Optimizing Success by matching Management Style to Project Type [1, 2]

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Introduction

The purpose of this paper is to bring together the findings of the previous papers in this series to show a connecting thread that, if followed, leads to a better understanding of the project management process, and hence to higher levels of project success. This thread is summarized as follows

- The meaning of project success
- The nature of fundamentally different types of project
- Their technological content
- Their scope and degree of complexity
- The nature of project work
- Project leader personality traits and consequent management styles, and
- Selection of most appropriate project leader for best chance of project success.

But what is "project success", and how might such success be influenced by the particular type of project and how it is managed?

Any serious discussion of the concepts of project management require that the terms to be used are clearly defined. While there is a general understanding of what a project is and what project management is about, there is no consensus amongst practitioners as

[1] Second Editions are previously published papers that have continued relevance in today's project management world, or which were originally published in conference proceedings or in a language other than English. Original publication acknowledged; authors retain copyright. This paper was originally published on the pmforum.org website in 2000. It is republished here with permission of the authors.

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to precise definitions of either of these terms. So we must start our journey by establishing what we mean by the terms we use for the purposes of this paper.

For examples of different definitions in common use in each case, visit the PM Glossary on wideman.com (http://www.maxwideman.com/pmglossary/index.htm) and look up each term!

Project and project management

In the context of "project success", our preferred definition of project is as follows. [1]

> "A unique set of coordinated activities, with definite starting and finishing points, undertaken by an individual or organization to meet specific objectives within defined time, cost and performance parameters." To this we would add that the project is only completed when the intended product or deliverable has been satisfactorily transferred into the hands of the customer.

This definition implies that a project involves both process and organization and this is quite distinct from the "product" which is the resulting output. In this respect, the word "project" is often misused to refer to "the end result", i.e. the "product". It should also be noted that the process is a "journey through time" and that the objectives, expressed in terms of scope, quality, time and cost determine the "boundaries" or limitations imposed on this journey. The measure of "customer satisfaction", on the other hand, is the measure of the project's success as reflected in the perception and acceptance of the end product.

Project management, then, is the management of the process or journey just described. Yet, it too has a fundamental underlying concept. Perhaps this was best expressed more than 2,500 years ago by the famous Chinese philosopher Confucius, when he said "In all things, success depends upon previous preparation - and without preparation there is sure to be failure."

In modern parlance, this elementary observation translates into a simple two-step sequence: "Plan before doing". This basic concept is the foundation of the project life cycle by which projects need to be managed. That is to say, first plan, then do. This is also reflected in the Deming Quality mantra "PDCA" (also known as the Deming Wheel) which stands for Plan, Do, Check, Act and describes the Deming quality control management cycle.

Project Success

Since the ultimate objective of project management is to be "successful", we should first deal with the issue of "success". What really constitutes "project success"? From a

project process perspective, the classic response is being “On time, within budget and meeting requirements.” However, from a product perspective, a successful project is clearly one in which the "customer" ends up satisfied.

The former criteria have exercised project managers for decades, but once a particular project is completed, the results in terms of the parameters described are merely history. In contrast, the success of the product will continue to be an issue for its remaining useful product life. Clearly, "project product success" eventually transcends "project process success".

Indeed, there have been many cases of failure to meet process success, notably in the information technology field, yet the product has proved to be very successful. Similarly, but regretfully, vice versa. Optimum success is obtained when both success dimensions are achieved simultaneously.

But product success is not so readily identified. In 1988 Pinto and Slevin concluded from their research work that “Project success is a complex and often illusory construct, but nonetheless, it is of crucial importance to effective project implementation,” and, “project success is suggested to have two major components: issues dealing with the project itself and issues dealing with the client.” In addition, Pinto and Slevin stressed “... the necessity of developing an adequate program in terms of knowing ***when*** to determine project success.”[2] (Emphasis added.)

In a 1997 study, Shenhar, Dvir and Levy developed a universal multidimensional framework for the assessment of project success.[3] In this view, project success is seen as a strategic management concept where project efforts must be aligned with the strategic long-term goals of the same organization that the product of the project is intended to serve. The intent is to establish appropriate expectations of both the receiving management and the project team prior to project initiation. These expectations then provide a baseline for both the decision to launch project execution and the inevitable trade-off decisions that will be required of the project’s management during this period. Surprisingly, a documented baseline of measurable success criteria, or "Key Success Indicators" (KSIs) is frequently missing from the planning of most projects.

The Shenhar, Dvir and Levy study revealed four primary categories as seen at project completion:

- ***Project Efficiency*** - Internal Project Objectives such as meeting time and budget goals.
- ***Impact on the Customer*** - Immediate and long-term benefit to the customer
- ***Direct and Business Success*** - Direct contribution to the organization (usually not observable until the medium term), and

- ***Preparing the Future*** - Future opportunity (e.g. competitiveness or technical advantage typically expected in the long term.)

Each of these four categories is translated into measurable criteria as shown in Table 1.

