

# Rethinking Project Management: Old Truths and New Insights

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Change, learning and leadership are prevailing concepts of the New Economy. This paper reviews old truths and explores new insights in project management within the following areas: a) the profession, b) success / performance measures, and c) competitive convergence vs. competitive advantages in relation to certification programs and management maturity models. Then we present some new insights on two areas of current research - developing a firm level core competence in project management and practices to promote project management to executives. The paper concludes by encouraging those in project management to learn from the old truths and be receptive to change and learning as they lead the way into the New Economy.

## Introduction

Change, learning and leadership are three key concepts of the New Economy (Fastcompany, 2000). With the exponential growth of project management, emerging trends within the discipline lend themselves to new insights. In the Old Economy, classical or traditional project management involves getting work done on time, on budget and within scope. In the New Economy, modern project management involves leading change in organizations and learning from the process (Hartman & Skulmoski, 1998; Morris & Jones, 1998). Old Economy thinking focused on project management as a tactical construct; New Economy thinking positions project management as a strategic construct. These terms enable us to examine our practices for gaps so that we can challenge axioms (self-evident truths) and theorems (logical conclusions) about success (Delisle, 2001). "First, while the subject of 'project management' is now comparatively mature, and recognized by thousands if not millions of managers as vitally important, it is in many respects still stuck in a 1960s time warp" (Morris, 2000, p. 2).

Although some of the literature links project management competence to project management effectiveness, standards describing project management capabilities and the link to organizational success are still lacking (Cooke-Davies, 2000). There is a significant gap in our understanding of how project management can be integral to strategic management by defining project management's role in achieving

organizational effectiveness and long term business success. Though project management is a relatively young discipline, it has been around long enough for an exploration of some old truths and new insights. This paper highlights perspectives necessary to build a New Economy viewpoint on project management. The main themes discussed in this paper are summarized as follows:

Old Truths about Project Management	New Insights about Project Management
Project Management: a set of tools and techniques used to achieve project efficiencies	Project Management: a holistic discipline used to achieve project/program/ organizational efficiency, effectiveness and innovation
Success: measured by efficiency performance metrics	Success: a multidimensional construct measured by efficiency, effectiveness and innovation performance metrics
Competitive Convergence: operational effectiveness achieved through professional certification and maturity models	Competitive Advantage: strategic positioning through innovative practices that go beyond maturity models e.g. core competence development
Practice project management: focus on the project details at an operational level and tactically	Sell project management: be an advocate and champion of project management by aligning its value to the firm's strategic business priorities

Table 1: Old Truths and New Insights about Project Management

## Trends and Definitions

A number of global trends directly and indirectly influence the growth of project management. One such trend is the increased competitiveness of the global market place and emphasis on efficiency. Other trends include the exponential growth of the computer industry, reliance on Information Technology to store and analyze information, the Internet market space, deregulation, mergers and acquisitions, environmental concerns and growing customer expectations. These trends and others contribute to the corporate adoption of the following types of practices in the quest to remain ahead of the status quo: quality improvement, business process reengineering, outsourcing, restructuring, downsizing and project-based work to name a few (Stewart, 1995; Wirth, 1992). Over the past 50 years, project management grew exponentially to meet the demands of global competition. In 1998 it was an \$850 (US) million industry and growing at 20 percent a year (Bounds, 1998). Membership in the Project Management Institute® (PMI), one of several standards associations worldwide, is over 78,000 as of May 2001 (PMBOK, 2001).

Most early descriptions and definitions of project management were mechanistic and referred to the constructs of time, cost and scope - otherwise known as the iron or priority triangle (Archibald, 2000; Atkinson, 1999; Meredith & Mantel, 1995; Wallace & Halverson, 1992; Wirth, 1992) (Skulmoski & Hartman, 2000). Traditionally, project management referred to the discipline, methodologies, tools and techniques to manage projects and projects were "temporary endeavors undertaken to create a unique product or service" (PMBOK, 2001, p. 167).

Moving towards a New Economy perspective, a more holistic description refers to addressing stakeholder needs and expectations by balancing the demands between a) time, cost and quality, b) different stakeholders, and c) identified requirements and unidentified requirements (expectations) (PMBOK, 2001). The literature also describes project management as involving a blend of "hard" and "soft" processes, tools and techniques (Kress, 1994). The literature sometimes describes project management as involving cultural, structural, practical and personal aspects (Cooke-Davies, 1990). A New Economy

definition of project management that captures the essence of the discipline states that project management is "the art and science of converting vision into reality" (Turner, as cited in Atkinson, 1999 p. 338). Project Management researchers and practitioners are only now beginning to explore the implications this shift in perspective has on the discipline (Thomas & Tjader, 2000). Along with the evolving understanding that project management is a complex undertaking, there is growing awareness around its professionalization.

