Launching A Project Management Certification Program At The CIA
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Introduction

A key to successful project management enterprise wide is the level of skill, knowledge, and ability of the organization's project managers. This truth has manifested itself repeatedly across the industry and has frequently led to efforts to raise the PM competency levels through **training and certification**. The Central Intelligence Agency (CIA) is now embarking on this path; an internal agency-wide Project Management Training and Certification Program (PMTCP) is now being created. What are the conditions that led to the decision to launch a PM certification program at the CIA? What are the anticipated barriers? What type of certification program is being created, and why is it being aligned so closely with the Project Management Professional (PMP®) certification by the Project Management Institute (PMI®)? This paper examines the **dynamics within the CIA** associated with project management and presents the details of the process the CIA is using to put PMTCP into operation. The paper draws on the guidance in the *PMBOK® Guide* and from respected authors about project management certification, and it characterizes the importance of basing the certification program on clearly articulated needs from both the project management level as well as the senior executive level. Through mention of some interesting spy projects and a survey of CIA managers, the author uses experience from his thirty years in the project management business to describe the consequences of not paying enough serious attention to project management competency.

The paper includes answers to the key strategic PMTCP questions posed above, and it includes the rationale for these answers. A description is given of the **levels of project management training** that are being developed to support the certification. The status of the PMTCP program is presented and is followed by a summary of the major challenges anticipated as PMTCP moves from its design phase to implementation across the enterprise. Issues such as grandfathering, testing resistance, re-certification, and transitioning from the legacy curriculum to the new curriculum are examined. The paper concludes with a discussion about the effect PMTCP is expected to have on the project manager career advancement and job placement decisions as well as the effect anticipated on the organizational project management maturity.

The Conditions

What Is The CIA Project History?

The CIA has a long, rich history involving thousands of projects over decades of time (DST, 2003). The spies and the intelligence analysts have long relied on technology to support their accomplishments. For the last forty years the CIA has relied heavily on its Directorate of Science and Technology (DST) for most of this technical support. And the method of choice for the DST has been to **manage the work as projects**. The range of projects has been extraordinarily diverse, including large, complex CORONA satellites, small yet elegant disguises, secret writing, audio surveillance, cross-border tunnels, U-2 aircraft, and information data mining systems (OTS, 2001, Zakaria, 2001). Consequently, most people in the DST have direct experience working on and/or managing projects. In fact, the Directorate has been organized along project lines since its creation (CIA, 2003). And for the last fifteen years a standard **project management life cycle** process known as the Agency Project Cycle (APC) has been taught and widely adopted throughout many elements within the CIA. In this regard the CIA's DST has been a leader in providing high quality project management training to its work force.

The APC was created to capture and convey the best practices that had evolved out of our larger, complex multi-year projects. It integrates our use of project management best practices with our use of system engineering best practices with our contract acquisition process, and it captures our common vocabulary (CSM, 2003). It is structured as a waterfall process with a presumption that the work will be accomplished through acquisition from a

contractor. It has long been the practice of the CIA to teach the APC together with what we have considered to be the key project management elements. This approach of supplementing life cycle-based education with "key knowledge areas" should be recognizable by those familiar with the *PMBOK® Guide* as a best practice. The APC forms the basis of the internal Contract Officer Technical Representative (COTR) certification that is offered to our employees who manage the work being performed under contract by the various companies.

Other elements within the CIA, notably our CIO organization with agency-wide responsibility for information services, have invested in the use and tailoring of the APC. Although their cultures have not had as long or as deep a legacy of reliance on project management, they too have come to a significant dependence on projects for their mission success. Furthermore, they have become dependent on project management and on standard project management life cycle processes (O'Brochta, 2001, 2002).

Why PM Certification Now?