Primary Success Category	**Measurable Key Success Indicators (KSIs)**
Internal Project Efficiency (Pre-completion)	- Meeting schedule - Completing within budget - Other resource constraints met
Impact of the Customer (Short term)	- Meeting functional performance - Meeting technical specifications & standards - Favorable impact on customer, customer's gain - Fulfilling customer's needs - Solving customer's problem - Customer is using product - Customer expresses satisfaction
Business and Direct Success (Medium term)	- Immediate business/commercial recognition - Immediate revenue & profits enhanced - Larger market share generated
Preparing for the Future (Long term)	- Will create new opportunities for the future - Will position customer competitively - Will create new market - Will assist in developing new technology - Will add/has added capabilities & competencies

Table 1: Primary Success Categories and Measurable Success Indicators

It will be noted from these primary categories that time since project completion is a factor in the assessments and it is not difficult to infer that the perception of project success may change with time. If the principal focus of a project is to create future opportunity (fourth category), then such a project is unlikely to be viewed as a success until those opportunities actually come to fruition. This relationship is demonstrated in Figure 1.

Much of the project management literature refers to "Critical Success Factors" or "CSFs". However, such factors should be distinguished from the success indicator measures listed above, because they are management environment variables and not outcomes. CSFs may be defined as follows:

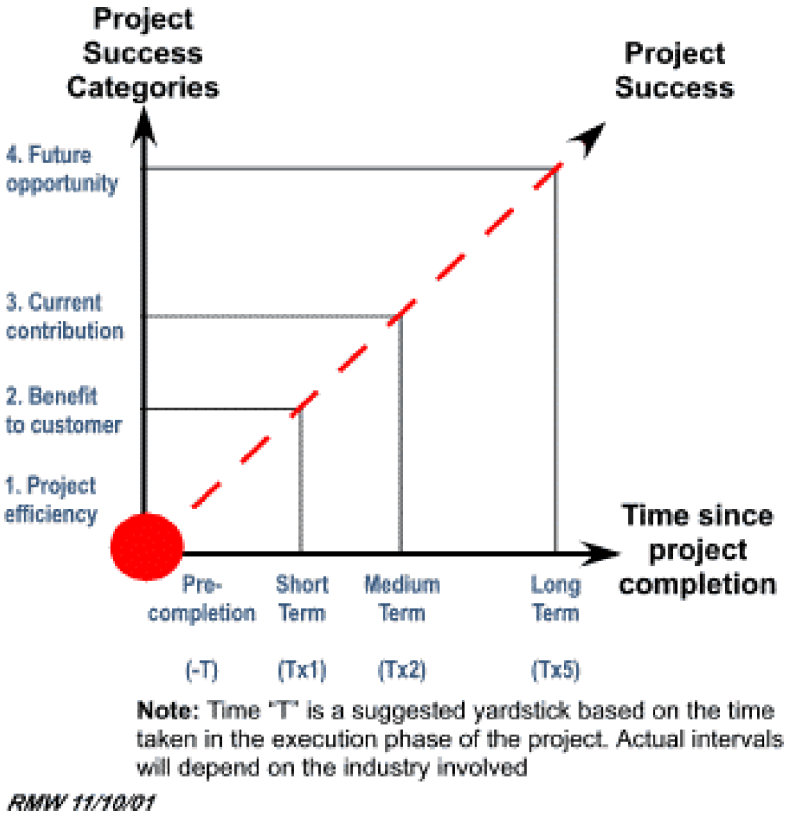

Figure 1: Project Success Categories vary with Time

> "Those managerial factors, listed in order of importance, that when present in the project's environment are most conducive to the achievement of a successful project."
>
> Examples include: Project objectives aligned with corporate mission; top management support; a culture of open communication"[4] and so on.

Research has shown that attention to these factors will improve the probability of project success, and reduce the chances of failure, but they do not drive the direction and decision-making on the project.

The nature of projects generally

Projects are not only unique undertakings but their range in objectives, size, complexity and technology (areas of project management application) are almost limitless. To aid in sponsorship planning and decision-making, it would clearly be helpful if projects could be categorized into some meaningful and practical classification framework.

To this end, Shenhar et al conducted a series of studies over the period 1993-1998 based on a collection of more than 120 projects for which detailed management data was available.[5, 6, 7, 8] The authors found that as technological uncertainty increases so does the need for increased technical management and that as complexity increases so does the need for higher and more formal project management. However, as both increase there is a third dimension in which there must be much higher levels of process and component integration and testing as shown diagrammatically in Figure 2.

