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Background

The jury is still out on whether project management is an art rather than a science. One thing is still true, however, a project can have in place all the necessary disciplines for good project execution - a meaningful statement of work, detail schedules, and change management, for example - and still end in failure.

Applying the tools, techniques, and knowledge of project management does not guarantee success. It only affects the likelihood of success, depending on the environment and the degree that the basic functions of project management are applied.

Many of the current theories take on a psychological rather than socio-logical approach regarding the influence of individuals on just about any endeavor. Many of these theories are based upon the Myers-Briggs Type Indicator, which identifies 16 different patterns of behavior or temperament action, and the work of David Merrill and Roger Reid, which identifies four basic social styles bases upon psychological variants [1] [2].

Only recently has the influence of the project manager's personality on project performance received recognition. The Project Manager Competency Model of Keane, Inc. attempts to analyze personality according to four clusters: problem-solving, managerial identity, achievement, and influence. Combined,

these four clusters consist of 17 core competencies [3].

Such attempts at analyzing the influence of the project manager's personality do little to account for the "teambuilding" perspective of project managers and how they respond to that environment via the application of project management disciplines.

A key variant in managing a project successfully is the project manager's style or approach toward a teambuilding situation. How project managers perceive their environment, respond to events, process information, and interact with others influence the outcome of projects.

"I Opt"

"I Opt" is a tool to facilitate the teambuilding process. It focuses on how people process information, decide on a course of action, and approach matters in a work situation that involves teambuilding [4]. [Portions of the "I Opt" explanations are derived from work by Gary Salton, Ph.D.]

The tool is not a psychological test that measures invariant attributes of an individual. Rather, it is a socio-logical tool emphasizing complementary skills and compatibility. It does that by identifying individual preferences in how a person approaches relevant work situations. It provides

insights for project managers to develop team structures and processes to improve project management.

Some specific ways project managers can use "I Opt" to improve project management include:

- Developing an appreciation and respect of other people's work-related behavioral attributes
- Suggesting how team members effectively allocate responsibilities in various situations or handle particular problems
- Assembling team members with specific capabilities.

"I Opt" identifies four primary styles in how a person approaches relevant work situations. Each style reflects the person's:

- Goal preferences and needs
- Task direction from which he or she might benefit.
- Supervision and organization preferences
- Orientation towards detail
- Attitude towards change.

To determine the style of individuals, people complete a questionnaire containing 24 items. In the following example, the responds select the single best phrase that describes them:

1. I like my own ideas best.
2. It's easy for me to stay on task.
3. I'm very careful.
4. I sometimes do things before I think them through.

Upon completing the survey questionnaire, data is compiled and analyzed. An extensive report is printed reflecting the individual's approach to any teambuilding situation.

The Four Primary Styles

The four primary styles are: Reactive Stimulator (RS), Logical Processor (LP), Hypothetical Analyzer (HA), Relational Innovator (RI).

Reactive Stimulator. Pure RS individuals are action-oriented. They react immediately to situations. They are highly focused on the immediate task and typically seek quick results. Now! Is their usual target.

RS individuals have a tremendous capacity to generate and complete work. They typically enjoy change, variety, and prosper under a fast-paced, pressured environment. They are fast starters and produce strong initial results. However, a strong RS may be inattentive to detail while aggressively pursuing the immediate result. Also, a spontaneous, high-energy RS individual may become

bored and frustrated with long-term projects that require methodical, concerted actions.

Logical Processor. LP individuals are the "bulldog" of the four "I Opt" types. They are logical, methodical, and not easily deterred. They are naturally detail-oriented and work best in situations involving assignments that are clear, precise, and have well-defined expectations. In effect, they like assignments reflecting their favored work strategy.