The short answer to the question of "Why PM certification now?" is that we want to do better. Our periodic introspective examinations of how well we are doing at managing projects have driven us to desire improvement. As stakeholders Congress, The White House, the military, and other government agencies expect more from us. Within the CIA during the past few years, our project management working groups, project management maturity assessments, project management councils, and project management career boards have all advocated the goal of **deepening the knowledge and skills** associated with successful project management. They have specifically recommended that we adopt an internal project management certification program. Additionally, an informal survey conducted of fifty line managers in the CIA produced the consistent view that the approach most preferred for increasing the project success rate is to deepen of the knowledge and skills of our project managers.

The life cycle-based approach to project management has served us well, resulting in a large population who are familiar with and can use to advantage the standard APC. However, as the mix and types of **projects have changed**, the portion of the population that is able to tailor and adapt the standard APC has declined. It is not so much that a reduction in the larger projects has taken place, but that we have experienced a huge growth in the other types and variety of projects. Project durations of one year or less are more the norm. Projects where incremental deliveries are desired are more the norm. Projects employing rapidly changing technologies are more the norm. Projects being conducted and managed entirely in-house instead of through acquisition are more the norm. An increasingly frequent lament is that the standard APC that is taught in the classroom is increasingly difficult to apply in this project environment. A related lament is that project management has become too process-driven at the expense of doing what is best for each specific project. Project managers want a deeper level of knowledge and skills so they may better tailor and apply existing project life cycle methodologies and/or develop methodologies more suitable to their specific types of projects.

In addition to the changes in the project types, we are also experiencing **changes in the project personnel**. Many of the wizened project managers who possessed years of experience and corporate knowledge have retired, and the demographers indicate that many more will do so within the next five years. The newly hired employees bring with them an enthusiasm that has not yet been tempered by this same depth of experience. They will continue to need help building the necessary depth of project management knowledge and skills. Some also bring with them an awareness of how projects are managed outside of the CIA, and they prefer to continue to use and strengthen these project management practices rather than to be confined to a CIA unique way of managing projects. Both these new hires as well as the existing project managers are finding themselves players in the government-wide push for compensation reform. For project managers in the CIA this means that an increasing number will for the first time be grouped with other project managers as part of the evaluation process for promotion and advancement. Project management standards for job performance are being applied as a separately defined class. Consequently, project managers want a deeper level of knowledge and skills so they may better excel at managing their projects and so they may better compete.

The **environment has also changed**. The discipline of project management has grown rapidly throughout industry. Many more people are applying more project management to more types of work. An awareness of these industry trends has crept into the CIA and has given a voice to a small and vocal community. Some of these voices
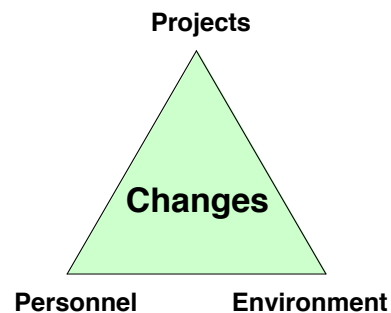
Projects

Changes

Personnel   **Environment**

Exhibit 1. Why Now

are found in recently created project management offices within the CIA that have been given enterprise-wide responsibilities. These voices are strong advocates of adopting more of the industry tried-and-true best practices and reducing the reliance on CIA unique practices. These voices are being listened to. These voices are leading the movement toward a deeper level of project management knowledge and skills.

What Are The Anticipated Barriers?

Anticipated barriers such as the lack of resources, the lack of top-level management commitment, the lack of a clear solution path, or the lack of patience to do the job right are not significant factors. Enough of the top-level managers are acting on their support for the creation of PMTCP by providing the necessary resources. Enough knowledgeable voices are aware of the highest payoff solution paths and are involved to the degree necessary. And, enough key stakeholders exist who are patient enough to spend the time necessary to achieve a high level of quality.

The most significant anticipated barrier is a result of all of the years of experience within the CIA with project management. There is truly a large installed base of trained project managers as well as mid-level managers who have predominantly known only one form of project management. For them, change represents a real threat to their status quo, to what they believe and have been rewarded for practicing. For them, it manifests itself as "we are already doing a good enough job at managing projects, and **we do not need to change**." Their experience at managing projects the CIA way is simultaneously a benefit and a limitation. For them, being in an organization as "mission focused" as the CIA, the notion of investing significant amounts of time and resources learning a subject that we already know is considered a waste when we could be applying these same resources toward the nationally important intelligence problems of the day.