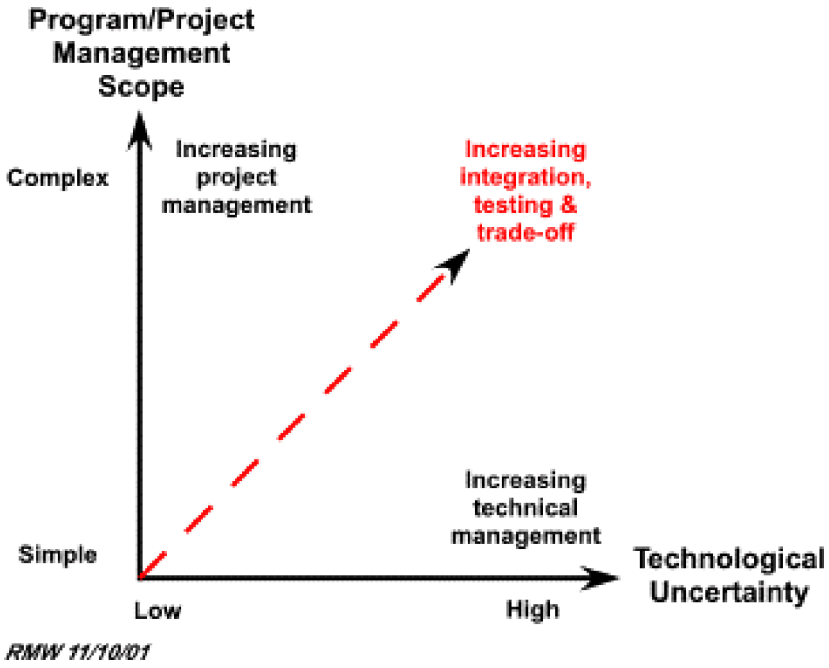

Figure 2: Uncertainty versus Complexity Trend

Subsets of these projects were then examined more closely for parameters that might be relevant and suitable. Up to 100 parameters were identified, but for practical purposes a simple but enlightening classification system emerged. Based on their findings, the authors proposed a two-dimensional project typology consisting of Project Management Scope versus Technological Uncertainty.

Again, for practical purposes, the two continuous scales have been reduced to four levels of Technological Content and three levels of Program/Project Management Scope. This matrix is shown in Figure 3.

The descriptors along each dimension of Figure 3 are briefly described in the next section. Fuller descriptions are provided in an earlier paper in this series.[9]

Technological content

Type A – Low-tech (Established Technology). These projects rely on existing and well-established base technologies to which all industry players have equal access. They can be very large in scale, but essentially no new technology is employed at any stage.

Examples - standard building construction, utility projects.

Type B – Medium-tech (Mostly Established Technology). These are similar to Type A, but involve some new technology or feature. While the majority of the work has relatively low uncertainty, the new feature provides market advantage but also a higher degree of uncertainty.

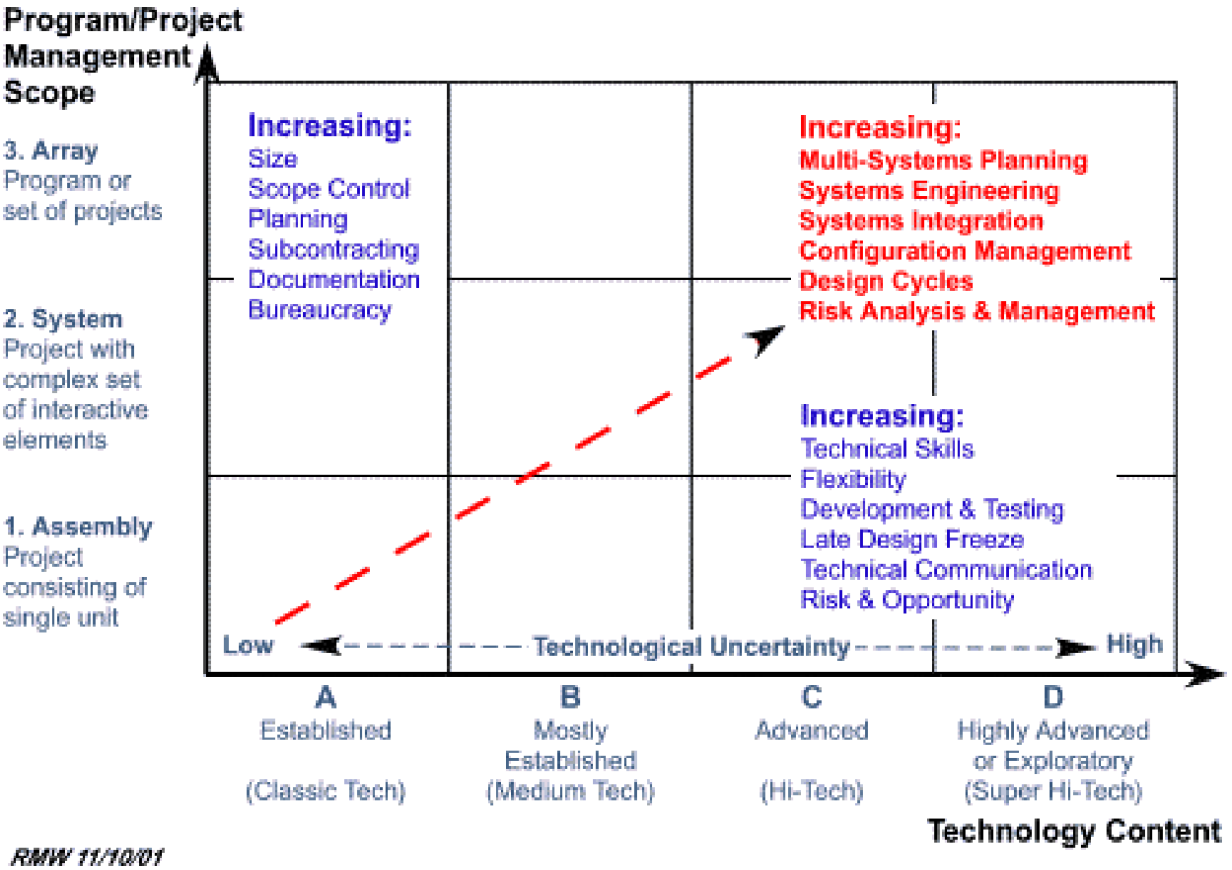

Figure 3: Project Classification

Examples – new models in established product lines (autos, appliances), concrete construction using advanced carbon fiber reinforcement.