LP individuals are tireless workers. They stay focused on an objective until its achievement; they are tidy and accomplish a lot. They are highly organized and structures readily, if perceived as logical. They are loyal to people and firms who treat them consistently and logically. However, LP individuals may resist change and are generally skeptical in their

approach to work. LP individuals are not a "natural" in setting longer-range goals and may need encouragement to participate in the process.

Hypothetical Analyzer. HA individuals are problem-solvers. They analyze problems carefully and ponder them from multiple viewpoints. They enjoy complexity and the challenge of solving a difficult problem or perfecting a program or process, or both. Their basic strategy is to decompose problems into components, and develop solutions. Being cautious, they usually have contingency plans ready. They mainly focus on planning in a position and may delegate actual execution.

HA individuals are great analyzers, planners, and problem-solvers. They are natural teachers, leveraging their tendency to decompose problems and processes into more easily understood components. They see the "big picture" and maintain perspective. However, analysis and planning takes time and HA individuals appear slow in pace. They focus on the intellectual elements of a task, which diverts them from performing final actions to conclude a project.

Relational Innovator. RI individuals typically deal in ideas and see the "big picture". They quickly see relationships between divergent ideas and situations. RI individuals are innovative and like to explore alternative ways of doing tasks. They can quickly integrate concepts, ideas, and innovations into coherent theories and systems.

Strong RI individuals are usually great "idea" people. They often generate more ideas in a day than other people do in a month. However, they can divert themselves into a stream of redefinition's, continuously seeing new relationships and alternatives.

Table 1. Four Basic Styles

Characteristics	Reactive Stimulator	Logical Processor	Hypothetical Analyzer	Relational Innovator
Goals	Self-selects goals: Prefers Immediate Ones	Likes clear and specific goals; focuses on shorter range objectives	Likes to thoroughly understand purpose of assigned goals	Likes and needs flexible goals
Direction	Resist rules and specific direction	Likes clear specific directions	Likes to figure out how to accomplish tasks	Prefers creating own ways to complete tasks
Supervision	Prefers "easy-going" supervision	Likes consistency, encouragement and recognition; not bothered by close supervision	Needs to understand the need to pursue a goal	Prefers minimal supervision; enjoys exploring options
Organization	Prefers organization and structure to keep their task to completions	Prefers highly organized, well-defined, and neat organization	Prefers discipline and structure	Creates unique personal systems
Details	Prefers quick and easier ways	Thrives on detail	Is highly attentive to planning detail, becoming inattentive later to procedures	If committed, very attentive to details; otherwise, may be inattentive
Change	Readily accepts change	Accepts logical, methodical change; uncomfortable in fluid, spontaneous situations	Accommodates change but may be frustrated by fluid situations	Responds well to changing situations; is highly adaptive and flexible
Appreciation	Likes comments about adaptability	Has difficult expressing or receiving appreciation	Likes to hear about own ideas; does not like to hear about routine work well done	Does not welcome or enjoy personal comments; appreciates focus on ideas and contributions
Progress	Quickly progresses toward an objective	Progresses linearly and steadily towards an objective	Progresses slowly in planning stage	Progresses in a halting pattern; gets sidetracked

The differences among the four styles manifest themselves in four areas: information processing preferences, planning and actions, change versus stability, and style interactions.

Information Processing

Preferences. RI individuals focus on a mission or at a global problem level. They consider a wide variety of information but not in great detail. HA individuals focus on the project or more local problem level. They may consider a variety of related information. They are very detailed in the analysis and planning phases but not in the execution phase of a project. LP individuals focus on immediate tasks or multiple duties to achieve an objective. They focus on detailed information in planning and execution phases of a project. RS individuals concentrate on immediate task levels. They are action-oriented and do not concern themselves with detail or many alternatives.

Planning and Action. The RS and LP individuals share an action orientation, appreciate the concrete rather than the theoretical, and generally focus on the immediate. Their strategy is to optimize within the parameters of a situation. Their information needs are low, the complexity of processing is minimized and speed of response is high. This kind of processing pattern is ideal in crisis situations where the speed of response is more valuable than the optimality of outcome.

