Empirical Study of the Facility Management Profession

by
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Abstract

Purpose – The purpose of this paper is to verify preexisting perceptions of the Facility Management industry through the collection of empirical evidence that establishes the current state of the profession. Data collected will identify the major challenges facing the Facility Management industry, and will be used in the development of proposed academic programs to address these challenges.
Design/methodology/approach – Two online surveys of Facility Managers on the national and local scale were used to produce a quantifiable description of the profession and its deficiencies. These surveys also focused on obtaining data to aid in the development of formal academic programs to train future Facility Managers and measured the willingness of industry representatives to support the proposed academic programs.
Findings – Results revealed that there is an insufficient number of Facility Managers entering the field to account for the high rate of attrition that will occur in the next ten to fifteen years. The main reason for the lack in new Facility Managers is the severely limited number of formal academic programs that specifically educate students in Facility Management.
Originality/value – Results of this research were valuable in that they quantified the main challenges facing the profession as well as the willingness of the Facility Management industry to support and recruit from proposed undergraduate programs. Collected data was also used to develop a specific undergraduate curriculum to educate students in the core skills needed to become successful Facility Managers.
Keywords Facility management, Industry Characteristics, Facility Management Industry Information, Education, Retirement

Research Details

Introduction

The profession of Facility Management (FM) coordinates the operation of the built environment and its assets, utilizing the principles of multiple disciplines to manage the functions of people, processes, and technology in a cost effective manner (IFMA, n.d.). Facility

Managers (FMs) are responsible for managing all aspects of the workplace in order to enhance the overall performance of their specific organization (Edum-Fotwe et al, 2003).

The FM profession is continuing to gain industrial importance as competition increases within the growing global market. Businesses have realized that their facilities require considerable investments of resources, making the proper management of operations essential to success (Badger & Garvin, 2007b; Cotts, 1999). The significance of Facility Management in the business world will only increase as occupancy costs continue to rise and greater emphasis is placed upon improving energy efficiency and sustainable operations (Then, 2003; Edum-Fotwe et al, 2003).

Problem Statement and Literature Review

Problem Statement

Even with the growing importance of FMs in the business world, little data currently exists to quantify the present state of the facility management industry. The lack of empirical data has resulted in the formation of largely negative perceptions of the FM profession, its deficiencies, and its future (Georgoulis, 2008). Among these perceptions are that Facility Managers are generally male, with low levels of secondary education, moderate levels of job satisfaction, and are an aging workforce that will soon reach retirement (Arizona Workforce Informer, 2008; Georgoulis, 2008). The FM field is also viewed as having an ill-defined career path, with very few FM academic programs to educate students, which thus hinders the influx of new talent entering the profession. While all of these perceptions contribute to the overall belief that the current industry has many inadequacies, none have been validated with documented data. As a result, it becomes difficult to address and prioritize these issues without further substantiation beyond individual speculation.

The purpose of this research is to collect empirical data to create a more accurate perception of the modern facility manager in order to recognize the current challenges facing the FM profession. Once these issues have been identified, a plan of action can then be developed in hopes of resolving the issues and ensuring the future success of the FM field.

Problem Statement Background: *Literature Review and Common Perceptions*

An extensive literature review of facility management sources confirmed that very little data about the FM profession is currently available (Georgoulis, 2008). However, there is a substantial amount of documentation that discusses the perceptions of the FM industry and its deficiencies. The general perception held by both the FM industry and the external population, is that the profession is largely in disarray due to its perceived inadequacies (Georgoulis, 2008).

The central perceived deficiency discussed in the literature is the impending retirement of the majority of the aging FM workforce (Arizona Workforce Informer, 2008). This presents a large challenge to the FM industry, as this trend could potentially translates into vast amounts of unmanaged space as well as loss in productivity, system failures, and increasing costs in energy (Georgoulis, 2008).

This issue is exacerbated by the perception that the career path to becoming a Facility Manager is ill defined, thus impeding the entrance of new talent into the field. This belief persists due to the fact that so few educational programs are available to specifically train Facility Managers and recruit cross-over FMs from other academic fields (Badger & Garvin 2007a). Currently, only five universities offer BS degrees in Facility Management (Brigham Young University, Ferris State, North Dakota State, Cornell University, Wentworth Institute), and five offer MS degrees in Facility Management (Arizona State University, Georgia Tech, Texas A&M, Cornell University, Pratt Institute). Due to the small number of FM academic programs, "little university and private research information exists in the field of facilities asset management and even less research funding is being introduced or implemented (Badger & Garvin, 2007b)."