### *The Profession of Project Management*

From the Old Economy perspective, project management is an applied discipline with value at the tactical and operational level. It is usually considered a subset or extension of a person's technical domain. In the period following World War II, project management evolved as a subset of technical knowledge areas such as defense, aerospace and civil engineering (Morris et al., 1998). It is beginning to be more widely acclaimed as a "profession" in its own right (Verzuh, 1999). As a young vocation not yet recognized as an occupation by many census bureaus, project managers require a balance of skills in the business, technical and project management domains and are increasingly viewed as industry independent professionals (Verzuh, 1999). Clearly, practitioners and major associations view project management as a "profession" (Zwerman & Thomas, 2001). However, project management only became an "academic" discipline in the mid 1980s (Morris et al., 1998). What is less clear is what that term means to its proponents and to the discipline as a whole.

For over 75 years, the discipline of sociology has studied what distinguishes a profession from an occupation. The list of attributes of a profession typically includes a body of knowledge, a culture sustained by a professional association, code of ethics, recognized authority and community sanction (Greenwood, 1966; Millerson, 1964). Project management is evolving towards professional status on some of the criteria as noted by the following trends (Zwerman et al., 2001):

- Bodies of knowledge exist for the profession e.g. Project Management Body of Knowledge Guide® and some include codes of ethics;

- The culture is sustained through professional development initiatives, conference and seminar venues as well as local chapter activities;
- Professional certification designations support recognized authority; and,
- Universities offer degrees at the graduate and doctoral level in project management (AACE, 2000; AIPM, 2000; APM, 2001; CCTA, 2000; CIPPM, 2001; ESI-International, 2001; Hartman et al., 1998; IPMA, 2000; PMI, 2001).

Based on the traditional definition of a profession, project management is missing an esoteric body of knowledge or theories that are unique to the practice. It is also missing community sanction or government recognition that the practice has enough impact on the public good to be reserved for "professionals" as is the case in law, medicine, engineering and accounting. The PMI recently recognized the need to examine the lack of project management theoretical roots as evidenced by its support for a research study on the topic in May 2001 (PMI, 2001). Many association bodies including PMI and academic researchers (such as Morris and Thomas) are endeavoring to develop theories of project management which will ultimately distinguish it from general management and other process skills and applications. The trickier question will be accomplishing the community sanction necessary to make it truly a profession in the traditional sense of the term. The other issue to consider is whether or not project management is mature enough as an occupation for practitioners to be measured against performance standards and whether an acceptable level of accountability is in place to regulate the discipline. Are the professional associations and practitioners in agreement on what this entails? Are they ready for this challenge? The answer to whether project management is a profession or not is likely to be debated for some time.

Adding to this debate is that the New Economy global playing field is increasingly complex. Project managers work in diverse organizational structures, manage or work with multiple teams and have many operational and project responsibilities. They deal with

changing customer demands, multiple stakeholders, senior management, teams, staff, and project responsibilities (Kerzner, 2001). The role involves considerable leadership and flexibility in a world of uncertainty. In addition to their technical responsibilities, they are increasingly aware of societal project issues (Hartman, 2000). These trends both drive towards professionalization (through the increasing potential impact on society of project outcomes and related need for community sanction and policing) and away from it (through increasing project complexity that makes it more difficult for project managers to accept responsibility for outcomes).

### Performance Metrics of Success

#### *Defining the Elusive Concept of Success*

In the Old Economy, project and project management performance metrics as indicators of success are of particular importance in determining progress. Whether time to market, reduced cycle time or quality products are the goals or more broadly, returns on investment or market share, firms compete and seek the advantages offered by strategies and techniques such as project management. Historically, success was efficiency focused, measured in terms of the iron triangle of time, cost and scope (quality) and emphasized the implementation phase of the project lifecycle (Pinto & Slevin, 1987).

Newer insights are slow in being adopted. They relate to understanding that success is not a one-time measure, it can be subjective and it is a multidimensional construct.