The RI and HA individuals are perfectionists. They appreciate the theoretical, are more comfortable in abstract possibilities, and more easily accommodate generalities rather than specifics. Their strategy is to focus on how things could be rather than on the constraints of a situation.

Change Versus Stability. RI and RS individuals are spontaneous and, consequently, they consider a high volume of possibilities. Also, they almost randomly accept information, augmenting the possibilities they will consider. Finally, they are open to suggestion and challenge, readily contributing to and accepting modifications to their ideas. HA and LP individuals are structured in their approaches to work. They seek and integrate information related to their subject. They apply logic to the information within their structured, methodical approach. HA individuals are protective while RI individuals are expressive of their ideas.

Style Interactions. We are usually compatible with people whose style is like our own. The RS and LP individuals are action-oriented and appreciate the concrete rather than the abstract. Their perspectives serve as a foundation for an effective relationship. Similarly, RS and RI individuals are creative and receptive to change. Their orientations help build effective working relationships among styles. The challenge is building relationships that between polar opposites. RI individual's planning tendencies, future orientation, unstructured processes, preference for change, and a more spontaneous style may not easily integrate with the LP persons' structured, methodical, conservative, and action-oriented preferences. This style interaction provides a weak basis for shared perspective.

Nevertheless, differences between styles can provide the basis for effective teambuilding. Their different styles can complement one another, providing a balanced variety of perspectives. To ensure that divergent style does not hinder teambuilding, introducing a third style can prove beneficial by serving as a conduit for

shared values. For example, a team composed of Relational Innovators and Logical Processors might benefit from the introduction of Reactive Stimulators and Hypothetical Analyzers.

"I Opt" and the Project Management Orientation Criteria

The use of "I Opt" has great utility in determining the application of project management functions for a given project. The reason is that preferences for planning, organizing, controlling, and leading a project reflect the project manager's style or approach toward a teambuilding situations.

Before discussing the relationship between "I Opt" and project management, however, it's important to define the latter.

Project management consists of four basic functions: planning, organizing, controlling, and leading. Each function involves applying certain tools, techniques, and knowledge on projects.

Planning. This function entails deciding in advance what a project will achieve, determining the steps for its execution, assigning people and other resources to those steps, and identifying when the steps must start and stop. Activities subsumed under planning are defining goals, assessing risks, estimation, budgeting, allocating resources, defining tasks, and building schedules.

Organizing. This function involves orchestrating resources cost effectively to execute project plans. Activities subsumed under organizing are setting up effective spans of control, assigning responsibilities, establishing communications, teambuilding, and development documentation.

Controlling. This function entails assessing how well the project uses its plans and organization to achieve goals and objectives. Activities subsumed under controlling include setting up change control, solving problems, tracking, monitoring, performing contingency planning, and replanning.

Leading. This function involves motivating people to perform satisfactorily on the job. Activities subsumed under leading are delegation, communication, and motivating.

Of course, all four functions (planning, organizing, controlling, and leading) do not occur independently. Each overlaps with the other to contribute to project completion. Leading occurs throughout planning, organizing, and controlling of a project; planning during organizing and controlling; and organizing during planning and controlling. The result is an interdependency, or integration, of all four functions.

At the same time, applying these four functions occurs at various levels. For example, extensive planning can occur while organizing does, too, on a much more limited extent. Or extensive planning can occur while controlling does, too, on a more limited extent.

Applying the activities subsumed under the four project management functions occurs according to orientation or proclivity, reflected in the project management orientation criteria, and manifests itself through the teambuilding style of the project manager. Below is a listing of the orientations attributed to each function of project management:

Planning.

