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## **Senior Management Perceptions of Effective Project Manager Behavior: An Exploration of a Core Set of Behaviors for Superior Project Managers**

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### **Abstract**

This paper reports on the first stage of a multi-stage research project exploring the effective behaviors of successful project managers, as perceived by senior management. The data was collected using a Web-based questionnaire that included personality dimensions and behavioral competencies. We analyze this data and discuss the perceptions of personality characteristics and behavioral competencies of successful project managers, using information we obtained from a sample of 40 supervisors of project managers. These respondents identified several personality characteristics common among successful project managers: Conscientious, Vigorous, Controlling, Socially Confident, Evaluative, Persuasive, and Behavioral<sup>1</sup>. The least frequently reported characteristics include Independent Minded, Conventional, Modest, Conceptual, and Worrying. The behavioral competencies reported as essential to superior performance in the role of project manager included Delivering Results and Meeting Customer Expectations, Planning and Organizing, Deciding and Initiating Action, Leading and Supervising, and Persuading and Influencing. We discuss these findings in relation to prior research and the current personal characteristics and behaviors documented in the key project management standards.

### **Introduction**

Effective project management is as much about demonstrating appropriate behaviors as it is about applying project management skills. Acknowledgement of this is reflected in the inclusion of behaviors and personality characteristics in project management standards and guides, such as the International Project Management Association's (IPMA) International Competency Baseline (ICB) (International Project Management Association, 2006) and Project Management Institute's (PMI) *Project Manager Competency Development (PMCD) Framework* (Project Management Institute, 2007). There is also increasing reference in the literature to the importance of soft skills (Muzio, Fisher, Thomas, & Peters, 2007; Singh, 2005; Thomas & Buckle, 2004) and personality characteristics (Dolfi & Andrews, 2007; Gehring, 2007; Dvir, Sadeh, & Malach-Pines, 2006) involved in managing projects. Both the standards and the research concerning the personality characteristics and behaviors of project managers tend to rely on the views of project managers, especially in regard to desirable behaviors and traits. However, while practitioners and researchers are interested in understanding the personality and behavioral profiles of *superior project managers*, the distinction of superior performance is problematic and strongly influenced by the perspective of the person making the judgment (Crawford, 2005).

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<sup>1</sup> These are specific dimensions from the OPQ32; further information on these dimensions can be found in the OPQ Technical Manual, which is accessible at [www.shl.com/SHL/au/Products/Access\\_Personality/Access\\_Personality\\_List/OPQ32+Product+detail.htm](http://www.shl.com/SHL/au/Products/Access_Personality/Access_Personality_List/OPQ32+Product+detail.htm)

The research reported in this paper is exploratory in nature and contributes to understanding the behavioral profile of effective project managers, from the perspective of senior managers. To accomplish this, we addressed six specific questions:

1. Which personality characteristics do senior managers perceive as those most often associated with more effective project managers?
2. Which personality characteristics do senior managers perceive as those least often associated with more effective project managers?
3. Is there any consistency among the perceptions of senior managers regarding the most often and the least often demonstrated personality characteristics?
4. Which behavioral competencies do senior managers deem essential to superior project manager performance?
5. Does perceived organizational project management maturity influence a senior manager's choice of the personality characteristics and the behavioral competencies that are common among *superior project managers*?
6. Does the senior manager's role influence the characteristics and behavioral competencies they perceive as essential for superior project manager performance?

To obtain answers to these questions, we asked the supervisors of project managers to think about the most successful project managers they had known and to use these individuals as the model for rating 32 personality dimensions and 20 behavioral competencies. We then analyzed these results and compared these with those from a study of superior-performing project managers in the construction industry, as judged by senior managers (Dainty, Cheng, & Moore, 2005), and with the behaviors identified in IPMA's *ICB* and PMI's *PMCD Framework*.

## Background

Cheng and Dainty's (2005) research into the behavioral profile of superior-performing project managers is one of the field's first research efforts of its kind. Relying upon the perceptions of senior managers, the authors identified twelve behavioral competencies (see Appendix B for complete listing) that distinguished superior-performing project managers in a sample drawn from the construction industry. Dainty, Cheng, and Moore (2005) contributed to the discussion on the twelve behavioral competencies by comparing the behavioral competencies of client-focused (client's project manager) and production-focused (contractor's project manager) project managers. Their aims were twofold: To identify the extent to which a project manager's behavioral characteristics were determined by project management function; and to identify the nature of the project management activity or role that the project manager performed. Their research found that eleven of the top twelve behavioral competencies for project managers were, in general, common to both client- and production-focused project managers. This finding provides support for the possibility of a single core set of desirable behavioral competencies for project managers. As for the twelfth competency, the key difference was that client-focused project managers are organizationally aware, whereas production-focused project managers are more directive-oriented. The difference supports the notion that although there may be a core set of behaviors that underpin superior project manager performance, local specialization accounts for role differences, which researchers should recognize when building a behavioral model.