Type C – High-tech (Advanced Technology). These are projects which contain technologies that have been developed prior to project initiation, but which are used together for the first time.

Examples - most defense industry projects, new computer family.

Type D – Super High-tech (Highly Advanced Technology). These are projects that call for the incorporation of technologies which are not entirely existing, are emerging or even require unknown solutions at the time of project initiation. Such projects incorporate exploratory development and non-existing technology development during project execution.

Examples – Moon landing, star wars.

Program/project management scope and complexity

Level 1 – Assembly (Simple Project). This project relates to a collection of components and modules combined into a single unit.

Example - a computer's display.

Level 2 – System (Complex Project). This is one which consists of a complex collection of interactive elements and subsystems within a single product, but which jointly perform a range of independent functions to meet a specific operational need.

Examples - a computer workstation, a radar system.

Level 3 – Array (Program). Rather than a single project, this is a series of related projects designed to accomplish broad goals and to which the individual projects contribute.

Examples - a national communication network, a city.

As Figure 3 indicates, progression along the Technological Uncertainty dimension leads to the need for increased intensity in technology management. Progression up the Program/Project Management Scope axis increases the project management complexity and leads to increased intensity and use of project management tools. When both are combined together, there is a compounding effect resulting in the need for both added technology management techniques as well as more comprehensive project management techniques.

In this view of project typology, the relationship with the primary success categories discussed earlier is shown in Table 2.

Project Type / Success Category	A Low-tech (Established Technology)	B Medium-Tech (Mostly Established)	C High-tech (Advanced)	D Super Hi-Tech (Highly Advanced or Exploratory)
Project Efficiency (Pre-completion)	Critical	Important	Overruns acceptable	Overruns most likely
Impact on Customer (Short term)	Standard product	Functional product with added value	Significantly improved capabilities	Quantum leap in effectiveness
Direct Contribution (Medium term)	Reasonable profit	Profit. Return on investment	High profits. Market share	High, but may come much later. Market leader
Future Opportunity (Long term)	Almost none	Gain additional capabilities	New product line. New markets	Leadership in core and future technologies

Table 2: Success Categories and Characteristics of Various

Project Types The nature of project work

The foregoing classification provides a way of categorizing projects and consequently for assessing the extent and type of management techniques required. But what of the people involved? Are there differences in the styles of management that would be most appropriate in each case for managing the people on the project?

It is a common experience that different people respond to different styles of leadership. Some respond better to being told what to do, while others respond better when allowed to think more for themselves. Intuitively, one suspects that the former aligns more with craft work requiring training while the latter aligns more with intellectual work where people have more opportunity to educate themselves.

Therefore, the authors suggest that differences in project management styles should be determined by a more fundamental distinction between or within projects. This distinction has to do with both the type of product emanating from the project and the type of work required to create that product, and this distinction should be made at the individual work-package level.

Depending on the nature of the work package product, the effort required to manage the process and to produce the product will require varying degrees of both intellectualism and craftsmanship. From the perspective of management, it is the extent and balance between these components that provide the distinguishing features.

Thus, we can envision a simple matrix consisting of two broad types of product, namely, "tangible" and "intangible", and two types of work, namely, "craft" and "intellect". These may be defined as follows.[10]

Tangible Product. These products are ones in which the primary value is in the physical artifact.

Examples - new building, a piece of hardware.

Intangible Product. These products are ones in which the primary value is in their intellectual property even though there is some tangible product as the vehicle for conveyance.

Examples - new software, a manual.

Craft Work. This work is the result of manual dexterity, has been done before, and essentially requires repetitive effort.

Examples – brick laying, welding.

Intellect Work. This work is the result of applying "brain-power", has not been done before, and requires new ideas and imagination.

Examples - new process, new design.

It should be noted that all projects involve intellectual work in their planning and in this respect all projects appear to be similar. Indeed, this may be the root of a popular misconception with many that all project management is the same. However, it is the production work in the execution stage of the project that results in actual final product and, from a project management perspective, it is this that distinguishes one type of project from another.

At first glance it might appear that craft work is simply the requirement of tangible-type projects, and intellect work is the requirement of intangible-type projects. However, a 2x2 matrix introduces the possibility of adding both tangible-intellect projects as well as intangible-craft projects.

Table 3[11] shows the characteristics, results, and some examples of each of all four basic project types.

