up the difference. Therefore, we actually delivered only our original 8 slots, having to cancel the two slots David had worked so hard to acquire. See the table below for the speakers, topics, and what happened (Table 1).

Continued on page 5

Table 1

Author Name	Abstract Title	What Happened?
Dr. David Hillson	Use a Risk Breakdown Structure (RBS) to Understand Your Risks	David presented as scheduled. My observations were that he was very well received and my personal review was outstanding!
Michael Wakshull	Application of "Even Swaps" to Normalize Qualitative and Quantitative Risk Valuations	Michael had to withdraw several weeks prior to the event. He cited the SoCal event and business pressures as drivers behind the decision.
Carl Pritchard	Putting the OUCH! In Ouchi -- Risk Thresholds as a Quality and Motivational Practice	Carl presented as scheduled. My observations were that he was very well received and my personal review was outstanding!
Joseph Lukas	It Works! Risk Management on an IS Project	Joe presented as scheduled, was very well received and is one of the papers selected to encore at PMI NJ!
Luc Audet	Project Interdependency Management	Luc and one of his original co-authors, Janet McEwan, presented as scheduled. Their third co-author retired to BC, but they carried on and were very well received. They also are slated to encore in NJ in May!
Madhusudhan Nagarajan	Valuing Project Risks Using Options Theory	Madhu presented as scheduled. I had a previous commitment during this time slot, but the discussion I heard when I returned to the Track room ensuing the talk, spoke well for the quality of and interest in this talk!
Noel Dickover	Leveraging Expertise: Lessons Learned from Integrating Just-in-Time Learning and Risk Management Assets to Improve Risk Management Performance Across the DoD Acquisition Workforce	Noel had to withdraw several weeks prior to the event. A career re-assignment caused the change in plans.
Donald Wynes	Guiding Projects Through Massive Change	Donald had to withdraw just before the event started. We can only assume that more changes were the culprit.
David Hulett	What Every Executive Needs to Know About Risk Management	David presented as scheduled, but drew the new Tues. at 8:00am slot. Though attendance at that session was light due, I believe, to the early hour, he was very well received and is one of the papers selected to encore at PMI NJ!
Christopher Eaton	Managing Project Risks Associated with Electronicity Market Evolution	Christopher submitted an abstract with a co-author who had to withdraw for personal reasons. When HQ declined to accept a replacement co-author, Christopher had to decline the opportunity.
David Tilk	Project Success Through Project Assurance	David presented as scheduled. He was very well received and my personal review was very good.
Terrill Smith	Risk Management - Lessons from the Three Stooges	Terrill presented as scheduled. I believe, that due to some technical difficulties with sophisticated technology and new equipment, the presentation was not as well received as our other talks. However, Terrill is an excellent speaker who presented a creative perspective on risk management.

RISK TOPICS (cont.)

With the permission of the authors, several of the delivered presentations will be posted on the Risk SIG website at www.risksig.org.

Three of the delivered presenters have also been invited and accepted engagements at the PMI New Jersey 2003 Symposium on May 5 in Edison, NJ. These speakers constitute the first Risk Track presented by the NJ Chapter. Two other papers addressing risk management topics will also be presented in other tracks at the New Jersey event.

The same thing happened in San Antonio – so from this small sample we could conclude that Risk is a hot topic in today's business and government environments. Several of our abstract submissions were directed to one or two other possible tracks. Since these other tracks had fewer submissions, David agreed to share the wealth. Some of these papers are listed in the second table below (Figure 2) for your perusal. You might even find some names you recognize!

In general, PMI2003 was well-run and provided good opportunities for learning and networking. In particular, the Risk Track and the Risk SIG business meeting were excellent sources of learning, camaraderie, and progress towards our SIG's goals. However, you might want to consider the source before you take this conclusion on faith! Talk to others and join us next year in Baltimore or at a venue in your global region.