Muller and Turner (2007) identified another behavioral characteristic of project managers, which they found via their investigation of the differing leadership styles of project managers in relation to project type. In this study Muller and Turner used the Emotional Intelligence framework to assess the leadership and behavioral aspects of project managers in relation to the types of project they manage. The results of their study support their underlying hypothesis that the project manager's leadership style, and the type of project they manage, affect the project's outcome. This suggests that there is a significant variability in what might be considered *successful* behavioral profiles of project managers for different project types.

Mullaly and Thomas (2004) used a Jungian-based instrument, called Insights Discovery, to explore the influence that a project manager's personality has on delivering a successful project outcome. Although the early findings of this research suggested that certain aspects of personality do have some influence on project success, the researchers concluded that the linkages between personality, other aspects of competency, and project management success are tentative.

Dvir, Sadeh, and Malach-Pines (2006) pursued a similar theme in an exploratory interdisciplinary study looking at the relationships which exist between project types, personality traits of project managers, and project success. Their results only provided tentative support for their hypothesis, that the fit between a project manager's personality and management style is crucial to project success. Gehring (2007) used a Meyers-Briggs (MBTI) indicator and found that certain MBTI types appeared to have preferences that would support leadership. Sunindijo, Hadikusumo, & Ogunlana (2007) investigated the leadership styles of construction project managers through the lens of emotional intelligence (EI) and found some evidence that delegating, open communication, and proactive behavior could bring positive outcomes to the organization.

In the search for behavioral profiles that distinguish superior-performing project managers, we found that one important factor is identifying those project managers that are perceived to be superior performers. Both Cheng and Dainty (2005) and Crawford (2005) relied upon the perceptions of senior managers to make this distinction. Although Crawford's work found no statistically significant relationship between project manager performance—as measured by a knowledge test and use of project management practices—and senior management perceptions of performance, she noted that this relationship is complex and “will be influenced by factors including the personality and behavioral characteristics of both the project personnel and their supervisors” (Crawford, 2005, p13).

Crawford (2005) defined competence as a combination of knowledge, skills, experience, demonstrable performance, and personal competence which includes attitudes, motivation, behaviors, and personality characteristics. Personal competence is identified as the dimension of competence that has potential to differentiate between threshold and superior performance. She identified—as a potential area of research—the exploration of senior management perceptions of personality and the behavioral characteristics of successful project managers. As Crawford discovered, perceptions of senior managers may not always be accepted as providing an accurate assessment of competence, but they have a significant influence on the career path of individual project managers, the development of a project culture within organizations, and the recruitment of new project managers into the organization. Thus, the perceptions of senior managers warrant a more in-depth understanding.

## Methodology

To address the six questions identified in the introduction to this paper, we selected a quantitative approach, using data collected through the use of a Web-based survey. The research reported here is part of a larger survey that contained a wide range of questions for project managers and their supervisors. Participants for the research study were recruited through a process whereby organizations agreed to participate by providing between 5 and 20 project managers and their managers to complete the Web-based survey. Data was collected over a period of six months.

## Measures

This paper reports on the analysis of a subset of the data captured during this study. All data was captured using an online questionnaire. The measures used include *demographics* (gender, age, country of work, country of birth), *current role*, and *perceived level of project management maturity of the organization* (in which the subject was employed). The measures of organizational project management maturity and current role of the senior manager were selected to address research questions 5 and 6 above. Demographics were included to ensure an adequate understanding of the sample was obtained.

The measure of organizational project management maturity was a single-item measure based on the following five levels of organizational maturity, as defined by the Software Engineering Institute's (SEI) Capability Maturity Model Integrated (CMMI) (SEI, 2006):

- 1 = *Initial, ad hoc, and chaotic*
- 2 = *Repeatable project management system and experience*
- 3 = *Defined, organization-wide project management system*
- 4 = *Managed, stable, and measured processes*
- 5 = *Optimizing organization focused on continual improvement*

When conducting research that involves personality characteristics, it is wise to use well-tested and validated instruments. For this reason, in this study, we measured *Personality Dimensions* using the thirty-two (32) personality dimensions of the SHL Occupational Personality Questionnaire (OPQ32)(Saville and Holdsworth, 2006).