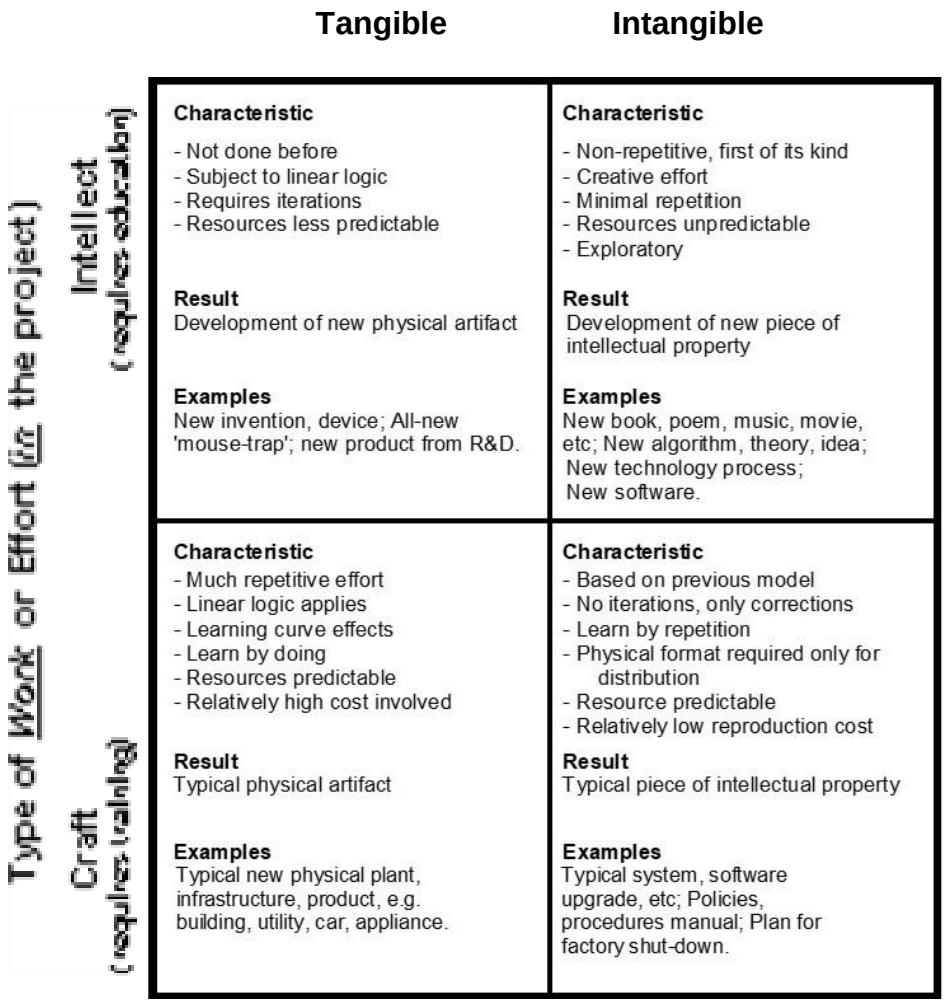

Table 3: Basic Project or Major Element Classification of Project management style and personality traits

In the March 1996 issue of the PMI Journal, Kliem and Anderson discussed the project manager's style or approach toward team-building as a key variant in managing projects successfully.[12] They observed that "Only recently has the influence of the project manager's personality on project performance received recognition."[13] They identified four primary styles in how a person approaches relevant work situations and applied this to the processes of planning, organizing, controlling and leading.

Kliem and Anderson concluded that "Knowing the type of [project] environment and the team-building style [required] of the project manager increases the opportunities for selecting the right person for the position..."[14] Unfortunately, the descriptors they used are not terms familiar to most project management people.

To bring more recognizable and practical utility to the issue of project leader selection, a six-step analysis was undertaken.[15] The analysis commenced with a review of the last ten years of PMI publications to abstract familiar words or phrases used to describe a project manager's required personal characteristics and skill sets. The selection excluded words depicting technical experience or know-how. The result was a list of some 200 words or phrases and, not surprisingly, implied that the leader of a project should be an impossible paragon of virtue.

The next step involved a literature review of personality typology and selecting those dominant types most relevant to the project management environment. This was based on two dimensions of "Focus" versus "Approach" as shown in Figure 4. This provided four "types" to which familiar but differentiated project leadership titles could be assigned. The list of words or phrases were then subjectively assigned to each title, except those that plainly referred to all four types.