1. Concentrating on path or goal. Project managers emphasize the approach to reaching the goal, or the ultimate goal of the project. Examples are project managers perfecting how to reach the goal first, or perfecting the goal first and then choosing the path.
2. Taking a linear or nonlinear approach. Project managers identify and execute only one way to attain the project goal, or they see multiple ways to reach it. Examples are systems developers using the waterfall, or spiral, life cycle, or choosing from several new development life cycles or a combination of them.
3. Developing broad or in-depth plans. Project managers develop "high-level" plans containing minimal detail, or "low-level" plans with great detail. Examples are developing a bar chart based on a high-level breakdown structure, or a network diagram based upon a WBS of great detail.
4. Being product- or process driven. Project managers focus on building a quality product regardless of process, or on perfecting the process as a way building a quality product. Examples are eliminating waste (e.g., conducting work flow analysis) in processes before developing a product, or building regardless of inefficient process.
5. Building formal or informal plans. Project managers either treat plans officially or casually. Examples are documenting the plans according to established style and getting buy-off, or "scratching out" the plans and obtaining general approval.

Organizing.

6. Establishing narrow or broad spans of control. Project managers either organize their team with a tight reporting structure with layers of management or a wide reporting structure with minimal layers. An example is a project would be ten people. A narrow span of control would be two leads with one person per five people; a wide span of control would be zero or one lead for the entire team.
7. Employing formal or informal communications. Project managers disseminate information and acquire feedback using standard communications tools, or they rely on more personal approaches. Examples are holding weekly status review meetings and publishing a project newsletter, or holding ad hoc one-on-one sessions to disseminate information and acquire feedback.
8. Relying on individual performers or teamwork. Project managers identify and rely upon star performers, or they see the team as consistent of constituent parts that collaborate with one another to deliver a product. Examples are relying on one or two individuals to perform 80 percent of the work, or assigning work equitably so everyone provides a meaningful contribution.
9. Developing minimum or extensive documentation. Project managers establish weak or strong mechanisms for capturing, disseminating, strong mechanisms for capturing, disseminating, and storing data. Examples are a formal documentation structure that includes building and mentation

structure that includes building and maintaining project manuals and project history files, or just tracking weekly project progress using a project management software package.

Controlling.

10. Resisting or accepting change control. Project managers view change as threatening to a project or something to manage. Examples are disregarding all changes to a schedule and proceeding ahead, or establishing a change management function to evaluate changes to a schedule.
11. Treating symptoms or sources of problems. Project managers either take a "Band-Aid" or short-term approach to deal with problems, or they invest the time, resources, and effort to address causes. Examples are using overtime to address frequent peak load periods, or investing the time and effort in building a realistic schedule that leads to more efficient and effective use of resources in the long run.
12. Taking formal or informal measurement. Project managers invest the time, effort, and resources to systematically collect, analyze, and evaluate data on project performance, or they take a casual approach that uses minimal tracking and monitoring. Examples are establishing detailed metrics on cost, schedule, and quality performance, or simply holding one-on-one sessions to gauge the status of certain tasks.
13. Doing or managing. Project managers do many of the tasks that other team members perform, or project managers manage others doing the work. Examples are managing the administrative functions while team members build elements of the product, or create one of the elements themselves.
14. Taking a task- or people-orientation. Project managers stress doing the work without placing any importance on motivational issues, or they emphasize behavioral issues over completing tasks efficiently and effectively. Examples are estimating time to complete tasks without the input from the people doing the work, or obtaining the feedback from everyone on how to complete tasks.
15. Using formal or informal power. Project managers manage from a structured command and authority perspective or from a relational, interpersonal vantage point. Examples are publishing organization charts of great detail and establishing a highly organized project office, or using ad hoc meetings and other less official means to manage.
16. Using negative or positive incentives. Project managers employ Theory X (e.g., negative) incentives to ensure completion of tasks or Theory Y (e.g., positive) incentives. Examples are threatening termination of project participation for failure to perform, or providing tasks that increase challenge, responsibility, and a sense of achievement.

Leading.