To complete this survey, our subjects were required to rate—using a five-point scale—how each dimension related to an effective project manager. Subjects were instructed to think of the most successful project managers they had encountered when scoring each dimension. A description of the dimension was provided at score 1 and for score 5.

*Behavioral Competency Dimensions* were measured using the Universal Competency Framework, consisting of twenty (20) dimensions and descriptions developed by SHL. Subjects were required to identify the six (6) dimensions that are essential for a superior-performing project manager and the six (6) dimensions that are desirable.

We selected the SHL tool set based on its wide-spread use in the business community for assessing workplace personality and behavioral competence. The SHL tool set, developed by Professor Peter Saville and Roger Holdsworth in 1984, has been used in over 4,000 organizations worldwide. Evidence supporting the job-related validity of the OPQ32 instruments has been reported in a number of studies across a range of industry sectors and job types (Bartram & Brown, 2004; Robertson & Kinder, 1993; Saville, Sik, Nyfield, Hackston, & MacIver, 1996).

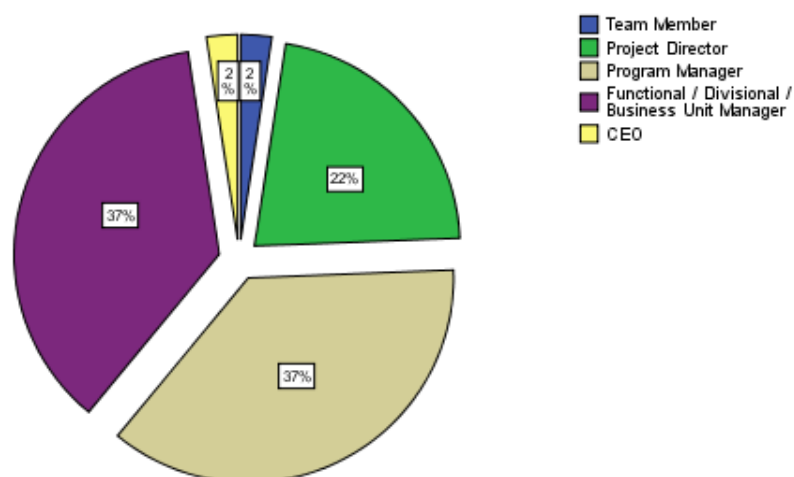
## Results

### Descriptive Statistics

*Participants:* Subjects for this study are supervisors of project managers (N = 41) from eleven organizations that agreed to participate in the study; one set of results, however, was incomplete for some analysis and was therefore omitted. The sample includes 30 males (73.2%) and 11 females (26.8%), with 58.3% of the sample aged between 41 and 50 years and no subjects under the age of 30 years.

The roles which most subjects performed were program manager (37%) and functional or line manager (37%). The next most widely reported role was project director (22%).

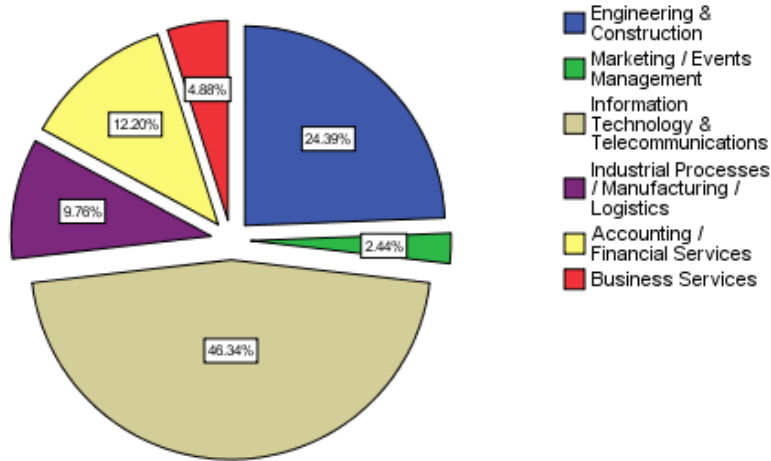
**Figure 1. Current role**



Participants were asked to report on the category which best describes their area of professional discipline, of which 46.34% of subjects reported as information technology (IT) and

telecommunications, 24.49% reported engineering and construction (E&C) and 12.2% reported financial services. (See Figure 2 for details.)

**Figure 2. Areas of professional discipline**



The sample was geographically dispersed in regards to where the subjects worked, the details of which are documented in Table 1 below. The three countries that contributed over 60% of the sample population include Australia (22%), United Kingdom (UK) (29.3%), and China (14.6%). Table 2 details the subjects' country of birth. In comparing the data listed in Tables 1 and 2, we found that some subjects moved between countries; for the most part, however the subjects were working in their country of birth.