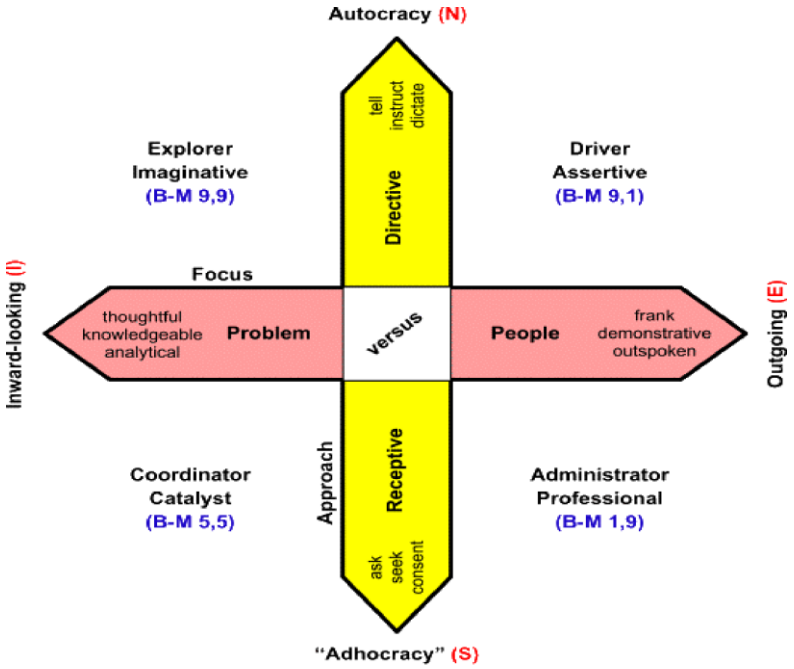

Figure 4: Identification of Project Manager's Style

Subsequent steps involved subdividing each group into either inherent personality traits or learnable skill sets, and matching these word sets across the four project management types to provide a cross-check and some degree of uniformity. In the final step, the word groupings were further subdivided into the management processes of planning, organizing, executing and controlling.

Of course, the propensities and skills of individuals never fit these descriptions exactly. Nor, for that matter, are projects ever that simple. But the arrangement does begin to show a correlation between personal characteristics and the realities of different project management environments.

The data is provided in the paper referenced above, but it is also available in the form of a two-part questionnaire for those who would like to conduct a self-examination.

Table 4: summarizes the characteristics and skill sets of the four types of project leader.[16]

	Explorer	Coordinator	Driver	Administrator
Characteristics:				
Planning **Organizing** **Executing** **Controlling**	Vision oriented Solution seeker Inspiring Determined	Mission oriented Conflict mediator Understanding	Goal oriented Solution enforcer Hard driving Rigid	Objective oriented Conflict solver Analytical Flexible
Skill Sets:				
Planning	Focus long range	Focus on participation	Focus short range	Focus on solutions
Organizing	Evokes dedication	Obtains willing effort	Gets early results	Harmonizes effort
Executing	Leads by example	Develops commitment	Uses partnerships	Reinforces commitment
Controlling	Takes major decisions	Reaches closure	Makes most decisions	Implements decisions

Note: These words and phrases have been taken from the larger word sets that represent each cell as presented in Appendices A and B of the fourth Paper in our series: "Dominant Personality Traits Suited to Running Projects Successfully - And What Type Are You?"

Table 4: Project Leader Types, Characteristics, and Skill Sets

Four types of project leader

The resulting four types of project leader may be briefly characterized as follows.

Explorer. The explorer or entrepreneur type project leader has a vision of the future and projects are the stepping stones. Characteristics: strategic thinker, bold and imaginative, comfortable in the lead, and exuding confidence and charisma.

Coordinator. The coordinator types become paramount when the project situation calls for "facilitation". Characteristics: practical, thorough, willing to compromise and takes the time to ensure that team issues are surfaced, discussed, and resolved to mutual satisfaction.

Driver. The driver type project leaders are distinctly action-oriented and are both hard-working and hard driving. Characteristics: pragmatic, realistic, resourceful, structured and hard driving, and their focus is on precise project goals.

Administrator. The administrator recognizes the need for some stability, to optimize productivity through maxim repetition to complete the work. Characteristics: analytical, responsible and dependable, gives thought to trade-offs, conflicts and problem resolution. Work is highly organized.

In reality, experienced and skilled project managers often find themselves "shifting gears" to suit immediate circumstances during the course of whichever stage the project is actually in. Nevertheless, experience and the literature suggest that it is unusual to find all four traits in a single person. What is important across all four styles is the project manager's force of personality, tenacity and skill.

Bringing it all together

It would be very satisfying if it were possible to relate these various project management elements into one cohesive pattern. However, project management is multi-dimensional apparently with no direct correspondence. Nevertheless, there do appear to be some common trends.

Shenhar and Dvir have observed from their project database that a number of common project variables progress from one form to another across the Technological Uncertainty spectrum as shown in Figure 3. For example, from established technology projects to highly advanced or exploratory projects, design cycles and design freezes progress from only one cycle with a design freeze prior to execution, to multiple cycles and late design freeze well into the execution period. Similarly, communications progress from formal and relative few regularly scheduled meetings to multiple, frequent and informal interaction.

In the former low-end type of project, the project manager must have good administrative skills, a firm style and stick to the initial plan. At the high end, the project manager must be an exceptional technical leader to handle highly skilled professionals, adopt a highly flexible style, and live with continuous change.[17] This suggests that at the low end, a good administrative or driver type is required, while at the high end what is required is a good explorer/coordinator.

Similarly, we might compare the different types of major elements in projects with technological uncertainty and management style. As shown in Table 3, most traditional projects fall into the Tangible/Craft quadrant and require the driver type manager for their execution. At the opposite end, the major elements of many of the hi- or super hi-tech projects fall into the Intangible/Intellect quadrant requiring the explorer/coordinator type manager for execution.