Respectfully yours,

Angyne J. Schock-Smith
PMI 2002 Risk Track Co-chair

Table 2

Track/Talk	Author(s)	Topic
Aero05	LeGassey & Kelley	Run Trap Lines Daily: Optimizing Cultural, Bureaucratic, and Political Risks
DPC08	Zahlohl & Hartman	Construction Contracts and Risk Allocation
Financ08	Webb, David, Craig Peterson, Oliver	Basel II and the Impact on Financial IT Risk Management
Global07	Sennara & Hartman	Managing Cultural Risks on International Projects
Oil07	Davis & Austin	Strategic and Tactical Planning in Successful Environmental Project Management
Pharm03	Minter, Hendersone, Raum, Plank	DynePort Vaccine Company's….Integrated Master Plan to Identify and Manage Risk
PMBas05	David Jacobs	Chapter 11 – It's Not About Bankruptcy
PMBas08	West	Integrating Risk Management & Prioritization: A Practitioner's Tool
PMBAS09	Love	Risks, Issues, and Changes– Help! I'm Drowning in Logs

Call for Papers

The Risk Management SIG welcomes original material covering all aspects of risk management. Send inquiries or electronic documents to the editor, at editor@risksig.com.

Published articles do not necessarily reflect the views of the newsletter or the Risk Management SIG.

This space for rent.
Have your business card or small ad inserted here.
Contact the editor for details.

Chapter 11 — It's Not About Bankruptcy

By David Jacobs, USAF, PMP
Chief, Transition Planning Cadre, Air Armament Center, Kirtland Air Force Base, Albuquerque, New Mexico

Introduction

Chapter 11 of ANSI/PMI-99-001-2000, ***A Guide to the Project Management Body of Knowledge*** (PMBOK 2000) describes project risk management. Some practitioners complain the PMBOK describes a risk management process that is ponderous, expensive, and appropriate only to large government or commercial investment projects. They claim risk management can drive good projects into bankruptcy. However, the PMBOK describes processes that project managers may tailor to meet their corporate and sponsors' requirements and their own personal needs. Much as formal scientific method can be either a battering ram or a scalpel (Pirsig 1974, 107 – 111), the PMBOK's risk management processes can be impediments or tools. Astute project managers could even tailor the PMBOK's project risk management processes to plan personal projects, like business trips or family vacations (Petroski 1985, 64 – 66).

For the past six or eight years, various scholars have been trying to synthesize the collected works of Sun Tzu (Clavell 1983), Miyamoto Musashi (Harris 1974), and Karl von Clausewitz (Howard and Paret 1976) into a few simple ideas. The goal is to find a few ideas easily understood and applicable across a range of functional disciplines, natural talents, and learned skills. One idea that rises to the surface often is agility. Academicians and practitioners have discussed agile logistics for a few years, and now other experts make arguments for agile acquisition. In this context, acquisition is a general term encompassing requirements, research and development, and procurement. Project management processes apply to all three areas.

Agility seems to be one of those things that people cannot define, but they will know it when they see it, and they have not seen it yet. It involves improved effectiveness. It involves increased efficiency. It involves reacting rapidly and effectively to changing conditions. If some team could patent an *agilometer*, they would make a fortune for themselves and their sponsors.

The six risk management steps described in the PMBOK can easily form the basis of an agile process for project risk management. Project members must understand the six risk management steps to know when they are mandatory rules and when they are optional guidelines. There is a cliché that states: a fool with a tool is still a fool. With understanding, any project manager can develop agile project risk management processes, tailored to the project team's needs and the project's requirements.

A device to help attain agility is to maintain focus. There are three keys to project risk management essential for focus. First, the definition of project risk is "an uncertain event or condition that, if it occurs, has a positive or negative consequence" (PMBOK 2000, 127). Second, project risk management is a process, not a product. Finally, ignoring risks does not make them go away.

Discussion

A Tutorial on the PMBOK Method of Project Risk Management

The PMBOK defines risk as "an uncertain event or condition that, if it occurs, has a positive or negative effect on a project objective" (PMBOK 2000, 127). The PMBOK further defines risk management as "the systematic process of identifying, analyzing, and responding to project risk" (PMBOK 2000, 127). Finally, the PMBOK describes a six-step process for risk management; however risk practitioners will more easily recollect and understand these six steps if they group them into planning, analyzing, and executing stages.

The first stage is the Planning stage. Planning includes two steps.

The first step is **risk management planning**. Referring to the first stage as planning, and also referring to the first step as risk management planning can be a little confusing, but context usually reveals whether the term "planning" refers to the stage or step. During planning project managers decide upon their risk management strategy. The risk management strategy includes (but is not limited to) things like risk tolerances, tools and methods, and preparing adequate resources to implement the strategy. Most project managers evaluate projects in terms of the "triple constraints" or the "tortured triangle" of performance, cost, and schedule. Strategy also includes documenting the project risk management plan.