Table 2. Matrix Showing Teambuilding Style and Relationship to Project Management Orientation Criteria

Orientation	Reactive Stimulator	Logical Processor	Hypothetical Analyzer	Relational Innovator
Planning				
1. Concentrating on path or goal	Path	Path	Goal	Goal
2. Taking a linear or Non-linear approach	Linear	Linear	Nonlinear	Nonlinear
3. Developing broad or in-depth plans	Broad	In-depth	In-depth	Broad
4. Being product or process-driven	Process-driven	Process-driven	Product-driven	Product-driven
5. Building formal or informal plans	Informal	Formal	Formal	Informal
Organizing				
6. Establishing narrow or broad spans of control	Broad	Narrow	Narrow	Broad
7. Employing formal or informal communications	Informal	Formal	Formal	Informal
8. Relying on individual performers or teamwork	Individual	Individual	Teamwork	Teamwork
9. Developing minimum or extensive documentation	Minimum	Extensive	Extensive	Minimum
Controlling				
10. Resisting or accepting change control	Accept	Resist	Resist	Accept
11. Treating symptoms or sources of change	Symptoms	Sources	Sources	Symptoms
12. Taking formal or informal measurement	Informal	Formal	Formal	Informal
Leading				
13. Doing or managing	Doing	Doing	Managing	Managing
14. Taking a task – or people-oriented	Task-oriented	Task-oriented	People-oriented	People-oriented
15. Using formal or informal power	Informal	Formal	Formal	Informal
16. Using negative or positive incentives	Negative	Negative	Positive	Positive

Relationship of "I Opt" Styles to Project Management Orientation Criteria

Reactive Stimulators. These individuals plan at a very high level and, consequently, spend less time at it than other styles. They view plans as a way to help set direction and nothing more. Getting started on the work is more important than developing elaborate, formal plans.

RS individuals place little emphasis

on establishing a supporting infrastructure for projects. Too much organizing of a project slows momentum and, with a preference for "sawing wood, not talk," frustrates them. Setting up a project history file or library, for example, are nice if time permits.

They also have little patience with formally controlling projects. They prefer moving forward to complete tasks, not spending time to collect data and analyze it. Nor do they take

time to address the causes of problems; doing so only slows projects. They see formal status review meetings, for example, as headaches.

RS individuals, with their strong penchant for action, focus on completing tasks and prefer not dealing with the delicacies of behavioral affairs. They are impatient with formality in organizations, viewing it as an impediment to taking action. They accept teambuilding activities when it doesn't directly interfere with progress. They pride themselves in "kicking butt" to get the job done.

Logical Processors. These individuals plan at a very detailed level. How they achieve a goal is as important as the goal itself. They must design both the product and process in great detail. They don't begin any action until they define all tasks thoroughly, step-by-step, and linearly. In other words, they take a systematic, linear approach to planning. They produce work breakdown structures and schedules of great depth.

They also establish a well-defined organization for a project. Just about everything they develop is highly "rational". They'll produce the finest organization chart imagined, a complete project manual, and a well-organized project history file.

LP individuals ensure that all activities on the project occur according to plan. They have little tolerance for anything that deviates from the plan. They will establish good change management procedures and practices, but such setups are mere formalities because they seldom welcome change.

They also prefer to do the work themselves, not delegating unless convinced the delegates can do just as good a job. They also rely on for-

mal authority to complete tasks, placing little faith in interpersonal or behavioral approaches for motivating team members and often relying on the "stick" to adhere to plans.

Hypothetical Analyzers. These individuals center their plans around the goal. They plan the goal and the path to achieving it in considerable detail. However, they immerse themselves in details, plans get to detailed, giving the impression that they are more wrapped up in the process for developing a product than the product itself.