We might go further and match the project manager style required on a "traditional" type project with its project life cycle as follows.

At its most fundamental level, every well-run traditional project has four major periods in its life cycle. A project must first be "conceived" and articulated as a goal or objective. That goal or objective must then be "developed" into an agreed set of requirements from which a defined scope and scope of work can be derived and translated into a viable and doable set of activities. With appropriate approvals and sufficient time and funding, this plan can then be "executed". Finally, the project must be properly "finished" with the product successfully transferred into the care, custody and control of its eventual owners.

Figure 4 and a moment's thought suggests that the "Concept" period should start out with the "Explorer" type; proceed to the "Coordinator" type in the "Development" or planning period; move to an assertive "Driver" type in the "Execution" period; and culminate with the "Administrator" type in the clean-up "Finishing" period.

Failure to match an appropriate style with the particular project or element can quickly demoralize the project work force and lead to unsatisfactory project results.

Table 5 takes the same period descriptions shown in Table 3 and illustrates vividly the negative impressions that can develop when an inappropriate project management style is adopted.

Project Leader Type	As seen when appropriately assigned	As seen when inappropriately assigned
Explorer	Vision oriented Solution Seeker Inspiring Determined Focus long range Evokes dedication Leads by example Takes major decisions	"Starry-eyed" Devious Out-of-touch Unworkable "Far out" Scattered Unrealistic Mischievous
Coordinator	Mission oriented Conflict mediator Understanding Free-form Focus on participation Obtains willing effort Develops Commitment Reaches closure	Impromptu Outsider Sentimental leisurely Contriving Obtuse Over personalizes Stirs up conflict
Driver	Goal oriented Solution enforcer Hard driving Rigid Focus short range Gets early results Uses partnerships Makes most decisions	Acts first, thinks later Arrogant Domineering Dictatorial Lacks long-range view Ladder climber Self-seeker Untrusting
Administrator	Objective oriented Conflict solver Analytical Flexible Focus on solutions Harmonizes effort Reinforces commitment Implements decisions	Over zealous Long winded Over analyzes Indecisive Hidebound Ruling Unemotional Unglamorous

Table 5: Project Leader's Image when Appropriately and Inappropriately Assigned

Obviously, we have made some over-simplified generalizations, but there can be no question that project leadership style and the need for flexibility to suit particular circumstances, must be an important determinant of project success. The successful development, production and testing of the largest and most complex aircraft built to date, the Boeing 777, is an instructive example of most appropriate style of project management.[18] Conversely, the infamous Challenger disaster was perhaps the most vivid project example of the application of inappropriate management style.[19]

If, however, these indications are true, might it be possible to postulate some guiding relationship such as that shown in Table 6? Based on the observations earlier, this table suggests that to achieve optimum success, there must be some correlation between the type of project leader, the type of product and the phase of the project. For example, for established technology project elements with their shorter-term success goals a low-key or regular progression through the four project management styles is shown. These

compare with those of higher technology, with their relatively longer-term success goals, and in which the styles of the explorer and coordinator types need to drive further down through the project life cycle.

Project Period / **Project Type**	**Concept** **C**	**Development or Definition** **D**	**Execution** **E**	**Close-out or Finish** **F**
Low-tech (Established Technology)	Explorer or Coordinator	Coordinator or Driver	Driver	Administrator
Medium-tech (Mostly Established)	Explorer	Coordinator	Driver	Driver or Administrator
High-tech (Advanced)	Explorer	Explorer	Coordinator	Driver
Super High-tech (Highly Advanced or Exploratory)	Explorer	Explorer	Explorer	Coordinator

Table 6: Potential Selection of Leader Type or Management Style to Optimize Success, given the Project Type and Project Phase

Conclusions

In the opinion of the authors, the balance between intellectualism and craftsmanship, that is, between "brain and brawn" as some might put it, is what determines the most appropriate management style for producing that element. This recognizes that to attain the highest potential on a large complex project, one single management style may not be appropriate throughout the project organization and certainly not through all phases of the project life cycle. It is evident that failure to match an appropriate style to project circumstances can quickly demoralize the project work force and lead to unsatisfactory project results.

If further studies can demonstrate some relationships such as those suggested, this could be invaluable in helping management to design appropriate organizational structures for complex projects. It could also assist management in assigning the most suitable leadership, given the necessary force of personality, tenacity and skills, for maximizing the probability of a successful project outcome.

Thus, it is hoped that the descriptions provided in this paper will help to match style to circumstances, or at least provide some basis for further study in this vital area.

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Professor of Project and Technology Management, Chairman and Founder, Technological Leadership Institute, SPLWIN Group, Dr. Shenhar is regarded as one of the world's leading experts in project management, innovation, and leadership. He holds five academic degrees in engineering and management, including three degrees from Stanford University and two from the Technion in Israel.