Most project managers are familiar with the concept of risk in a negative context. A risk event occurs, and there are adverse effects. However many project managers have come to view some risks in a positive context. Examples might be evolving technologies that achieve breakthroughs with consequent positive effects, or anticipated price increases in materials or labor actually become price decreases. In the first case, perhaps management took proactive action to enhance the probability of the breakthrough. In the second case, perhaps management foresaw increases in labor costs. Having foreseen increases in labor costs, that foresight precipitated efforts to redesign the project to require fewer hours of higher skilled labor, similar hours of lower skilled labor, or automated labor that could be spread over multiple projects or depreciated over time. These changes resulted in net benefits (rather than minimized frustrations). Project managers can address opportunities with the same tools they use manage negative risks.

There is an ongoing debate in the project risk management community whether project risk management applies to positive risk; i.e., whether project risk management and project opportunity management are the same discipline. The PMBOK defines risk as something that "has a positive or negative effect" (PMBOK 2000, 127). However some respected risk practitioners disagree with the PMBOK's definition. Dr David Hillson (Hillson 2001a and Hillson 2001b) seems to be leading the charge to ensure there is a full and vigorous debate on the issue.

The second step is **risk identification**. Risk identification is an iterative and recursive process to develop a catalog of risk events or conditions and to identify risk symptoms. Sources of risk events or conditions include historical files, project files and various information-gathering techniques. Information-gathering techniques mentioned in the PMBOK include brainstorming; Delphi technique; interviewing; and Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis. Risk symptoms are indications that a risk event has occurred or is about to occur. An example of a risk symptom is a cost or schedule variance on an earned value management report.

Chapter 11 (cont.)

The second stage is the Analyzing stage. Project managers assign values to risk events to help decide which events require priority attention and which may receive lesser attention. The purpose of the analyzing stage is to assign values to risk events identified during the risk identification step of the planning stage, and according to the procedures documented in the project risk management planning step of the planning stage.

The value of a risk event is the probability the event will occur times the consequences of the event given that it does occur: value = probability x consequences. Traditionally risk management practitioners express value in terms of money (e.g., dollars), but managers also express value in terms of time or some other unit that has meaning to the project team members.

Usually project managers place more emphasis on assessing the consequences of risk events, rather than their probabilities. Given two risk events with the same value, project managers will choose to devote resources to address risk events with significant consequences and defer spending resources on risk events of little or no consequence to the project goals. For example, risk events with the consequences of maiming or killing a person, threatening the survival of the organization, or bringing unfavorable media attention to the organization probably will attract a great deal of management attention, regardless of the probability of the events occurring.

The first step of the analyzing stage is **qualitative risk analysis**. Qualitative analyses include non-numeric analyses ranging from "eyeball analysis" to probability-consequence matrix analysis. The goal of qualitative analysis is to separate the vital few risks from the trivial many. Project managers may then consider the vital few risks for quantitative analysis.

Probability-consequence matrices plot the probability that a risk event will occur against the consequences of the risk event given that it does occur. Typically probability-consequence matrices are 5 x 5 matrices, but some project managers prefer 3 x 3 or 9 x 9 matrices. Project managers or corporate policies dictate responses based on assessments of where particular risks fall upon the matrix. For example, risks with remote probability and minimal consequences may merit only monitoring, while risks with near certain probability and catastrophic consequences may require executive attention. Responses typically are asymmetric to recognize that management usually is more concerned about the consequences of risk events rather than the probability of the events occurring. Figure 1 shows one possible probability-consequence matrix with definitions of probabilities and consequences, and responses required based on assessments.

The second step of the analyzing stage is **quantitative risk analysis**. Quantitative analyses include numeric tools including (but not limited to) sensitivity analyses, *A Fortiori* analysis, decision tree analysis (also called expected monetary value), and Monte Carlo analyses.

There is a real risk to quantitative analyses. Effective quantitative analyses used to require individuals with years of advanced training and lots of personnel and physical resources. Now there are many software tools on the market that permit any idiot to do sophisticated quantitative analyses, and many do. The result is quantitative analyses can take on lives of their own as increasing numbers of individuals devote increasing resources to learn more and more about less and less. Eventually, someone declares he knows everything about a particular risk event, only to discover that