They also establish a highly formal organizational infrastructure. Just about everything they develop is highly defined, orderly, and well documented. Unlike the Logical Processor, however Hypothetical Analyzers view everyone on the team as vital for executing project plans successfully. They do not see star performers; rather, they see everyone playing an important role during project execution. They produce, for example, highly interwoven responsibility matrices and conduct frequent meetings.

HA individuals, after developing elaborate plans, resist change. However, to fulfill their desire for thoroughness they institute good change control measures to identify problems and fix root causes. This attention to root causes necessitates instituting formal measurement programs. They'll have, for example, excellent metrics to gauge project performance in many subject areas.

They see people playing an important role in successfully completing projects. They encourage involvement, including team and customer buy-in. They accomplish that through formal approaches such as signatures and regular meetings. They also

place a high premium on behavioral aspects of managing, e.g., redesigning tasks to engender enthusiasm.

Relational Innovators. These individuals focus on the goal. They care less about how to attain that goal and will explore alternative ways to achieve it. Hence, they produce highly flexible, broad, and not-well-documented plans.

They also put little emphasis on establishing an organizational infrastructure. They dislike creating layers between themselves and the people they manage. They also see items like project manuals and project history files as "administrivia". They see everyone as a significant contributor to a project, not just a few.

RI individuals are flexible to new ideas and welcome change. Rather than formally categorize and evaluate a change, they decide its fate as soon as possible with available information. Often their decision treats symptoms so as not to impede progress toward a goal.

They view people as critical in completing a project. Rather than manage people formally, however, they prefer the personal touch. They see completing a project with and through people. They value positive incentives (e.g., training and coaching) over negative ones (e.g., criticizing people).

The Project Management Application Typology (PMAT)

Each teambuilding style in "I Opt" has a great influence on how a project is planned, organized, controlled, and led. This influence becomes significant when project managers with specific styles manage in a project environment that agrees or disagrees with that style.

The PMAT reflects such relationships when applying the four functions to a project. The PMAT consists of four quadrants, each representing a specific type of environment. The PMAT is created through the intersection of two axes, or continuums. This intersection creates four quadrants.

The X-axis is the level of structure that exists in an environment. Structure means the degree of formality that exists within an environment (e.g., going through administrative "hoops" or red tape). The more the formality, or rules to follow, the more structure. For example, a high-structure environment requires a considerable number of reviews, approvals, and forms completion; a low-structure environment would have less of those items.

The Y-axis is the level of change that exists in an environment. At one end, the environment is very static; change only occurs as frequently as earthquakes on the eastern seaboard of the United States. At the other end, the environment is very dynamic; change occurs so frequently that baselining anything is like shooting at a moving target. For example, a dynamic environment has a considerable number of changes to the budget, schedule, processes, requirements, and product design; a static environment would have few changes to those items.

Basic Activities of Each Function

The intersection of these axes creates four quadrants, each representing a project environment. The intersection of the two continuums (Static-Dynamic and Low-High Structure) creates four basic ideas.

Table 3. Project Manager's Application Theory

Dynamic Environment (DE)