And for the portion of the population who are more open to change, the barrier is centered on the fact that the CIA is truly different from elsewhere. The CIA is, after all, in the spy business. And the **spy business is different** from all other businesses. For these people, it manifests itself as "even if we must change, since we are so different from everyone else we should not rush to an overdependency on the practices of others." Their experience in the spy business has taught them that insularity is a virtue that supports the need for secrecy and the need to be different from others.

The Certification Program

What Are The Key Requirements?

The PMTCP has as its underpinning the following key requirements: continue with the CIA's integration of project management and system engineering, remain faithful to our standard project life cycle methodologies and vocabulary, build a depth of knowledge and skills, be aligned with the *PMBOK® Guide*, be structured in multiple levels, and base certification on testing or other clear demonstration of mastery of key subject matter. The three most significant changes in this requirement set when compared to the current conditions within the CIA are the deepening of the knowledge and skills, the alignment with the *PMBOK® Guide* knowledge areas, and the reliance on testing to obtain an actual certification.

Whereas the learning objectives of our past curriculum would have read, "be familiar with," the learning objectives for PMTCP read, "**be able to**." Since more and more of our project managers are directly managing the work themselves, they are in need of a greater depth of knowledge and skills. For example, many more of our project managers are finding that being skilled at reviewing the work breakdown structure (WBS) traditionally written by the contractor is no longer adequate; they are finding that since they are not relying as much on the contractor, they need to be able to create a WBS themselves. Similar circumstances exist for other knowledge areas as well.

PMBOK® Guide knowledge area alignment is being driven by the need to be less CIA unique and more in tune with what is going on in the rest of the project management industry. It was fifteen years ago that the CIA performed a serious assessment of its project management needs and developed the existing life cycle-based curriculum; serious assessments since then have refined and improved this curriculum through the addition of the key project management elements. In the meantime significant progress has made by the project management industry in general and the Project Management Institute (PMI®) in particular, resulting in a large, well-defined

body of knowledge. Taking advantage of this body of knowledge offers the dual benefits of both efficiency and effectiveness. Efficiency is achieved by minimizing the amount of custom curriculum development and maximizing the amount of the curriculum that is based on existing offerings from the large stable of qualified PMI® registered education providers (MCI, 2003). Effectiveness is achieved by relying on a body of knowledge that has been found by many to work in practice and which has also been found through measured research to work (Pennypacker, 2002; Ibbs, 2002). Additionally, given that our doors are opening and that significant numbers of our employees engaged in project work are now coming from industry, it follows that the expedient choice would most likely be something already familiar to them as they enter the CIA, as well as something of value to them when they exit the CIA and return to industry.

The requirement to rely on testing to obtain certification is directly related to the use that is intended of PMTCP. Some elements within the CIA have already announced their desire to make official decisions regarding promotion and regarding assignment **based in part on PMTCP**. Elsewhere, project managers who are finding themselves subject to the newly forming project management occupational career paths are looking for definitive ways to progress. And still elsewhere, project managers who look beyond the immediacy of the project they are currently working on recognize the benefits of professionalization in this manner. Certification, with centrally administered psychometrically valid testing at its heart, is a widely accepted approach for addressing these intended PMTCP uses (Prometric, 2003).

What Process Is Being Followed?

PMTCP is being **managed as a project**, and as a project it is following a process documented in a plan. This process represents a tailoring of our standard APC project life cycle methodology. Key sequential tasks include requirements definition, planning, acquisition, requirements validation, development, piloting, transitioning, and implementation. Key parallel tasks include the management of the project and communication. Key control gates include Requirements Review, Design Concept Review, Pilot Readiness Review, and Annual Readiness Reviews.

