Revisiting Risks: Threats and Opportunities in Complex Projects[1]

***Stacy Goff**, IPMA Level D®*
IPMA Vice President of Marketing and Events
asapm President

Abstract

Most PM practitioners believe we already know all about Risk Management—and many do. We follow the process steps, record the documentation, and then move on to managing the next knowledge area. But there is a huge performance gap between those who follow the steps, and those who use adept management of project and program risk as their competitive advantage. Risk Management is a classic case of "the more we know, the more we realize there is to learn."

Simple projects, those that represent 60-80% of initiatives, rightfully have less concern about risk; but complex projects and programs are a different story. These need far more insight in managing risk than many project managers demonstrate. In fact, some say that all of the knowledge, skills and competences of project management are really nothing more than a specialized version of risk management—managing the uncertainty of change. So, what can we do, to maximize the effectiveness of our risk management and project management efforts?

There is a range of answers to this question, and not all are apparent; these include:

- Moving beyond knowledge, to mastery, and using that mastery as a competitive advantage.
- Managing the Contextual Competences of the IPMA[2] Competence Baseline; they hold the secret to getting the permanent organization's assets to work for us, rather than vice-versa.
- Balancing process knowledge with appropriate interpersonal skills, and grasping those skills' importance in getting action on Risk Responses from those who are responsible for them.
- Instilling a deeper understanding of the responsibilities of those who initiate engagements, help manage risk, and assure business success once the project team moves on to another project.

[1] Second Editions are previously published papers that have continued relevance in today's project management world, or which were originally published in conference proceedings or in a language other than English. Original publication acknowledged; authors retain copyright. This paper was originally presented at the 6th Annual Project Management Symposium, University of Texas at Dallas, August 16-17, 2012. It is republished here with permission of the author and UT Dallas.

- Collecting and actually re-using Project Intelligence, the prescient key to efficient and effective Risk Management—both for Threats and Opportunities, in complex projects.

While many PM practitioners spend the majority of their time planning and tracking **lagging** project indicators, the highest-performing PMs, teams and organizations are managing and monitoring the **leading** indicators. And, these leaders and teams receive supportive action from their organizations when risks go awry. These high-performers can produce twice the results, twice as fast, at half the cost, and at higher levels of quality. They do so by truly managing project and program risk. Which of these two groups are you in?

Key Topics

- Project Risk Management as a Competitive Advantage
- The Role of Contextual Competences in Complex Projects
- The Role of Interpersonal Skills in Risk Management
- Clarifying Risk Management Roles in Complex Projects and Programs
- Managing Threats and Maximizing Opportunity: Rising Success Rates

Context

We base this paper on 25 years of project and program risk management coaching and consulting that we have performed in contract optimization for major consultancies, aerospace and defense. While many things have changed during those years, most of the key success factors have not.

1. Project Risk Management as a Competitive Advantage

A significant difference exists between knowing the steps and mastering the practice. This is true whether you are cooking, racing sports cars (as the author has done; he truly grasps risk), or managing a project. In each context, there are some who focus on the former—following the steps. And there are others who seek to master the practice. Our experience is that the difference is one part mindset, one part rewards, and one part experience. In the popular Thinking Styles models, one theory is that those who show left brain preference tend to focus on process, and those with right brain preference tend to focus on results. And, those models always point out that the most successful people are *whole-brained*, applying the advantages of both left and right.

OK, fine, you say, but what does this have to do with competitive advantage? We're glad you asked! And here is our answer: Based on our experience, effective project risk management practices are a key differentiator between otherwise competent and performing market players—whether the application area is consulting, aerospace/defense, finance or manufacturing. And those effective risk management practices usually rely on the following:

- Clear responsibilities for identifying and managing risks—across the organization
- Consistent processes and a critical view of their results.
- Managers and support staff who are dedicated to engagement success.

- Decisions are based on accurate history, useful metrics and fierce analysis, not just "gut."
- And on the other hand, decisions verified based on "gut" reaction of highly experienced leaders.

An Example

Years ago, one of the "Big Eight" Accounting Firms wanted to **win more bids**, and to **make more profit on bids won**. Each objective, by itself, was relatively easy. But together, these apparently-conflicting objectives were nearly impossible. And, these were highly complex projects!