Quadrant I (DE-LS)	Quadrant II (DE-HS)
Planning	Planning
1. Concentrating on path 2. Taking a linear approach 3. Developing broad plans 4. Being process-driven 5. Building informal plans	1. Concentrating on goal 2. Taking a nonlinear approach 3. Developing in-depth plans 4. Being product-driven 5. Building formal plans
Organizing	Organizing
6. Establish broad span of control 7. Employing informal communications 8. Relying on individuals 9. Developing minimum documentation	6. Establish narrow span of control 7. Employing formal communications 8. Relying on teamwork 9. Developing extensive documentation
Controlling	Controlling
10. Accepting Change 11. Treating symptoms of problems 12. Taking informal measurements	10. Resisting change 11. Treating sources of problems 12. Taking formal measurement
Leading	Leading
13. Doing 14. Taking a task-orientation 15. Using informal power 16. Using negative incentives	13. Managing 14. Taking a people-orientation 15. Using formal power 16. Using positive incentives
Best Suited: Reactive Stimulator Least Suited: Hypothetical Analyzer	Best Suited: Hypothetical Analyzer Least Suited: Reactive Stimulator
Quadrant III (SE-LS)	Quadrant IV (SE-HS)
Planning	Planning
1. Concentrating on goal 2. Taking a nonlinear approach 3. Developing broad plans 4. Being product driven 5. Building informal plans	1. Concentrating on path 2. Taking a linear approach 3. Developing in-depth plans 4. Being process-driven 5. Building formal plans
Organizing	Organizing
6. Establish broad span of control 7. Employing informal communications 8. Relying on teamwork 9. Developing minimum documentation	6. Establish narrow span of control 7. Employing formal communications 8. Relying on individuals 9. Developing extensive documentation
Controlling	Controlling
10. Accepting change 11. Treating sources of problems 12. Taking informal measurement	10. Resisting change 11. Treating symptoms of problems 12. Taking formal measurement
Leading	Leading
13. Doing 14. Taking a task-orientation 15. Using informal power 16. Using positive incentives	13. Managing 14. Taking a people-orientation 15. Using formal power 16. Using negative incentive
Best Suited: Relational Innovator Least Suited: Logical Processor	Best Suited: Logical Processor Least Suited: Relational Innovator
Static Environment (SE)	
Low Structure (LS) ← → High Structure (HS)	

Quadrant I:	Dynamic Environment-Low Structure (DE-LS)
Quadrant II:	Dynamic Environment-High Structure (DE-HS)
Quadrant III:	Static Environment-Low Structure (SE-LS)
Quadrant IV:	Static Environment-High Structure (SE-HS)

Each quadrant reflects a unique environment, being either static or dynamic and either low or high structure. Within each quadrant are the four functions of project management. Each function, in turn, consists of activities.

Quadrant 1 (Dynamic Environment-Low Structure). This environment is typically where high-tech startup firms and research and development firms conduct their projects. Change occurs rapidly and administrative operations are often overlooked or viewed as a necessary evil. The focus is on pursuing the shortest path to the goal.

Planning. The goal is achieved in the shortest, quickest way possible. Plans appear broad while emphasizing the process rather than the product. Hence, planning occurs more informally and at a high level. Little effort is spent, for example, on building detailed work breakdown structures and reliable estimates.

Organizing. A broad span of control exists, communications is informal, reliance is on individual performers, and formal documentation is minimal. Establishing project history files, creating organization charts, and publishing project manuals receive little emphasis.

Controlling. Change is normal and good. When problems arise, however, emphasis is on fixing the symptoms to meet schedule and budget milestones. Formality takes a backseat. Measurements on project performance

are informal, change control occurs more in a casual setting, and a flexible response to change is of more value than following an elaborate change procedure.

Leading. Project managers take a more task-oriented approach when dealing with all project participants via an informal setting that stresses interpersonal relationships. They stress negative rewards as an incentive to complete a project successfully. The overall leadership style tends to be authoritarian, even autocratic at times, but in a benevolent way.

Project managers who are Reactive Stimulators function best in this environment. Their action orientation and low tolerance for bureaucracy give them the opportunity to move quickly toward project completion. Project managers who are Hypothetical Analyzers are least suited for this environment due to their penchant to collect a variety of information and to perfect everything before taking action.

Quadrant II (Dynamic Environment-High Structure). This environment is typically where manufacturing firms conduct their projects. Change occurs but not as rapidly as in the Low Structure-Dynamic Environment. The environment is more stable and an appreciation for administrative operations is greater. The focus is on the means by examining multiple ways to build a product.

Planning. Emphasis is initially on extensively defining the goal and then shifts to defining in detail the tasks for achieving it. This shift explores different approaches to achieving the goal. Extensive efforts are taken to ensure that the plans, once agreed upon, are approved and formalized.