The requirements definition, planning, and acquisition were all done using personnel from within the CIA. Key documents including Requirements, Concept of Operations, Acquisition Plan, and Statements of Work were all written in the PMTCP Program Office and vetted with key stakeholders. A standards working group with experts and representatives from key elements within the CIA was formed and has been functioning as both a resource and an oversight for PMTCP. Contractor teams, selected through a competitive acquisition process, will perform the requirements validation and development of the courses and tests. Piloting of these courses and tests will be conducted jointly by the contractor teams and by CIA employees hand picked by the PMTCP Program Office. The transitioning of the work force from the existing project management life cycle based approach to the new knowledge based certification approach will be guided heavily by the standards working group. Implementation of the full PMTCP curriculum and certification testing will be the primary responsibility of the contractor teams with
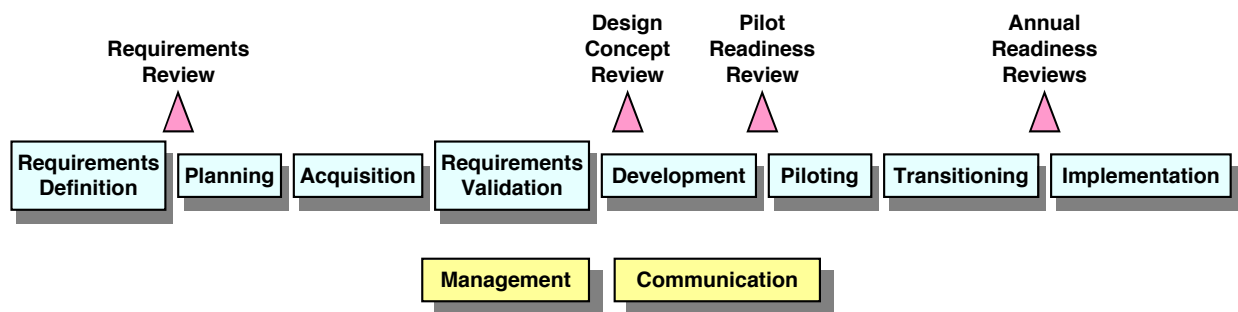

Exhibit 2. PMTCP Plan

some CIA instructor supplementation.

How Is PMTCP Structured?

PMTCP is structured into **four hierarchical levels** that are aligned with the grouping of needs from both the project management population as well as from the senior executive population. Certification of employees for project management within the CIA will occur at each of these four distinct levels. It is expected that project

managers in the CIA will succeed based in part on the knowledge and skills obtained through this internal PM certification, in part based on their work experiences, and in part based on their subject or domain expertise. As such, CIA PM certification will represent a significant factor in the evaluation of the performance and potential of our project managers, but not the only factor. The structuring of PMTCP is a direct result of our research of and interactions with leading project management organizations nationwide. PMTCP builds on the lead established by the *PMBOK® Guide* for certification and accreditation (PMI, 2000). This type of approach of formal education and certification has been found to be the most widely accepted approach for professionalization (Zwerman, 2003; Turner, 2000). A dozen courses are expected to fill the curriculum across these four levels. About 80% of the material in these courses is expected to come from off-the-shelf training material that has previously been developed and has been used widely, with the remaining material specifically developed to address unique CIA requirements. An individual progressing through all courses at all levels will be engaged in approximately 240 hours of classroom training likely spread over a 3-5 year period. PMTCP is sized to handle a flow of 500 students per year. Entry by an employee into the curriculum will occur based on the completion of a diagnostic/equivalency test. This test will be used to assess the level of knowledge and skill possessed by an experienced project manager entering the certification program and determine the initial certification level. "Grandfathering," whereby practitioners are granted certification merely due to their seniority or experience level, will not be permitted. Progression through the certification levels will occur based on completion of post-course tests; these will likely be written but may employ other means.

The first certification level is intended to provide **overall familiarity** with the responsibilities of project managers and the common terminology associated with the field. A single course is intended to equip project managers with skills and knowledge to work as team members on large projects or as leaders of small low-risk projects. It is assumed that project managers at this certification level will receive significant supervision.