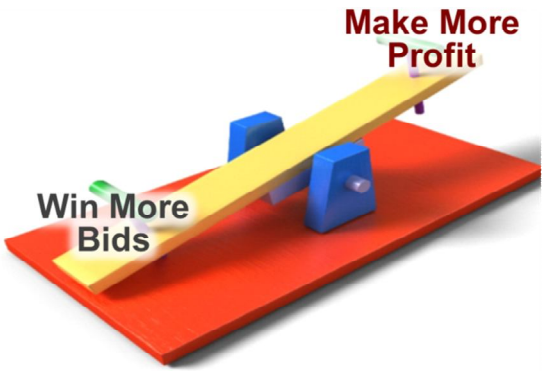


Figure 1, Goff: 1987, Risk Management Trade-offs

In that era, most consultancies used Risk Checklists to rate areas of engagement risk, and then—get this—used the multiplier from their risk checklist to increase their bid, to cover their risk. The irony: They were proposing, via their bids, to charge buyers ***to manage risks their customers could manage!***

Our solution took a few years to "make a difference." Based on great project histories, we identified the most-frequently-recurring risks that Customers could manage in each of a dozen business sectors, with the likely cost savings (based on history). We established these potentially business-owned risks as contract exclusions.[3] In that era, the contracts bid with this approach came in at 25% less than the others in a tough, competitive market, and they won! Interestingly, not all buyers were interested in saving money, at first—they were more interested in transfer-ring Risk.

But within three years, *all of the competition* needed to bid the same way, and we had a three year head start. By 1988, this was the only effective way to bid a contract. *This is just one example* of effective Risk Management as a competitive advantage. ***Mission accomplished.***

2. The Role of Contextual Competences in Complex Projects

What is a complex project? For many, this is a vague concept. For others, there is an entire professional organization that specializes in helping manage them.[4] Complexity—in projects or programs—can be caused by many factors, both in the environment or constraints of the project and in the choices made in achieving it contribute. IPMA and *asapm* (IPMA-USA) use a pair of rigorous management complexity evaluation tools to determine project management complexity.

We use these tools (and they are available to you[5]) for several purposes:

- To determine the management complexity of the projects our advanced certification candidates have managed. We use the tool to make a critical evaluation between

whether you qualify for Certified Senior Program Manager or a Certified Program Manager; between Certified Senior Project Manager or a Certified Project Manager.

- In some cases, the management complexity of a candidate's program experience may not warrant a program manager certification— we may recommend a project manager certification. And, some applicants' projects do not demonstrate enough management complexity to warrant any advanced certification—we either recommend that the applicant select a different example project, or that they fall back to an exam-based certification—reflecting the rigor of our program.
- Managers use the management complexity tools either to match the management complexity of initiatives to your appropriately-certified talent, or to take actions to reduce the risks of unnecessary project or program management complexity.

When we understand the factors that contribute to management Complexity, what do we do about them? The IPMA Competence Baseline (ICB) is a key resource.