**Table 1. Country of work**

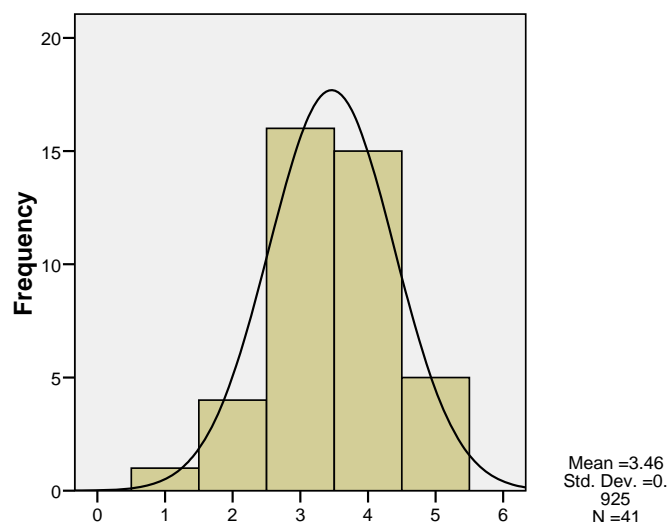
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Australia	9	22.0	22.0	22.0
Brazil	1	2.4	2.4	24.4
China	6	14.6	14.6	39.0
Croatia	1	2.4	2.4	41.5
Germany	2	4.9	4.9	46.3
Greece	1	2.4	2.4	48.8
India	1	2.4	2.4	51.2
New Zealand	1	2.4	2.4	53.7
S E Asia (multiple countries)	1	2.4	2.4	56.1
Singapore	3	7.3	7.3	63.4
Thailand	1	2.4	2.4	65.9
UK	12	29.3	29.3	95.1
USA	1	2.4	2.4	97.6
Vietnam	1	2.4	2.4	100.0
Total	41	100.0	100.0	

**Table 2. Country of birth**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Australia	7	17.1	17.1	17.1
	Bosnia	1	2.4	2.4	19.5
	Brazil	1	2.4	2.4	22.0
	Canada	1	2.4	2.4	24.4
	China	6	14.6	14.6	39.0
	Germany	1	2.4	2.4	41.5
	Greece	1	2.4	2.4	43.9
	India	1	2.4	2.4	46.3
	Laos	1	2.4	2.4	48.8
	Malaysia	2	4.9	4.9	53.7
	New Zealand	1	2.4	2.4	56.1
	Romania	1	2.4	2.4	58.5
	Singapore	2	4.9	4.9	63.4
	Thailand	1	2.4	2.4	65.9
	UK	13	31.7	31.7	97.6
	USA	1	2.4	2.4	100.0
	Total	41	100.0	100.0	

We also analyzed the perceived organizational maturity of each subject's organization. The majority of subjects reported working in an organization with a maturity level of 3 (*Defined, organization-wide project management system*). This was followed closely by those who reported working in an organization with a maturity level of 4 (*Managed, stable and measured processes*). These results show a much stronger level of organizational maturity than that possessed by the organization's project managers (Aitken and Crawford, 2006) indicating a difference between the perceptions of senior managers and project managers when observing the same phenomenon. Figure 3 below depicts the frequency and normalized curve for perceptions of organizational project management maturity.

**Figure 3. Perceived organizational maturity**



### Descriptive Statistics

Senior management participants were asked to think of the most successful projects managers they have encountered or managed and to rate 32 dimensions, as defined in the SHL OPQ, in terms of the relevance in describing an effective project manager. Table 3 shows these descriptive statistics.

**Table 3. Descriptive statistics for personality dimensions**

	Mean	Std. Deviation	N
Persuasive	4.03	0.660	40
Controlling	4.23	0.800	40
Outspoken	3.75	0.707	40
Independent minded	2.93	0.944	40
Outgoing	3.68	0.971	40
Affiliative	3.58	0.984	40
Socially confident	4.10	0.672	40
Modest	2.73	1.037	40
Democratic	3.68	0.730	40
Caring	3.40	0.778	40
Data rational	4.00	0.716	40
Evaluative	4.05	0.714	40
Behavioral	4.03	0.891	40
Conventional	2.83	0.844	40
Conceptual	2.53	0.960	40
Innovative	3.58	1.083	40
Variety seeking	3.48	0.751	40
Adaptable	3.73	1.086	40
Forward thinking	4.00	0.877	40
Detail conscious	3.40	0.841	40
Conscientious	4.48	0.751	40
Rule following	3.10	0.928	40
Relaxed	3.25	1.214	40
Worrying	2.25	1.104	40
Tough minded	3.98	0.800	40
Optimistic	3.60	0.810	40
Trusting	3.28	1.037	40
Emotionally controlled	3.30	1.114	40
Vigorous	4.38	0.705	40
Competitive	3.90	0.955	40
Achieving	3.85	0.834	40
Decisive	3.53	0.751	40