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Dr. Shenhar is also an experienced manager and executive. He served in the Israeli Navy, before joining the defense industry, where he has been involved in managing projects, innovation, R&D, and high-tech businesses for almost 20 years. Working for Rafael, Advanced Defense Systems, he participated in all phases of engineering and management — from project manager up through the highest executive posts. As executive, he served as Corporate Vice President, Human Resources, and later, President of the Electronic Systems Division.

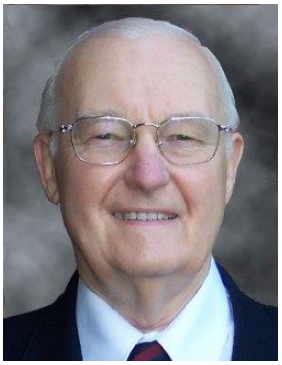
In his second career of over 20 years in academia, he was a tenured professor, serving at several universities where he founded new programs in Project and Technology Management, among them Stevens Institute of Technology, Rutgers University, University of Minnesota, and Tel-Aviv University. Dr. Shenhar's research has focused on project and program management, technology and innovation management and leadership of professionals in technology-based organizations. Based on his extensive research, he developed the methods of Strategic Project Leadership(R) and the "Diamond of Innovation," which teach corporations how to focus projects and innovations on business results and adapt their management processes to the specific goal and context.

With six books and over 150 publications, which were cited more than 5000 times and published in leading journals such as Strategic Management Journal, Management Science, Sloan Management Review, Research Policy, or IEEE Transactions on Engineering Management, his writings have influenced project and technology management research and education around the world. His publications are highly regarded and used in the curriculum of a growing number of corporations and universities.

He served as consultant to major corporations such as 3M, Honeywell, AT&T, Trane, Dow Jones & Co., US Army, NASA, NSA, Lockheed Martin, Merck, Tata Industries, and Israel Aerospace Industry.

In 1993 he led a team of 30 researchers in an industry-wide study involving most defense development programs in Israel, and resulting in recommendations to the defense department on how to overhaul the industry and the department's acquisition and program management processes. In 2005 he led a large NASA study building a NASA-specific program management framework. Dr. Shenhar has also developed the framework used by the Aerospace Industry Program Excellence Award and is member of Aviation Week's annual evaluation team. Now in his third career, Dr. Shenhar is the founder of TLI, and SPLWIN, education and consulting groups, dedicated to aligning projects and innovation with business.

He is co-author of the recent book, Reinventing Project Management: The Diamond Approach to Successful Growth and Innovation, Harvard Business School Press. The book was selected among the top five best business books of the year.



R. Max Wideman

Ontario, Canada

Max Wideman, FCSCE, FEIC, FICE, FPMI, FCMI, is a globally-recognized author, consultant and expert. He is widely recognized as one of the world's leading authorities on modern project and program management. The Wideman PM Glossary is one of the most widely-referenced lexicons of PM terms and terminology in the world today. For those who wish to use it, with over 6,000 entries, it is available free on-line on his web site at www.wideman.com. There you will also find details of smaller but more up-to-date industry-dedicated versions available for download at very modest

costs. Max's personal website is one of the world's best-known online resources for project and program management.

Max Wideman has over 50 years of PM-related experience in a wide range of projects and industries. He is a registered professional engineer specializing in project management consulting. Max is a Fellow of the Institution of Civil Engineers (UK), a Fellow of the Engineering Institute of Canada, a Fellow of the Canadian Society of Civil Engineers, a Fellow of the Project Management Institute (PMI®) and a Fellow of the Chartered Management Institute (UK).

Max served on the PMI Board of Directors as VP Member Services (1984), President (1987) and Chairman of the Board (1988). As Chairman of PMI's Standards Board, Max won PMI's Distinguished Contribution Award in 1985 and Person of the Year Award in 1986. As chairman, he led a team of PMI volunteers to document the PM Body of Knowledge (PMBOK), published by PMI in 1987. In 2018 he cleaned up his hard copy of that document and, together with the Glossary of the day, he has now made all that available in PDF format via his web site.

Max Wideman is the author of A Framework for Project and Program Integration (PMI, 1991) and Project and Program Risk Management: A guide to Managing Project Risk and Opportunities (PMI, 1992). He contributed chapters to Project Management Handbook (PMI/Jossey-Bass, 1998); Field Guide to Project Management (Van Nostrand Reinhold, 1998, 2004) and Project Management for the Business Professional - A Comprehensive Guide (Wiley, 2001). His most recent book is A Management Framework for Project, Program and Portfolio Integration (2004 – Now only available in PDF format).

Max is a former long-time resident of Vancouver, British Colombia where, in 2006 and together with five other enthusiastic PM supporters and a donation of $50,000, he launched the Wideman Education Foundation (WEF). The WEF's goal is to promote project management education through practical project competitions in partnership with educational institutions – in this case with the business department at Simon Fraser University in Burnaby BC. Max now resides in Richmond Hill, Ontario, Canada, so with the help of members from the PMI Chapter in Toronto, WEF has also held very successful competitions there since 2017.

Since 2012 Max has been representing Canada as a Subject Matter Expert (SME) with the International Standards Organization (ISO) committees working on Project Management Standards or Guides.

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