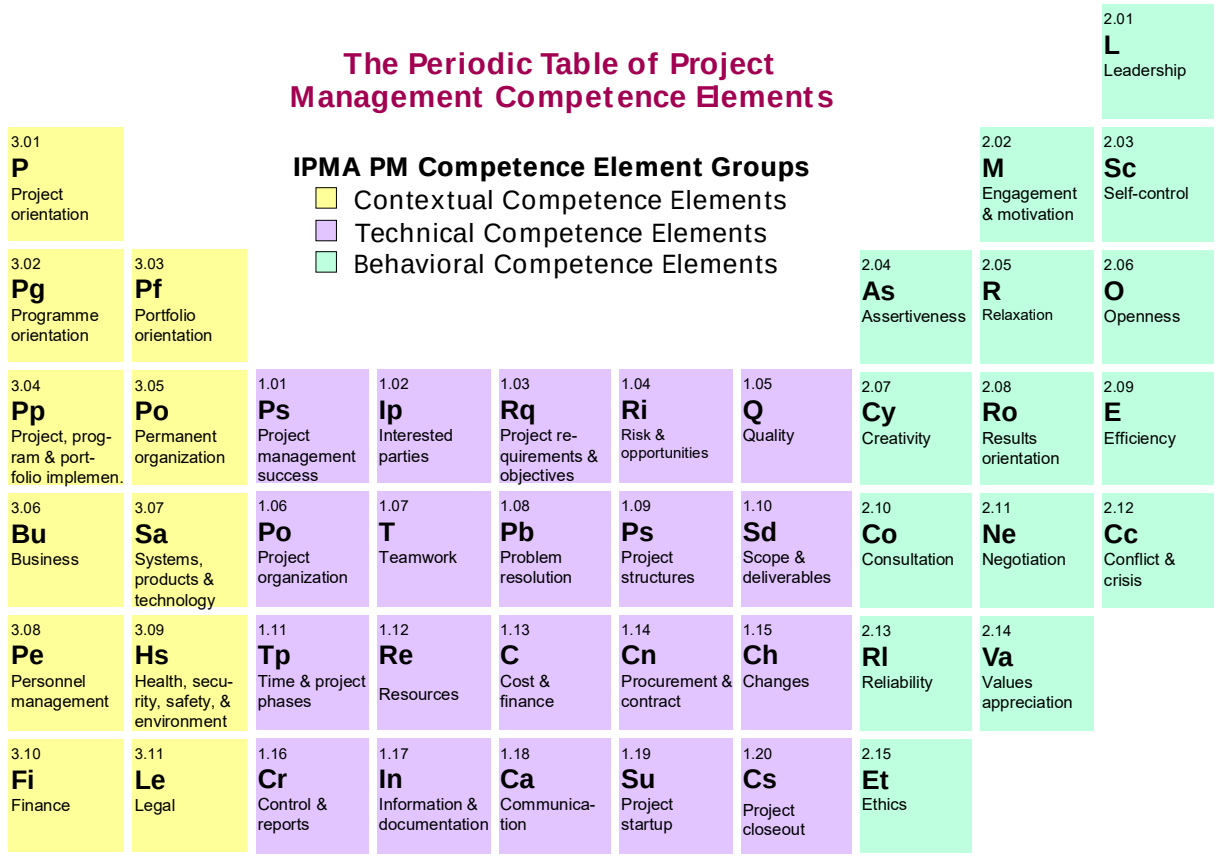


Figure 2; © 2008 Goff: Periodic Table of IPMA PM Competence Elements

In one place, it integrates the competence elements needed to manage projects, programs, and portfolios, all while interacting with the key project-related parts of the permanent organization.

For those who are not yet familiar with ICB, we point out three key parts of this chart. The Technical Elements in the center are similar to the PM knowledge areas of other

organizations' bodies of knowledge. They are clearly essential to the success of any project. But remember, here we are discussing Competence Elements, not just knowledge areas. Professionally-assessed competence demonstrates a higher level of grasp of the topic than multiple-choice exams. And, note that we do not just list nine+ areas, but 20. Do you see any in the center column of the diagram above that you could skip in your projects?

On the right in the ICB model are the Behavioral Elements. Those have not, until recently, even appeared in the baselines of other organizations, but IPMA has recognized for years that these "soft skills" have a greater impact on project success than all the technical elements together. For those who remember their chemistry, it is with some irony to note that we have placed the Behavioral Elements in the same location as the Noble Gas elements in the chemical table.

Finally, on the left, we see the Contextual Elements. To a great extent, these provide the competences that help to overcome the risks of *Complex Contexts*—our focal point in this paper. For example, can *you* work effectively with Contextual Elements 3.06-3.11, both those within your Permanent Organization, and those within your suppliers, contractors, and strategic partners? And how effective are you in Contextual Elements 3.01-3.04, which define your maturity or competence as a Project-oriented enterprise?

Implications

The implications of IPMA's approach are clear: Anything less than mastery of *all* the ICB elements would be risky in managing *any* project to a successful conclusion. In the case of Complex projects, it should be clear that it is downright dangerous and foolhardy to attempt to manage with just a dozen or so knowledge areas, when you must demonstrate 46 Competence Elements. The Contextual Elements are essential to success—as are the Behavioral Elements, which we shall continue discussing in the next section.

Among the benefits of recognizing the Contextual Elements, and harnessing their power, rather than becoming stymied by the assets and processes of the permanent organization, are the following:

- Managing Conflicting Priorities: Projects vs. the Permanent Organization;
- Improving Team Acquisition and Team-Building in a competitive Talent market;
- Harnessing the Supply Chain, and having it work for you, together with your Legal Department.
- Obviously (or not), the permanent organization is the place that your post-project success will be judged, and you'd probably prefer to know who will evaluate success beginning from project start-up, wouldn't you?

The Complex Project bottom line: Savvy project and program managers apply Contextual and Behavioral Competences—in addition to important technical knowledge and competences, to reduce heightened risk.