	Terms	Scope Mgmt	Time Mgmt	Cost Mgmt	Comm Mgmt	Risk Mgmt	Integ Mgmt	Req System	Arch Engineering	IV&V	HR Mgmt	Gen Mgmt	Bus Mgmt	Acq Mgmt
Level 4											●	●	●	
Level 3								●	●	●				
Level 2			●	●	●	●	●							◯
Level 1	○	○	○	○	○	○	○	○	○	○	○			○
PMBOK		√	√	√	√	√	√				√			√

Exhibit 3. PMTCP Structure

The second certification level is intended to provide a **depth of knowledge and skills** across the field of project management as it is practiced in the CIA. A series of about seven 1-3 day courses will focus on skills and knowledge in the areas of cost management, schedule management, risk management, communications management, corrective action, and the implementation of suitable life cycles. Certification at this level is intended to prepare project managers to perform all functions for low-risk to moderate-risk projects. This level of certification will likely contain much the same content as the Project Management Professional (PMP®) certification available from PMI®.

The third certification level is intended to focus on the **system engineering** aspects of project management. This will be accomplished in a series of about three 1-3 day courses that focus on skills and knowledge in the areas of requirements definition, system architecting, system integration, verification and validation. Certification at this level is intended to prepare project managers to perform all functions for moderate to high-risk projects.

At certification level four the intended focus is on producing **project management experts** capable of leading significant and high-risk projects. A single course is intended to equip project managers with the knowledge and skills in the areas of human resource management, advanced risk management, and areas of general management that are important to successful project management such as the CIA's budget process and the ability to negotiate.

The Upcoming Challenges

What Is The Status?

PMTCP began the requirements definition tasks during Summer 2002. The award of contracts to two contractor teams completed the acquisition tasks. One contractor team has responsibility for the development and delivery of the project management portions of PMTCP and a second contractor team has responsibility for the system engineering portions of PMTCP together with the testing and training integration. Requirements validation tasks are taking place during the Summer 2003 and are to be followed in the Fall 2003 by the development and Winter 2004 by the piloting of the courses and testing. Transition and implementation of PMTCP to the full CIA population is **scheduled for Spring 2004**. The PMTCP Program Office, which is located within the CIA's DST and organizationally linked to the CIA's University, manages all aspects of PMTCP.

What Is Next?

A key to future project successes at the CIA will be the move to a *PMBOK® Guide* aligned internal **knowledge-based project management certification** program. This full meaning and effect of this strategy, although endorsed by key stakeholders, will become increasingly apparent as PMTCP moves closer to reality. We will convert existing off-the-shelf commercial courseware into high quality training fully responsive to CIA's requirements, and we will do this in a manner satisfactory not only to the PMTCP Program Office but to the standards working group members as well. Co-opting a work force into accepting the use of certification tests and not the use of grandfathering will involve a serious communications effort and, perhaps the use of incentives. Overcoming the barriers of change resistance and CIA uniqueness will involve meaningful engagement with and participation by the affected. Orchestrating a smooth transition to the new *PMBOK® Guide* aligned knowledge-based certification approach will be guided heavily by the standards working group This working group will benefit from the fact that their voice is reflective of the overall population. Lastly, developing an acceptable approach to periodic re-certification remains an open subject.

> **A key to future project success at the CIA will be the move to a *PMBOK® Guide* aligned internal knowledge-based project management certification program.**
> *Michael O'Brochta*

Exhibit 4. Punch Line

PMTCP offers the CIA an opportunity to address its desire to do better at managing projects. Tasks within PMTCP are included to perform individual basic skill level trend analysis of the post-course test results. Tasks are also included to perform some project management maturity benchmarking so that insights can be gleaned about the organizational level effects. And metrics will be developed to monitor the PMTCP adoption rates for job placement and career advancement. The expectation is that these will **show a positive and lasting effect** on the performance of project management at the CIA.

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