The following personality characteristics were perceived by senior managers as indicative of an effective project manager (characteristics which were rated above 4 on the 5-point scale):

- **Conscientious** - Sticks to deadlines, completes jobs, perseveres with routine, and likes fixed schedules.
- **Vigorous** - Thrives on activity, likes to keep busy, and enjoys having a lot to do.
- **Controlling** - Takes charge, directs, manages, organizes, and supervises others.
- **Socially Confident** - Comfortable with strangers and likes to put others at ease.
- **Evaluative** - Critically evaluates information, looks for potential limitations, and focuses upon errors.
- **Persuasive** - Enjoys selling, changes opinions of others, convincing with arguments, and negotiates.
- **Behavioral** - Analyses thoughts and action, psychologically minded, and likes to understand people.



Senior managers perceived the following personality characteristics as less important (characteristics which were rated with a score of 3 or lower), as those personality characteristics which senior managers perceive as not required to successfully perform as a project manager:

:

- **Independent Minded** - Has strong views on things, difficult to manage, speaks up, and argues.
- **Conventional** - Preserves well proven methods, prefers the orthodox, disciplined, and conventional.
- **Modest** - Reserved about achievements and avoids talking about self.
- **Conceptual** - Theoretical, intellectually curious, and enjoys the complex and abstract concepts.
- **Worrying** - Worries when things go wrong, keyed-up before special events, and anxious to perform.

The standard deviation was moderate for most dimensions; however, there were a number places where the deviation was significant (greater than 1). This variation—in combination with the fact that no dimensions reported a mean lower than 2.24—suggest that there is no single personality profile for an effective project manager. Interestingly, none of the factors with high levels of standard deviation were included in the group of top-scoring dimensions, indicating that there is more agreement about the top few personality dimensions than those further down the list. The following dimensions are those in which the standard deviation was greater than one:

- **Relaxed** - Calm, relaxed, cool under pressure, free from anxiety, and can switch off.
- **Emotionally Controlled** - Restrained in showing emotions, keeps feelings back, and avoids outbursts.
- **Worrying** - Worries when things go wrong, keyed-up before special events, and anxious to perform
- **Adaptable** - Changes behavior to suit the situation and adapts approach to different people.
- **Innovative** - Generates ideas, shows ingenuity, and thinks up solutions.
- **Modest** - Reserved about achievements and avoids talking about self.
- **Trusting** - Trusts people, sees others as reliable and honest, and believes what others say.

The frequency of behavioral competencies that were reported as essential to a superior-performing project manager are listed in Table 4 below. The top-rated essential behavioral dimension—with 78% of the sample identifying it as *Essential*—is *Planning and Organizing* which is closely followed by *Delivering Results and Meeting Customer Expectations*. Three (3) other dimensions were reported as essential by over 50% of the sample; these include *Deciding and Initiating Action* (66%), *Leading and Supervising* (59%), and *Persuading and Influencing* (54%).

Given these results, the following are some of the behaviors expected of *superior project managers*:

- Identifying and organizing resources needed to accomplish tasks.
- Consistently achieving project goals.
- Taking responsibility for actions, projects, and goals.
- Initiating and generating activity.
- Delegating work appropriately and fairly.
- Gaining clear agreement and commitment from others by persuading, convincing, and negotiating.

The sample universally reported that the two (2) dimensions of *Achieving Personal Work Goals and Objectives* and *Creating and Innovating* were not essential to being a superior-performing project manager.

**Table 4. Essential behavioral dimension**

	<b>Frequency</b>	<b>% of Sample</b>
Planning and organizing	32	78%
Delivering results and meeting customer expectations	30	73%
Deciding and initiating action	27	66%
Leading and supervising	24	59%
Persuading and influencing	22	54%
Analyzing	15	37%
Working with people	14	34%
Presenting and communicating information	13	32%
Relating and networking	9	22%
Coping with pressures and setbacks	8	20%
Adapting and responding to change	7	17%
Adhering to principles and values	5	12%
Formulating strategies and concepts	3	7%
Learning and researching	2	5%
Following instructions and procedures	2	5%
Applying expertise and technology	1	2%
Entrepreneurial and commercial thinking	1	2%
Writing and reporting	1	2%
Achieving personal work goals and objectives	0	0%
Creating and innovating	0	0%

### **Correlation Analysis**

We performed a bivariate correlation analysis to assess the relationship between the variables of organizational maturity and role type against the personality dimensions from the SHL model that senior managers rated as most often demonstrated by *superior project managers*. Through this analysis, we explored the following research questions:

- Does perceived organizational project management maturity influence the selection of personality characteristics and behavioral competencies senior management report as important for superior project managers?
- Does the role of the senior manager influence the characteristics they perceive to be essential for superior project manager performance?