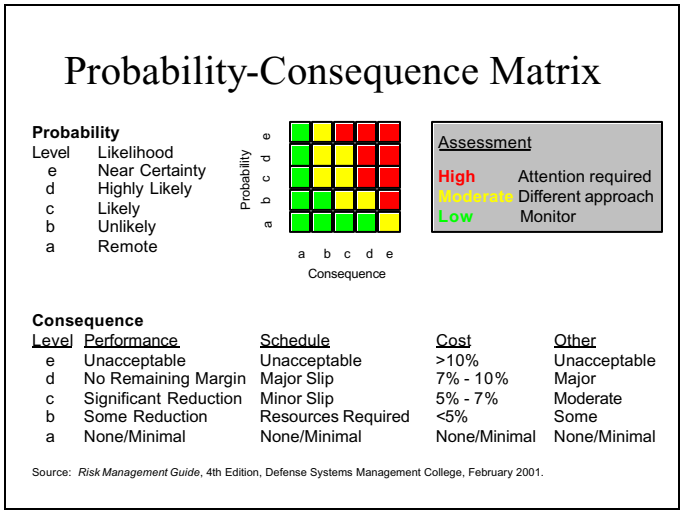

Figure 1. Probability-Consequence Matrix

while his knowledge is precise, it is not accurate, and the knowledge is not useful anyhow. Often a simple sensitivity analysis can be more revealing than sophisticated Monte Carlo simulations. Good quantitative analyses can help the project team to achieve their goals. Bad quantitative analyses can divert resources from more crucial tasks.

The final stage is the Executing stage. As with the other two stages, the Executing stage includes two steps.

The first step is **risk response planning**. Risk response planning is evaluating and implementing strategies to reduce risk value to acceptable levels. There are four classic risk-handling strategies, known by the acronym CAAT (or sometimes MAAT).

- **Control** (or mitigation) is deliberately using the design process to lower risk value to acceptable levels. Control usually involves increased cost or schedule, or trading performance in one area for performance in another area. Consequently, project team members usually make business cases to justify their control proposals. Typical activities include designing processes or systems to make a particular risk event physically impossible or implementing redundant systems.

- **Avoidance** is changing or removing requirements that represent uncertainty or high-risk value. Typical activities include trading risk value for performance, schedule, cost, or other capability.

- **Acceptance** is assuming risk because it is low enough in value (probability or consequence). Typical activities include planning budget and schedule reserves. Ignored risks are assumed risks. The ignored risks do not go away; rather the project manager assumes the ignored risk, usually without planning for appropriate reserves in case the risk event takes place.

- **Transfer** is moving risk from one area to another. Transferring risk gives responsibility for the risk event to another party, but it does not reduce the probability or consequences; i.e., the value of the risk. Typical activities include purchasing warranties or insurance for the risk event.

The second step is **risk monitoring and control**, which includes systematically tracking identified risks and evaluating the effectiveness of handling strategies. This final step includes

Chapter 11 (cont.)

monitoring the project for risk symptoms and events, and then implementing the strategies described in the project risk management plan. Sometimes risk events will occur that the project risk management plan failed to foresee. In those cases, the project team will design and implement a custom workaround for that specific event. While no project risk management plan can foresee all possible risks, if the project team spends inordinate time on workarounds, the project risk management plan probably is flawed, and the project team will need to review and revise their plan.

Tailoring Project Risk Management Processes to Non-Complex Projects

This paper's thesis is project managers can develop agile project risk management processes, tailored to the project team's needs and the project's requirements, where agility is defined in terms of improved effectiveness, increased efficiency, and reacting rapidly and effectively to changing conditions. Consider the case of the project to deliver a person to attend a symposium in San Antonio, Texas, and return him or her safely to home. This case is deliberately trite to emphasize that project managers can use the PMBOK's risk management processes on projects ranging from simple to complex. While this project is simple, it may represent a crucial task that is vital to the professional success of this individual or the economic success of this individual's firm.

Note: To conform to accepted rules of English grammar, this paper will refer to this hypothetical individual with masculine pronouns. However, this individual may be someone of either gender.

Risk management planning is deciding upon risk management strategy. The risk management strategy includes determining risk tolerances, tools and methods, and preparing for adequate resources.

The strategy for this San Antonio Project is to use standard business software and resources from public libraries or the world wide web (internet) to identify and evaluate project management risks and opportunities. The traveler's boss is the approval authority for the project. The traveler is the project leader and the project risk manager. Delivering the traveler to attend the symposium and return him safely to home is a vital task and time is of the essence. Safety is a primary consideration. Risk events that may lead to the traveler's maiming or death are unacceptable. Costs are important but secondary considerations. The primary tool used to evaluate project risks will be probability-consequence matrices.