Success may refer to indicators (aspects that are paid attention to) or outcomes (aspects that are judged) (Delisle, 2001). Success metrics also changes over the project lifecycle and can extend into the product lifecycle (Atkinson, 1999; Baccarini, 1999; Might & Fischer, 1985; Munns & Bjeirmi, 1996; Shenhar, Levy, & Dvir, 1997). Success involves both objective performance metrics (efficiency measures e.g. return on investment) and subjective metrics (effectiveness and innovation measures) (EIU, 1999). Some examples of effectiveness metrics involve the customer perspective, improved internal processes, learning and competencies (Germain, 2000; Sveiby, 1997). Another area of contrast between old truths and new insights is related to success and involves the constructs of competitive convergence and competitive advantage.

#### *Competitive Convergence vs. Competitive Advantage*

In the Old Economy, the emphasis is on efficiency whereas the New Economy perspective includes effectiveness and innovation metrics in a balanced manner akin to how the iron triangle warrants negotiations on time, cost and scope. Effectiveness values emphasize customer service, collaboration, organizational effectiveness and knowledge sharing. Innovation values involve market expansion and advantage creation strategies (EIU, 1999). Being more successful than the competition is key towards achieving a competitive advantage. However, as explained by Porter's productivity frontier diagram that fol-

lows, companies that compete on project management competences but rarely on a core competence in the discipline achieve operational advantages instead of competitive advantages. Firms are constantly pressured by both internal and external factors to increase productivity, improve performance and improve quality. Performance is also indicative of success and at the firm level, being successful means survival in the competitive marketplace, staying ahead of the pack and increasing profits (Cleland, 1991; Stewart, 1995; Wirth, 1992). To outperform rivals, firms must deliver greater or a more full range of value for customers or create comparable value at lower costs (Porter, 1996).

Operational effectiveness means doing similar activities better than rivals. Operational effectiveness is insufficient in achieving a competitive advantage though, because after a while, firms look alike, do the same things and this leads to diminishing returns as they reach competitive convergence (Porter, 1996). Porter depicts this as follows.

On the productivity frontier (based on non-price buyer value delivered and relative cost position), the frontier shifts constantly due to the diffusion of innovative practices. Common strategies such as project management, project management maturity models, quality improvement, empowerment and outsourcing can be used to keep up with the productivity frontier. However the frontier continues to shift as rivals imitate each other and generic solutions diffuse into the marketplace. Operational effectiveness is a necessary part of management but it is not the same as

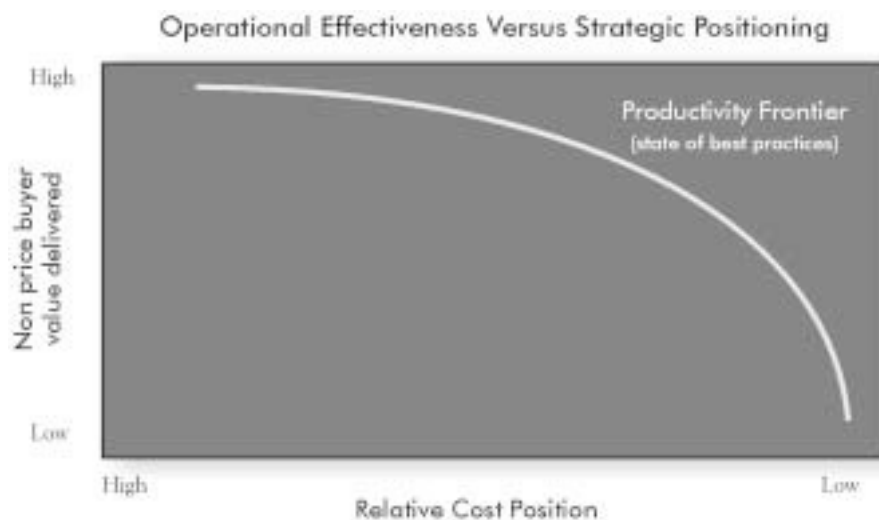


Figure 1: Operational Effectiveness Versus Strategic Positioning

innovation. Operational effectiveness shifts the productivity frontier outward and continues to raise the standard of expected firm performance. However, it does not lead to a relative improvement position for firms. In contrast, strategic positioning refers to doing different activities from rivals or similar activities differently - in other words, being innovative and creative. Innovation involves revolution, remodeling or introducing newness (EIU, 1999). As explained in next section, this is an area where project management has not moved forward rapidly in the New Economy. Project management continues to support incremental improvements through Old Economy practices in relation to certification and maturity models.

### **Individual Certification and Project Management Maturity Models**

Certification programs and project management maturity models both measure competence. Certification measures competence at the individual level and the project management maturity models measure competence at the project, program or firm level.