Given the small sample size, the statistical validity of the analysis must be considered weak overall; however, it does provide an indicator for future research.

We created a nominal Role Type variable using the Role data (see Figure 1). We coded as zero the project-oriented roles of team member, project manager, project director, and program manager; we also coded as one the business-oriented roles of functional/business unit manager and chief executive officer (CEO). We created this new variable to explore the question of whether the type of role, that which the supervisor holds, is correlated to their selection of personality characteristics of effective project managers.

We identified several significant correlations. We found that supervisors fulfilling project-type roles were more likely to report *Forward Planning*, *Relaxed*, and *Achieving* personality characteristics as being demonstrated by successful project managers. This means that supervisors with a background in project management were more likely to identify successful performers as being people who prefer to plan ahead, who are able to switch off from the demands of work, and who are ambitious and results-focused. There were no significant correlations between business role type and the personality dimensions, indicating that there were no statistically significant relationships between the supervisors

who come from a business role (rather than a project role) and the selection of particular personality characteristics.

The perceived project management maturity of the organization was negatively correlated with *Conventional*. The higher the perceived level of an organization's project management maturity, the lower the personality characteristic of *Conventional* rated. This is an unexpected relationship. From previous experience with the SHL model in other industries, we would have thought that as organizations become more mature in their project management practices, they would require less scope for trying new approaches and there would be more emphasis on people conforming to established work methods. This result, however, suggests that organizations who have mature project management practices do value project managers who are able to identify unconventional approaches and new ways of implementing projects.

Our study results confirms previous SHL research (SHL, 2005) and identifies the following relationships between dimensions:

- Conscientious is positively related to Vigorous.
- Vigorous is related to Achieving.
- Controlling is positively related to Outspoken.
- Socially Confident is negatively related to Worrying and positively related to Optimistic.
- Persuasive is positively related to Controlling and Socially Confident.
- Behavioral is positively related to Conceptual and Caring.

We conducted a second bivariate correlation to assess the relationship between the variables of organizational maturity, role type, and the twenty (20) behavioral competencies from the SHL Universal Competency Framework (SHL, 2004).

We found no significant correlations between role type and selected behavioral competencies. We found only one significant correlation between perceived organizational project management maturity and the behavioral competency, namely *Analyzing*. More mature organizations were less likely to select the *Analyzing* competency (defined as *Analyzing information, probing for clarity, producing solutions, making judgments, and thinking systemically*) as essential. This is understandable, since in more mature organizations, the processes are in place for project managers to follow and there would be less need to initially identify the scope and requirements of the project manager's role.

## Discussion

The possibility of defining a core set of behavioral competencies that characterize a superior-performing project manager—across all projects and industries—is appealing and would, if possible, be welcomed by both the research and the practice communities. The appeal of this outcome is evident in the rise in the number of project management standards with not only technical project management competencies but also the personal or behavioral competencies. Given the limited research in the field, and the varied results thus far obtained, we believe that the field must examine the following question: *Do the behaviors in the standards represent desirable behavioral characteristics for all project managers?*

Dainty et al. (2005) compared their findings from the construction industry to the behavioral characteristics listed in the *Association of Project Management Body of Knowledge (APMBoK)* (Dixon, 2000). Dainty et al. found that all six of the behaviors listed in the *APMBoK* could be matched to one—or part of one—of the behaviors identified in their study. However, of the eleven behavioral competencies that Dainty et al. found, only eight are mapped to the *APMBoK*. The eight that were mapped were only partial matches. The remaining three were not included in the *APMBoK*. These results can be found in Appendix B.