Risk identification is an iterative and recursive process to develop a catalog of risk events or conditions and to identify risk symptoms. The primary purpose of risk identification is to produce a catalog or register of potential risk events for further analysis. Project mangers may group risks into categories that capture all the identified risks. Analysis may suggest decomposing the risk categories into their component risks may help to understand how risk events affect particular projects. Consulting historical files and brainstorming yields the following risks:

- Airline travel is delayed or disrupted
- Preferred lodging is overbooked
- Local crime rate rises to unacceptable levels
- Symposium is cancelled

Qualitative risk analysis includes non-numeric analyses ranging from "eyeball analysis" to probability-consequence matrix analysis. The purpose of qualitative risk analysis is to separate the vital few risks from the trivial many.

- **Airline travel is delayed or disrupted.** Commercial airline flights into San Antonio International Airport generally are on time according to information available through the Department of Transportation web site (**http://airconsumer.ost.dot.gov/**), the Federal Aviation Administration web site (**http://www.faa.gov/**) and the San Antonio International Airport web site (**http://www.sanantonio.gov/airport/**). When delays occur, they are generally limited to a few hours. The project risk manager assesses the probability of delayed or disrupted airline travel is low, but consequences are high. Based on the probability and consequences, the management assessment is a different approach is required.

- **Preferred lodging is overbooked.** Consulting with the symposium organizers yields the organizers do not keep statistical records of participants who were unable to obtain their preferred lodging. The organizers claim to the best of their recollection they have always been able to accommodate lodging requests when the participants submit their requests by the symposium deadlines (which the organizers publish in their literature and on their web site). Consulting with the San Antonio Convention Center and Visitors Bureau web site (**http://www.sanantoniocvb.com/**) shows there are many hotels and alternative lodging in the area. The project risk manager assesses the probability of finding preferred lodging is overbooked is low, and the consequences of overbooking are also low. Based on the probability and consequences, the management assessment is to monitor.

- **Local crime rate rises to unacceptable levels.** Statistical databases show incidents of crime in San Antonio are generally rising across all categories of crime. Neither the Federal Bureau of Investigation web site (**http://www.fbi.gov/**), the Federal Bureau of Investigation San Antonio Field Office web site (**http://sanantonio.fbi.gov/**), nor the San Antonio Police Department web site (**http://www.sanantonio.gov/sapd/**) contain information on *per capita* crime rates or victim populations. The symposium venue is in a generally safe part of town and the hotel has its own security staff. The project risk manager assesses the probability of the traveler becoming a crime victim is moderate because the traveler may not be sufficiently aware of local conditions to avoid high-crime areas and the consequences of becoming a crime victim are high because there is insufficient information to make an informed judgment about consequences. Based on the probability and consequences, the management assessment is attention required.

- **Symposium is cancelled.** Consulting with the symposium organizers yields the organizers have never cancelled the symposium. The project risk manager assesses the probability of canceling the symposium is low. The project risk manager consults with management, and the group confirms that attending the symposium is vital, but if the organizers cancel the symposium, the effects will be inconvenient, but not catastrophic. The project risk manager assesses the consequences of canceling the symposium are moderate. Based on the probability and consequences, the management assessment is to monitor.

Chapter 11 (cont.)

Quantitative risk analysis includes numeric tools including (but not limited to) sensitivity analyses, decision tree analysis (also called expected monetary value), and Monte Carlo analyses. The purpose of quantitative risk analysis is to refine the probabilities and consequences of risk events. For the purposes of the San Antonio Project, the project manager assesses the costs of quantitative risk analysis are not worthy of the potential benefits to be realized.

Risk response planning is evaluating and implementing strategies to reduce risk value to acceptable levels. The four classic risk-handling strategies are control, avoid, accept, and transfer.

- **Airline travel is delayed or disrupted** (probability low; consequences high; assessment: different approach). Although the probability of airline travel delay or disruption is low, the consequences are unacceptably high. The project manager and management ***control*** the risk by agreeing the traveler will plan to arrive at the symposium venue a day early to allow time to accommodate unforeseen delays. The project risk manager and management further agree to ***control*** the risk by authorizing the traveler to proceed by train, bus, or rental car if airline travel is disrupted.

- **Preferred lodging is overbooked** (probability low; consequences low; assessment: monitor). The project manager ***avoids*** the risk by registering for the symposium and lodging early. Additionally the project manager ***controls*** the risk by making a backup (redundant) reservation at a nearby hotel. Management agrees to pay the cancellation fee if the traveler does not use the backup reservation.