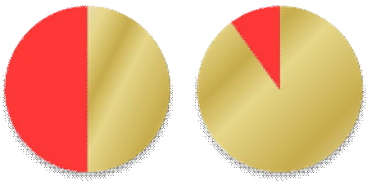
3. The Role of Interpersonal Skills in Risk Management

In the last few years we have visited with Deans of Colleges and Universities that are interested in developing truly relevant project and program management learning for their post-graduate programs *(such as those at UTD).* Hundreds of other universities (and many more new-arrival training companies) offer programs that merely prepare people to take an exam. Savvy schools, on the other hand, perform career-enhancing services, as a way to "stand out from the crowd."

In talking with these University Deans, we often start with a scenario, followed by a question: Imagine that XYZ Corp. (a major local corporation, and friend of the University) came to you, saying, "our project and program managers are good, but we feel they really should be able to do more, to improve our project, program and business success." ***Q: What would you offer them?***

The well-meaning response is usually along the lines of, "Advanced Scheduling, Earned Value Management, and probably a bit on Risk Management." Our reply, a favorite from Peter Drucker's work: "That's what nine out of ten Deans would say, and all of them are wrong."

Then we'd draw the beginning of a pie chart—an open circle, and begin with a statement: Projects certainly do depend on getting the basic pm processes—and knowledge about them—mastered. Let's say that one part of this pie chart reflects the importance of those factors. The other part reflects the importance of interpersonal skills, including rapport-building; getting commitments; and keeping them; trust and ownership—and all the others that competent project practitioners consistently demonstrate. ***Please draw the line that shows the ratio of each.***



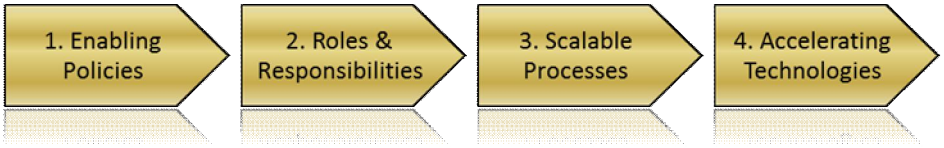
In our interactions, we draw the circle manually, and have them draw the dividing line to select the proportions. For this paper's purposes, imagine that the options might include the samples at left. Which do you think was closest to what they drew?

They all draw the chart on the right. And then, we ask them to label the portions—***T*** for technical knowledge, ***I*** for interpersonal skills. Their agony is exquisite. They know their answer long before they enter the label—but it is very difficult to admit it.
Interpersonal Skills Trump Technical Knowledge. Easy-to-teach, easy-to-test technical knowledge is a great foundation, but it has *very little impact* on business success from projects. And the difficult to teach, difficult to test (or assess) topics, mostly surrounding interpersonal skills, have the greatest impact.
Many of us—including this audience—have known this all along; some professional associations, such as *asapm* (American Society for the Advancement of Project Management) and IPMA (International Project Management Association) have recognized this fact for 10 and 20 years respectively, in our advanced PM certifications program.

This is a key point that we could have stated in the first paragraph of this topic with 80% acceptance: Your interpersonal skills are more important in managing Project Risk, and managing project and program success, than any others. ***And in Complex projects, they are even more so!*** Of course, you knew that!

4. Clarifying Risk Management Roles in Complex Projects and Programs

Clear roles and responsibilities are essential risk management practices in *any* project. In complex projects and programs, their importance ***soars***. In our paper on PM Methods Improvement[6], our methodology for maximized results on PM Performance improvement initiatives, we cite four universal ingredients required to achieve project benefits. We show them below.



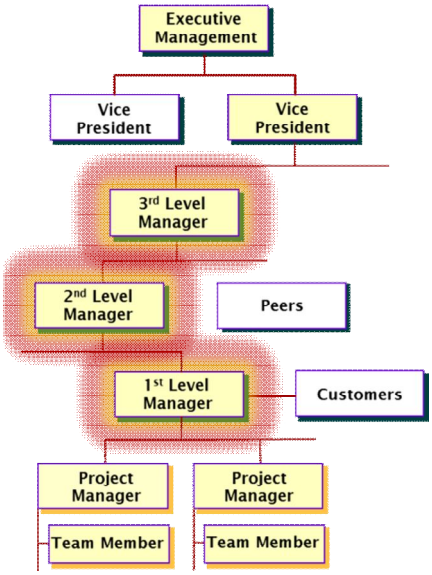
The key to these four ingredients is that they are best implemented in the sequence shown. So many times, when contacted to rescue a failing pm methods improvement project, we ask our initial questions, and find that the organization *started with the technology*. Sometimes, it is both the technology and the processes that the failing projects focus upon. The most frequently-missing items are the policies, and definition (and adherence to) clear roles and responsibilities.