The two most recently released project management standards which include behaviors or personality characteristics are the IPMA International Competency Baseline (ICB) (2006) and the Project Management Institute's (PMI) Project Manager Competency Development (PMCD) Framework (2007). A comparison of the top eight behaviors identified in this study as essential for effective project managers to possess by more than 30% of the sample, Dainty et al.'s findings, the behaviors from the

IPMA ICB and the personal competencies from the PMI PMCD framework is documented in Table 5 below. The comparison between the results from this study and the Dainty et al (2005) findings shows significant overlap. The behaviors perceived to be essential for effective project managers by senior management are similar to those behaviors that Dainty et al found in actual superior project managers. This result may be explained due to the selection process for the sample in the Dainty et al.'s (2005) research. In this research superior performers were identified by a panel of HRM specialists and senior managers. However the overlap between the two sets of findings provides support for the notion that senior management perceptions of success are common across at least the two samples provided. Given the sample for this study was broader than just the construction industry it provides an indication that perhaps Dainty et al.'s (2005) research may be applicable to a more general population.

The comparison of this study and the results from Dainty et al. (2005) with the two selected project management standards show a marked difference. There is limited overlap between any of the behaviors documented in the IPMA's ICB (2006). Only four of the sixteen behaviors (25%) are able to be mapped to the results from Dainty et al.'s research and only two (12.5%) are mapped to the findings from this research. Only two of the five (40%) of the personal competencies in the PMI's PMCD Framework (Project Management Institute, 2007) are mapped to the results from Dainty et al.'s research, and only one (20%) is mapped to the findings from this research. The limited overlap—to the behavioral competencies documented in the two more recently published project management standards—draws into question the validity of the behavioral and personal competencies espoused in our leading standards. A possible explanation for the discrepancy may lie in the development process of the standards. Project manager standards are typically developed by a process of collaboration of project managers. Project manager perceptions—about which behavioral or personal competencies are required for superior performance—may differ from those of senior managers.

**Table 5. Comparison of findings from this study as well as from Dainty et al. (2005) study, IPMA's ICB, and PMI's PMCD Framework**

<i>Equivalent Behaviors Documented in this study</i>	<i>Dainty, Cheng &amp; Moore 2005</i>	<i>IPMA ICB V3</i>	<i>PMI - PMCD</i>
Delivering results and meeting customer expectations	Achievement orientation	Results orientation	
Deciding and initiating action	Initiative		
	Information seeking		
Delivering results and meeting Customer expectations	Focus on client's needs		
Persuading and influencing	Impact and influence		
Working with people	Teamwork and cooperation		
Leading and supervising	Team leadership	Leadership	Leading Managing
Analyzing	Analytical thinking		
	Conceptual thinking		Cognitive ability
	Self control	Self-control	
	Flexibility	Openness	
Presenting & communicating information *		Efficiency*	Communicating*
		Engagement & Motivation*	Effectiveness*
		Values appreciation*	Professionalism*
		Ethics*	
		Creativity*	

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<i>Equivalent Behaviors Documented in this study</i>	<i>Dainty, Cheng &amp; Moore 2005</i>	<i>IPMA ICB V3</i>	<i>PMI - PMCD</i>
		Relaxation*	
		Reliability*	
		Consultation	
		Assertiveness	
		Negotiation	
		Conflict and crisis	

\* = competencies absent from corresponding profile

## Conclusion

The project management community is currently working towards an understanding of the behaviors and personality characteristics that define successful project managers. Thus far, limited research has been conducted; however, there are a few significant studies that have been reported in recent times. The results of this study show that there is a moderately consistent view of the personality characteristics that are demonstrated by successful project managers. These characteristics include the traits of *Conscientious, Vigorous, Controlling, Socially confident, Evaluative, Persuasive, and Behavioral*. The least frequently reported characteristics include *Independent-minded, Conventional, Modest, Conceptual, and Worrying*. The variation in what is considered successful is spread across seven (7) of the thirty-two (32) factors, over 20% of the factors assessed.

However, there are a number of personality characteristics that showed high levels of statistical deviation, indicating a wide range of disagreement about their importance to successful project management. These included *Relaxed, Emotionally controlled, Worrying, Adaptable, Innovative, Modest, and Trusting*. These high levels of standard deviation lend support to the notion that what is not feasible is a *one-size-fits-all* approach to defining the personality profile of the successful project manager. Given that there are many ways to look at this issue, a single personality profile for superior-performing project managers is also arguably undesirable.

The behavioral competencies reported as being essential to being a superior performing project manager included *Delivering Results and Meeting Customer Expectations, Planning and Organizing, Deciding and Initiating Action, Leading and Supervising, and Persuading and Influencing*. There was considerably more consistency between the ratings for behavioral competencies than for personality characteristics. A possible explanation for this increase in consistency may be that defining the successful project manager at the personality level may be too granular and individual differences and combinations make agreement difficult. By taking the assessment a level higher, to the behavioral competence level, we could more readily perceive an agreement on what behaviors are essential to superior performance. This is also consistent with the widespread use of behaviorally based competency models ((Boyatzis, 1982), (Spencer and Spencer, 1993) although these are usually defined in terms of behaviors associated with superior performance across all roles in a specific organization.