  Alternatively, the project manager could address this negative risk as an opportunity. For example, the project manager could discover an adjacent hotel property is equally rated for service and comfort, and has a lower financial cost, but at a convenience cost of having to walk across a parking lot to get between the hotel and the symposium venue. The project manager could ***control*** or ***enhance*** the opportunity by trading convenience for financial cost and adjusting project requirements.

- **Local crime rate rises to unacceptable levels** (probability moderate; consequences high; assessment: attention required). Ignoring the risk does not make it go away, but viable options are limited. The project risk manager ***controls*** some risk by providing the traveler with a corporate briefing on reducing vulnerability to crime while traveling on business. Additionally the project risk manager ***transfers*** some risk by ensuring corporate health, disability, and life insurance policies cover the traveler. Finally, the project risk manager and management agree to ***accept*** the remaining risk.

- **Symposium is cancelled** (probability low; consequences moderate; assessment: monitor). The project risk manager ***controls*** risk by making plans to attend another symposium.

Risk monitoring and control is systematically tracking identified risks and evaluate the effectiveness of handling strategies. For the San Antonio Project, the project risk manager (traveler) continues to monitor the information sources already identified and implements risk response plans.

Conclusions

Chapter 11 of ANSI/PMI-99-001-2000, ***A Guide to the Project Management Body of Knowledge*** (PMBOK, 2000) describes project risk management. The approach to project risk management can be a lot like the formal scientific method. Project risk management processes and formal scientific method are both invincible tools that force the most intractable problems to yield. Unfortunately, both tools have the disadvantage that in the hands of some practitioners, they can be ponderous, time-intensive, costly, and biased towards very large projects. Some project managers could apply the project risk management steps and could easily find themselves polarized between expensive, heavyweight exercises on the one hand, and oversimplified checklist approaches for small jobs on the other. Fortunately, skilled practitioners can tailor both tools to the problem at hand.

Focusing on the three keys to help tailor the six project risk management steps can help the project team to develop project risk management processes which are effective, efficient, and react rapidly to changing conditions. The three keys are to identify risk events; to recognize project risk management is a process, not a product; and to appreciate ignoring risks does not make them go away.

Astute project managers may tailor the PMBOK's project risk management processes to plan personal projects, like business trips or family vacations. In the admittedly trite case of delivering a person to attend a symposium and returning him safely to home, the project risk management process delivers a suitably tailored risk management plan that identifies, analyzes, and handles risks. While some risk practitioners may dismiss these risks and this application as trivial, other practitioners may embrace these risks and this application as vital to the professional success of some individuals or the economic success of their firms.

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Recently, PMI shared news with you that PMI's Annual Seminars & Symposium has undergone a major comprehensive redesign in order to meet the professional development needs of its membership and other stakeholders.

(www.pmi.org/prod/groups/public/documents/info/ap_news-congresses.asp)

In 2003, PMI will premiere its new world-class "congresses" which build upon the strengths and best traditions of the Seminars & Symposium, but are tailored to meet the growing demand for project management knowledge, professional development and networking on a global scale.

The first of these new professional development events is PMI Congress 2003-Europe, slated for 22-26 May 2003, in Den Haag (The Hague), The Netherlands. In September 2003, PMI Congress 2003-North America will be held in Baltimore, Maryland, USA. At least two additional congresses are planned for other global locations in the future. All congresses will be delivered in a similar format; however, each will be tailored to reflect the cultural interests of its attendees. PMI aims to give "regional flavor" to each congress by offering presentations by speakers who live and/or work in the region, and who can speak to the unique aspects of managing projects in that particular area of the world.

Right now, PMI is reaching out to all PMI Components to help inform their memberships about the new online submission process for presentation proposals for PMI Congress 2003-Europe. We encourage all chapter, SIG and college members - especially those living and/or working in Europe, the Middle East and Africa - to visit the PMI Congresses Web site (www.pmi.org/info/PDC_CongressSpeaker.asp) to review the proposal submission process for all congresses, and to submit a proposal for the European Congress.

The deadline for submissions for PMI Congress 2003-Europe is Friday, 20 December 2002, at 5:00 p.m. (US Eastern Time, GMT -4). The Web site will not accept proposals after this date. Notification of proposal status will be sent to all submitters the week of 12 January 2003 via e-mail and postal mail. Online submission of proposals for PMI Congress 2003-North America will begin in early 2003.

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Regards,

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