How does this relate to Risk? Most of us realize that Project Managers do not manage Risk. Why? ***Because everything we can manage is not a risk!*** Our job in project risk management is to cause those who could help to manage risk to accept their responsibility to do so. Identifying those who should participate in risk management is a good step. That participation includes:

- Identifying Risks, both during project Risk Assessment sessions, and when the Risks arise.
- Brainstorming and taking responsibility for Risk Responses.
- Assessing the impact of Risks from an enterprise perspective; project team members are usually not the best roles to assess these impacts.
- Engaging the Permanent Organization in managing Risks (this is even more important in Complex projects—often the permanent organization has other priorities).
- In contracts, performing relationship management with buyer managers and executives.
- Evaluating the cumulative impact of multiple Risks; while it can be relatively easy of assess individual risks, the cumulative impact of multiple Risks can be difficult to analyze.

Key Risk Management Roles

Who is best-qualified to help assure the Risk Management participation listed above? It is usually the 2-3 levels of Managers above the project manager and team who must do so. In our experience, a significant differentiator between enterprises that manage risks well and all others is the level of engagement of these Managers in helping manage project Risk.



This is the case regardless of whether we are speaking of complex project Risk Threats or Opportunities. Managers in the Middle are most-often responsible for "making the difference" between the enterprise working for the project, or vice-versa. And yet, is risk management a priority for our Managers? Have they been trained for this role? Are they rewarded for their performance in this area? ***So many unanswered questions!***

5. Managing Threats and Maximizing Opportunity: Rising Success Rates

Our ***Project Intelligence*** Model was originally based on a simple insight: The majority of project managers (and our managers) spend much of our time in react mode. Often, the reaction is too late to make a significant difference. One distinguishing factor between effective project managers and those who are not, yet, was whether they more-often receive needed action from Managers above them.

So, in our engagements where we developed and coached teams and organizations in the use of project management methodologies and effectiveness improvement, we focused on several more-proactive alternatives:

- Conveying actionable items earlier—notification with time to act.
- Providing compelling management information about consequences of the failure to act.
- Building trust by showing the benefits of recommended actions taken.

Later, we added a few more insights:

Based on our Project Vital Signs, we asserted that three factors are lagging indicators (Time, Cost and Quality), while three are leading in dicators (Talent, Scope and Risk). Our conclusion: The smartest way to manage projects is to ***manage the leading indicators and monitor the lagging ones***. Based on the story in the first section of this paper, citing Risk Management as Competitive Advantage, we had found that Project Risk is a ***super vital sign***. Here's how: While Risk has no project impact, when realized, it affects all the other Vital Signs.

Thus, from then on, our training, methodologies, coaching and tools focused on managing Risk.

The Project Intelligence Model progressed, as part of our proprietary methods, training and tools for over 20 years; it was only available to our licensees. But after 2000, when we began writing articles and speaking more-frequently at conferences, we began sharing it with others.

We continued developing the ***Project Intelligence*** theme, and presented it at the 2005 IPMA World Congress in Delhi, India. As part of the paper and presentation[7], we noted that Risk/Threats, Issues, Failures and Lessons Learned are four types of project events, all of which can affect project success.

We then proclaimed that they are all the same management information, ***just at different points in time!*** While intuitively obvious, this was an "Aha Moment" that swept the standing-room-only crowd.

Let us further explore the Project Intelligence relationship of the four project events:

Risk: *May Happen*. Action: Assess impact, probability, and prevent. Assign Responses.

Issue: *Has Happened*, but has not yet impacted. Action: Act quickly to intervene, to avoid Vital Signs damage.

Failure: *Has Impacted*. Action: Mitigate impact and recover; communicate, avoiding placing blame.

Lessons Learned: *Perhaps not really learned*, if it recurs. Action: Review at later phases, or at start-up of related projects.

Note that the events on the top half of the clock reflect leading factors; the bottom half are lagging factors. For the top half, you prevent or intervene; bottom half, you can only recover.

After that event, several observers asked, is there a version for Risk/Opportunities as well? We should thank Dr. David Hillson for that perspective, shouldn't we? We puzzled over the question for quite some time, and finally resolved it.

The Opportunity Version

Most of the events were easy to convert for the Opportunity version. The difficulty was identifying the corresponding event to an Issue. We agonized over it for months! Nothing

fit! Then, while driving, we encountered a traffic jam. Cars were backed up for miles. But the left lane on the two-lane freeway was moving a bit faster.