#### *Individual Certification*

Worldwide, project management associations such as PMI, the Association of Project Management (APM) and the Australian Institute of Project Management (AIPM) offer professional designations or certifications. These are based on combinations of questions that test individual rote knowledge and resumes and project summaries that assess reported experience. Most exams do not specifically test personal competencies or technical level detail (CCTA, 2000). Only the AIPM provides detailed evidence guidelines to measure capabilities. Examples of extant certification programs include: the PMI's Project Management Professional designation; the IPMA's certification; the APM certification; and, the AIPM certification (AIPM, 2000; CCTA, 2000; IPMA, 2000; PMI, 2001). The old truth is that project management is evolving as a discipline to warrant a number of certification programs as a way of establishing professional credibility. However, global standards are not in place and certifications remain continent specific for the most part.

The new insight is that existing certification programs will be challenged

to raise the bar and assess member competences more rigorously by developing tests that go beyond rote memorization. Otherwise, project management associations run the risk of diluting the value of certification and this will detract from the establishment of the profession. Two other pressures to move from the Old Economy to New Economy relate to the growing debate on the professionalization of project management and industry demands for better-qualified personnel in light of prevailing project failures (Standish, 1996). In addition, another frontier where incremental progress is being made relates to project management maturity models.

#### *Project Management Maturity Models*

Along with measuring individual capabilities, project management has focused on maturity models to assess project standards and practices as well as firm support for the discipline. As of 2001, there were approximately eight extant maturity models at various stages of development and use. Many are based on the Software Engineering Institute's five stage capability maturity model where the levels move incrementally from initial, repeatable, defined, quantitative to optimized performance (SEI, 2001). Most models are also based on the project management bodies of knowledge supported by the prevailing association. The models involve step-wise quality improvements on processes and practices.

Some of the maturity models involve commercially available software and others are conceptual or involve guidelines and templates. The range of extant project management maturity models includes: Organizational Project Management Maturity Model (OPM3); Projects in Controlled Environments Methodology (PRINCE2); Project Management Assessment (PMA 2000); Project Management Maturity Model; Project Framework; EFQM Excellence; IBM Progress Maturity Model; SMART Project Management; Project Management Maturity Model (AACE, 2000; AIPM, 2000; CCTA, 2000; Hartman et al., 1998; IPMA, 2000; PRINCE2, 2000; Schlichter, 1999). Only one model is described as "open" in contrast to the others that are linear and incremental - the Leshem-Nituv Engineers (Lubianiker & Schwartz, 2001).

The models are useful in advancing project management practices and standardizing processes. They combine inputs, processes and outputs as well as knowledge, experience and competencies. They investigate the premise that success could be improved by addressing project competence and maturity (Skulmoski, 2001). The models improve our understanding of practitioner competence, the working environment and the business purposes (Hartman et al., 1998). The maturity models also identify project or organizational strengths and weaknesses as well as provide benchmarking information.

However, few have been empirically tested and most are based on anecdotal material, case studies or espoused best practices (Skulmoski, 2001). Project management maturity models tend to be hierarchical and the exact points of transition between the levels are not always clear. Furthermore, they often blend individual project management maturity with program or organizational maturity. From a New Economy perspective, considering the shift in skills and roles project managers play in new types of organizations and teams in the global economy (i.e. virtual teams), maturity models need re-thinking (Delisle, 2001). Just as no one certification standard exists in the New Economy, neither does a generally accepted model for project management maturity (Schlichter, 2000). This area is relatively young and lacks empirical support for determining which competencies contribute most to project success (Skulmoski, 2001). Although the models have been useful in improving project related practices, they have also resulted in competitive convergence wherein companies are "doing much of the same", and few companies are strategically positioned as a result of achieving a high project management maturity level (Kujala & Artto, 2000).

The old truths on project management maturity models are that hierarchical, closed models can assess project management maturity and support project management as an operational construct as evidenced by the focus on the business unit or project level. The models typically lack a holistic, strategic dimension (Jugdev, 2001). As a consequence, business improvements appear incremental rather than strategic.



## *Project Management as a Core Competence*

The old truth is that project management is an operational construct. The new insight is that project management has a role at the strategic planning level of the organization. There is an economics and strategy based construct called a core competence that has yet to be explored in terms of what this means to project management. Achieving a high project management maturity score is not enough as it simply contributes to competitive convergence. However, companies with high levels of project management maturity are better positioned to achieve a competitive business advantage than their rivals, especially if they integrate the practice with other strategic initiatives.