Although this research has provided a useful basis for understanding the personality characteristics and behavioral competencies required for successful project managers, as perceived by senior managers, there are a number of limitations to the study. First, the sample size of forty-one (41) senior managers is small and in future studies should be expanded, although it should be noted that access to data from senior managers is notoriously difficult to secure. Second, future studies could examine actual assessments of the personality characteristics and the behavioral competencies of practicing project managers, conducting these by using a psychometrically valid assessment tool (e.g., SHL OPQ32) which would provide a useful counterpoint to a manager's perceptions of appropriate competencies and behaviors.

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## Appendix A

**Table 6. Correlation results - Personality characteristics**

	RoleType	Org Maturity
RoleType	1	-0.077
Org Maturity	-0.077	1
Char01	0.129	0.147
Char02	-0.025	0.128
Char03	-0.166	0.146
Char04	0.118	0.071
Char05	-0.114	0.033
Char06	0.020	0.030
Char07	0.039	0.086
Char08	0.107	-0.021
Char09	0.063	-0.031
Char10	0.067	0.191
Char11	-0.146	-0.038
Char12	0.092	-0.037
Char13	-0.139	-0.076
Char14	-0.085	-0.315*
Char15	-0.048	-0.142
Char16	0.115	0.053
Char17	-0.148	0.072
Char18	-0.090	-0.045
Char19	-0.537**	0.219
Char20	0.124	0.046
Char21	-0.078	-0.001
Char22	0.028	0.033
Char23	-0.334*	0.096
Char24	0.059	-0.068
Char25	-0.106	-0.018
Char26	-0.194	0.190
Char27	0.044	0.206
Char28	-0.258	0.007
Char29	0.028	-0.200
Char30	-0.192	0.083
Char31	-0.361*	-0.137
Char32	-0.061	-0.145

\*Correlation is significant at the 0.05 level (2-tailed).

\*\*Correlation is significant at the 0.01 level (2-tailed).

**Table 7. Correlation results - Behavioral dimensions**

	RoleType	Organizational Maturity
RoleType	1	-0.077
Organizational Maturity	-0.077	1
Dim01	-0.242	0.082
Dim02	-0.057	-0.045
Dim03	-0.102	0.268
Dim04	-0.082	0.236
Dim05	-0.135	0.064
Dim06	-0.164	0.000
Dim07	0.092	-0.073
Dim08	-0.071	0.140
Dim09	0.000	0.211
Dim10	0.167	-0.358*
Dim11	-0.067	0.157
Dim12	0.088	-0.207
Dim13	-0.091	-0.096
Dim14	0.235	-0.111
Dim15	0.043	-0.168
Dim16	-0.098	0.103
Dim17	0.288	0.083
Dim18	0.309	-0.203
Dim19	-0.114	-0.045
Dim20	-0.171	0.034

\*Correlation is significant at the 0.05 level (2-tailed).

\*\*Correlation is significant at the 0.01 level (2-tailed).

## Appendix B

**Table 8. Dainty, Cheng, and Moore's (2005) behavioral competencies**

<i>Client's Project Manager</i>	<i>Contractor's Project Manager</i>
Customer service orientation	Customer service orientation
Initiative	Initiative
Conceptual thinking	Conceptual thinking
Information seeking	Information seeking
Achievement orientation	Achievement orientation
Teamwork and cooperation	Teamwork and cooperation
Team leadership	Team leadership
Analytical thinking	Analytical thinking
Impact and influence	Impact and influence
Flexibility	Flexibility
Self-control	Self-control
Organizational awareness*	Directiveness*

\* = competencies absent from corresponding profile

**Table 9: Dainty, Cheng and Moore's (2005) identified behaviors, as compared to APM (2000) behavioral characteristics**

<i>Behavioral Characteristics of Project Managers (APM, 2000)</i>	<i>Equivalent Behavior Identified in Dainty et al.'s Study</i>
Adaptability	Flexibility
Attitude	Achievement orientation
Commitment	Achievement orientation
Common sense	Information seeking/Analytical thinking/Conceptual thinking
Fairness	Teamwork and cooperation/Team leadership
Inventiveness	Initiative/Conceptual thinking
Prudent risk taker	Achievement orientation/Analytical thinking
Open-mindedness	Flexibility

(Dainty et al., 2005)