And then we saw it: an opening in the stream of cars in the left lane! If we timed it right, we could signal, step on the gas, and zoom into the opening. After successfully navigating the maneuver, we realized that this was the term we'd been searching for, the Opportunity equivalent of an Issue. You have a very short time to act, and if you do, you succeed. We had found our missing event!

Using the Project Intellibase

The projects we mentioned in the first section's Competitive Advantage topic were highly complex, and they had high risk. These were make-or-break-your-company levels of Risk. And when we realized that our client had a great Risk history, with Risk Realization rates and impacts across a dozen areas of business, it made it easy to track and project the most frequently-recurring areas of risk, by customer, by industry, by type of project, phase of the life cycle. Adding the insight shown above about the relationship of four types of project events more than doubled our database. We moved from guessing about risks using checklists, to using data models of the most likely risks that the customer could manage. We moved from generic project management to a keen insight into the secrets of success—that we had observed in the best PMs.

Summary

Enterprise Executives and project and program stakeholders expect and are actively seeking much higher success rates from their project investments. In this paper we have traced a handful of simple topics with significant potential. They may be easy to explain, but they depend on some stringent prerequisites.

Whether your projects are simple, typical or complex, our message includes these tips:

- Mine your existing project history. Of course, you must first assure that it is reliable.
- Combine data and information. Most project managers spend far too much time on data and not enough on information.
- Communicate both information and data upward, in time to respond, and using the data to show the amplitude of impact if no action is taken.
- Cultivate your Context. As a project manager work with the groups in your permanent organization, establishing a relationship with them before you need their help. That investment cam pay off multiple times over.
- Develop and demonstrate your interpersonal (behavioral) skills. Remember the Dean's pie chart.
- Engage the Managers above you; develop their trust. In our experience, these 2-3+ levels can have more impact on project success than can all the immediate project or program team put together.
- Assure useful recording of Risk/Threats, Issues, Failure points, and Lessons Learned. But don't just record them; use them! They are the best source of project intelligence in your culture.
- Every now and then, use the above tips to seize an Opportunity.

You, dear reader, already know much or all of what we have written in this paper. The reason we wrote the paper is because most of us learn these things through our project experiences, and it is very difficult to convey experience to others. As your projects become increasingly complex (a long term trend), you continue to need to develop more people around you who can share your insights. And so we have provided this paper for your use, to help you accomplish just that feat.

References

[2] IPMA, the International Project Management Association, is the World's first project management professional association. Through over 50 Member Associations, IPMA offers professionally-assessed competence-based certifications for a range of project, program and managerial roles. Learn more about IPMA at IPMA.world.

[3] We agreed not to offer our Risk Management insights to other consultancies for a period of five years after this engagement ended. Our client did not want their competition to gain the same insights. In 1993 we integrated the approach and process into our Risk Management tool and product.

[4] International Centre for Complex Project Management; see them at: www.iccpm.com/.

[5] *asapm's* Project and Program Management Complexity evaluation tool is available for your use at: www.asapm.org/Cert/EvaluatingComplexity.asp.

[6] Stacy's *PM Methods Improvement Plan*, used by organizations for over 25 years to successfully implement methods improvement, is at: https://StacyGoff.com/assets/PM_MethodsImprovementPlan.pdf.

[7] See Goff's 2005 IPMA World Congress paper at: https://StacyGoff.com/assets/RiskKeyToProjectIntelligence.pdf.

About the Author

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Stacy Goff

Author

Stacy Goff, *the PM Performance Coach*, is Vice President of Marketing & Events for IPMA, the International Project Management Association, and past President of *asapm*, the American Society for the Advancement of Project Management (IPMA-USA). In these roles, Goff presents keynotes and speaks at conferences around the World on topics related to the advancement of project and program management competence, and improved PM performance. During 2011 he presented to dozens of audiences on five continents.

When he is not serving not-for-profit organizations, Goff is owner, trainer, and coach, of a USa-based Program and Project Management consulting, tools and learning company. A Project Management practitioner since 1970 and consultant since 1982, he helps improve enterprise, department, project team or individual pm competence, effectiveness and performance.

An insightful consultant and dynamic speaker, Mr. Goff offers workshops of interest to Executives, Managers, Program and Project Managers, and individual contributors. His Project Management tools and methods are used by government agencies, Enterprises, consultancies and individuals on six continents. By the year 2000, he had exposed over 45,000 people to the World of Project Management. And, he does not just teach project management, he lives it. Email: Stacy.Goff@gmail.com; Website: StacyGoff.com

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