***"Current research and project management applications often have a limited focus on applications at the operative level. As a result, they seldom provide links between operative and strategic management in a project-oriented organization... Projects have the potential to change the purpose and the future of the organization, and in that respect, they are part of the strategy creation process" (Kujala et al., 2000, p. 47-48).***

As presented thus far, the incremental progress in such areas as measuring success, performance, individual and project competence lends itself to Old Economy thinking and supports a theme of competitive convergence. How can firms then move forward and strive for New Economy thinking and practice? One approach would be to develop a core competence in project management. A core competency is what a firm does (e.g. functional skills and cultural habits, attitudes and beliefs) in contrast to tangible assets that a firm has (Nelson, 1994). This area has not been studied in project management and it stems from the Resource-Based Perspective of the firm. This perspective, rooted in economic theory, has produced the strategic management literature supporting the premise that systematic differences exist across firms that are relatively stable, and that intra-firm resources are

unique and contribute to a firm's competitive advantage (Foss, 1997; Schulze, 1994).

The Resource-Based perspective describes core competences in terms of tangible and intangible resources. Core competences are rooted in the intra-firm heterogeneous resources involving human resource practices, asset specialization, learning, culture, team-embodied skills and routines, hard to manage tasks/processes, alliances for learning and trust (Schulze, 1994). Organizational knowledge and collective practice are dimensions of the intangible assets a firm can capitalize on to achieve a dynamic capability or innovative competitive advantage (Teece, Pisano, & Shuen, 1997). Resources must be synergistic, unique, inimitable and or unexpected otherwise efficient markets will ensure that abnormal returns from any resource will be competed away (Barney, 1986). Overall, a core competence is "a messy accumulation of learning... (and) comprises both tacit and explicit knowledge" (Hamel, 1994, p 12). In addition, core competencies are dynamic, as they change over time (Bogner & Thomas, 1994; Hall, 1994; Turner & Crawford, 1994). Thus, their definition and measurement appear difficult.

Research should consider project management as more than a tactical construct consisting of tools and techniques, and introduce the softer, cultural and belief driven nature of project management. This may make it easier to see a holistic application of project management at the organizational level and encourage its application to generate a strategic advantage. One major issue may relate to addressing change at the cultural level of the firm. Looked at this way, we can make an argument that a project management culture is:

- Inimitable - while there is abundant reporting of best practices, organizations find it extremely difficult to transplant these practices across organizations;
- Synergistic - higher levels of project management application are found in organizations with base level cultures supportive of a high achievement, high accountability process; and,
- Unique - organizations that have achieved excellence in project management tend to have their own unique approach to

applying it internally. A vanilla, "mature" application of standard methodologies does not produce excellence.

DeFillippi and Arthur (1998) suggest that project management contributes to developing stable strategic resources in the following ways:

- Although projects are temporal in nature, involve cross-functional teams and essentially rent human capital, they can accumulate core competencies;
- Although projects do not involve a stable workforce, they can convey tacit knowledge and knowledge transfer; and,
- Although projects involve very mobile staff, they can create competitive advantage through possessing inimitable resources (DeFillippi & Arthur, 1998).

The old truths confirm that when firms apply project management basics as measured through the project management maturity models, most achieve competitive convergence. As such, operational effectiveness is a given. However, Porter (1996) suggests operational effectiveness "is a required practice for firm survival but it is not a strategy" (p. 78). Project management maturity models tend to support an operational approach that supports incremental improvements instead of strategic ones. Stepwise improvements are the norm for competitive convergence but not for a competitive advantage (EIU, 1999; Hartman & Skulmoski, 1999).

The new insights indicate that little research has been conducted on project management core competencies. To date, certification approaches have not addressed this and the maturity models emphasize project focused incremental improvements but not tacit knowledge or dimensions of a core competence that link it to the strategic management level of the firm. Firms investing in project management stand to gain a competitive advantage in the market place by capitalizing on their project management abilities and turning them into core competencies through the alignment of operations management with strategic management. Some firms could achieve strategic project management wherein the following constructs are supported:

1. Project management maturity levels: These firms have a founda-

tional project management maturity level;