Organizing. An extensive, formalized organization exists that establishes a narrow span of control, requires extensive documentation, and encourages formal communications. Reliance is on teams to complete significant tasks.

Controlling. Every effort is made to regulate the occurrence and impact of change. Formal, even elaborate, measures exist and often these become more important than change itself, and treating sources of problems become more important than delivering the product on time and within budget. This often leads toward concentrating on technical processes rather than on schedule and budget performance.

Leading. Formalization and structure exist to such a degree that project managers are merely overseers or figureheads for ensuring the project completes, and not necessarily according to plan. Project managers function in positions of accountability; the loss of a particular project manager makes little difference to the outcome of the project. The overall leadership style tends to be democratic, focusing on obtaining the best contributions from the people without disrupting the organizational structure.

Project managers who are Hypothetical Analyzers function best in this environment. Their desire to formalize, even standardize, and use teambuilding works well in a bureaucratic institution facing a changing competitive environment. Project managers who are Reactive Stimulators are least suited for this environment because they dislike bureaucratic formalities and can easily go astray in a changing environment.

Quadrant III (Static Environment-Low Structure). This environment is typically where insurance firms conduct their projects. The environment is very stable. Both means and ends are fairly predictable and routine; administrative operations are good "things" to do but not the important.

Planning. This function is not formalized or detailed. Emphasis is on achieving goals, not perfecting processes. The work is highly routine and insulated and, consequently, does not require elaborate planning.

Organizing. A broad span of control exists with people working together in a non-bureaucratic environment; meaning few layers of management and minimum departmentalization of responsibilities. Communications, like meetings and documentation, are done informally and on an ad hoc basis.

Controlling. Change is seen as a natural phenomena but not common and, therefore, rigid controls are unnecessary. Some measurements may exist but are informal and viewed as gauges rather than evaluation tools.

Leading. Project managers mainly facilitate to ensure that plans are basically followed. Their profile on projects, therefore, are low-key and often function as focal points for help. Project managers delegate willingly and frequently. The overall leadership style tends to be democratic, even laissez faire at times, and balance self-satisfaction with achieving the goals of the project.

Project managers who are Relational Innovators function best in this environment. The low-structure enables them the freedom to experiment with new ideas while at the same time the environment stays sta-

ble enough to allow them to "blue sky". Project managers least suitable for this environment are Logical Processors because of the lack of formalization of everything and their desire to "follow the rules".

Quadrant IV (Static Environment-High Structure). This environment is typically where construction firms conduct their projects. The environment does not change that often; the means and the ends pretty much are repeatable and lend themselves to stepwise refinement.

Planning. This function is strong but in a straight, simplistic manner. The project goal is identified and in-depth plans are generated to achieve it. Often the plan has been formalized, used and tested repeatedly; its employment is with some measure of reliability.

Organizing. A highly narrow span of control exists along with formal mechanisms to communicate with all participants. Documentation is highly formalized and detailed.

Controlling. Great effort is undertaken to control the occurrence and impact of change. Often elaborate measures are employed. The desire to control change results in elaborate efforts to identify the cause, address it, and not proceed until everything is "perfect" again.

Leading. The desire to keep everything well organized within the presence of detailed plans often has project managers doing the work themselves. Project managers rely on formal power and are willing to apply negative incentives; hence, the overall leadership style is often authoritarian.

Project managers who are Logical Processors function best in this envi-

ronment. The high structure and static environment affords them the opportunity to define and formalize everything. Project managers who are Relational Innovators are least suited for this environment because everything moves too slowly due to too many rules and is filled with red tape, which constrains experimentation.

Do It With Style

Many companies apply project management practices in a random, even brute force manner. As a result, applying some functions may be underkill or overkill.

Knowing the type of environment and the teambuilding style for the project manager increases the opportunities for selecting the right person for the position and applying the right project management practices to increase the likelihood of completing projects cost-effectively.

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