2. Success Factors: Senior managers embrace the concepts and provide leadership based on success criteria and indicators that are defined and measured up front (Belassi & Tukel, 1996);
3. Strategic Management: Executive practices are aligned with operations management. Operational management support alone is insufficient to develop a core competence in project management, as it does not result in a program of projects that are aligned among themselves or with the strategic directions. This might lead to competitive convergence instead of a competitive advantage;
4. Developing and Protecting: Project management core competences are supported and protected by senior management in innovative ways as warranted by the unique resource bundles. Firms that fail to do so end up in competitive convergence because rivals can easily and readily replicate their practices.
  - 4.1. The project management program is aligned with quality management and knowledge management practices as this lends itself to explicit and tacit knowledge sharing and practice improvements. An effort to develop a project management core competence in isolation of these practices lends itself to fractured knowledge warehousing and limited sharing. This constrains the firm's abilities to holistically address quality dimensions of project management;
5. Valuation: Project management is valued in both tangible and intangible ways and viewed more as a rent-generating asset than an overhead or cost. Firms that view project management as an expense, are less likely to view it as a strategic asset or make the investment in it;
6. Organizational Learning: Double loop learning (learn-do-assess-learn) and the ability to address the knowing-doing gap is a joint requirement for a core competence

in project management (Pfeffer & Sutton, 1999) (Thomas, Delisle, Jugdev, & Buckle, 2001b); and,

7. Dynamicism: Innovation and adaptability are the norm over rigidity and control. There is a tolerance for paradoxical situations and the firm is both effective and ineffective at the same time in different aspects of function (Helleloid & Simonin, 1994; Thomas, 1998) (Anderson, 2000; Thomas et al., 2000).

The old truth is that a high project management maturity level means excellence had been achieved. The new insight is that there are practices to be achieved beyond a linear maturity level focused on the project. Such practices relate are organizational in nature, involve corporate directions and core competences. This is a New Economy theory the authors are currently researching so this discussion is a first attempt to build a case for theorists and practitioners alike to view project management as a potential strategic resource and core competence (Jugdev, 2001). Furthermore, developing and sustaining core competences cannot occur without the commitment and leadership from executives or the investment in the learning process. "Without specific competences related to reshaping the firms future competences, corporate survival is no more than a chance event" (Turner et al., 1994, p. 262).

### Selling Project Management

Last but not least, the Old Economy supports the premise that it is enough to practice project management at the operational level and promote it in tactical ways by emphasizing tools and techniques. The Old Economy perspective supports practicing project management reactively, in response to crises, instead of proactively. A recent international research study (n= 1,867) confirms that this does not contribute to senior management appreciating the greater value possible with project management (Thomas, Delisle, Jugdev, & Buckle, 2001a). Instead it results in executives further viewing project management as a tactical construct lending itself to mid-level attention instead of senior level attention:

- 71.1% agree that the selling issue is an important one for their organizations;

- 45% somewhat or strongly agree (12.4%) that selling project management is difficult to do within their organizations;
- 58.6% somewhat agree that project management is used in times of crises and 16.7% strongly agree;
- The concept of the Accidental Project Manager is supported. 60.2 % of respondents agree that the title project manager is usually not accompanied by increased pay or recognition while 57.8% agree that little or no project management training is given to those who take on the role of project manager; and,
- 21.8 % of respondents strongly agree with the statement that project management is a valued discipline in organizations, ranking with accounting, finance and engineering and 26.8% somewhat agree. At the same time 11.8% strongly disagree and 26.1% somewhat disagree.

Insights of the New Economy are that firms support practices of advocating and championing project management by aligning the value of the discipline to the firm's strategic priorities. In addition, project managers understand the organization's business priorities and speak the language of executives as they extol the virtues of the discipline; project managers and senior managers strive to develop an environment conducive to sustaining a core competence (Thomas et al., 2001b).

### Summary

To summarize, the paper has addressed old truths and new insights in the following areas:

- a) Definitions on project management in either narrow terms or holistic ways;
- b) The debate on describing project management as a discipline or profession;
- c) Success and performance measures that are now multidimensional and recognize joint connection at the operational and strategic level;
- d) Aspects where project management has demonstrated competitive convergence instead of

- competitive advantages e.g. certification, maturity models;
- e) Competences vs. core competences; and,
  - f) Practicing project management vs. selling project management in proactive ways and demonstrating its strategic value.

Earlier, we identified change, learning and leadership as three driving concepts of the New Economy. Clearly, those aware of the old truths and their limitations and willing to take the risks of venturing into the New Economy stand increased chances to succeed. Furthermore, the area of core competences in project management will bear watching for the next few years. In a world of changing organizational forms where projects are more the norm than bureaucracies, developing a core competence in project management may be the key to survival and growth for many companies. Developing the "profession" of project management may be the route to further success or a few dead ends along the journey.

We encourage you to learn from the old truths and be receptive to change and learning as you lead the way into the New Economy.

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