The lack of academic programs available to educate new FMs leads to the further perception that the overall education level for the profession is low. Many believe that the majority of FMs are high school graduates with little or no trade school experience. The general view is that only a small percentage of FMs possess a bachelor's degree, and few to none have completed any advanced degree training (Georgoulis, 2008).

The authors have summarized the perceptions held of the FM field based on the literature research in addition to Stephen Georgoulis' 30 years of experience as a Certified Facility Manager at the City of Phoenix (Georgoulis, 2008).

Table 1: Common Perceptions of the FM Profession

Criteria	Perception
Level of Education Before FM Career	Trade School of Some College
Current Level of Education	25% Bachelor's Degree of Higher
Industry FMs Originate From	Building Trades
Professional Certifications Held	20% Have a Certification
Level of Job Satisfaction	50% Satisfied with FM Career
Years Until Retirement	35% Retiring in 10 Years
Level of Confidence in Future FMs	Moderate Level of Confidence
Recruiting of FMs	75% Recruiting
Succession Planning for FMs	80% Have a Succession Plan
% Who Would Take Advantage of an Undergrad Program	60% Would Take Advantage of an Undergrad Program
Value Placed on an FM Undergraduate Program	90% Value Program

Research Objective

The research performed has three main objectives:

1. To gather empirical data in order to provide an accurate description of the Facility Management industry's current state. This data will be used as evidence to verify the accuracy of the general perceptions held of the FM profession.

2. To better establish the specific weaknesses within the facility management industry through quantifiable evidence. Data collection was further directed towards determining how the industry is currently planning to resolve the perceived deficiencies within the FM field.

3. To utilize empirical data to develop a structured formal education system through which to eradicate the weaknesses within the Facility Management field. Research focuses on data collection regarding the main qualities that industry representatives believe are most essential to training successful FMs, as well as the willingness of the industry to assist and cooperate with new FM educational programs. With this information, the ultimate objective is to work with representatives from industry and higher education institutions in order to develop the curriculum for new academic programs that specifically educate students in facility management.

Scope of Study

The overall scope of the study focuses on the facility management field within the United States, with national testing used to define the profession and its main problems. This area of research targeted members of the International Facility Management Association (IFMA) throughout the United States.

More specific research was also conducted regarding the specific problems existing in the FM profession. The scope of this data collection was centered on the FM industry in the Phoenix Metropolitan Valley (PMV).

Methodology and Data Collection Tools

Data collection was comprised of a National Survey and a local Phoenix Metropolitan Valley Survey (Georgoulis, 2008). These surveys were offered online through a website called Survey Monkey©, which collected and stored all responses in an online database where they could later be reviewed. In order to encourage participation, a cover letter was included with each survey that outlined the intent of the study and its benefits. Additionally, each survey was limited to ten questions that were designed to collect data to assist in the identification of deficiencies within the Facility Management profession.

National Survey

The National Survey was designed with the purpose of collecting empirical data to describe the FM profession on the national scale. Information collected included quantitative data regarding gender, age, education levels before and after becoming an FM, number of professional

certifications currently held, factors leading to FM career, previous fields of work, and overall career satisfaction.

The online National Survey was targeted towards IFMA members to ensure the surveys were completed by individuals that were actively involved in Facility Management. IFMA Chapters located throughout the United States were contacted in order to receive permission to survey their members. Once permission was obtained, a test group of more than 1,200 IFMA members from 16 different Chapters were contacted, and 247 individuals (20.6 percent response rate) completed the National Survey.

Phoenix Metropolitan Valley (PMV) Survey

The purpose of the PMV Survey was to collect data to determine the educational needs of the FM profession, along with the willingness of the existing industry to meet these needs. To accomplish this, the PMV Survey was created by a group called the FM Forum, which was comprised of industry experts along with representatives from the Higher Education community from the PMV area. Once survey results were collected, the FM Forum was tasked with developing a plan of action to address these educational needs by establishing the type of academic programs and curricula that must be implemented in the future.

The PMV Survey was sent to 709 members of Arizona-based professional organizations such as IFMA, PMI (Project Management Institute), and USGBC (United States Green Building Council). A total of 169 individuals throughout Arizona completed the survey (23.8 percent response rate), and members of the FM Forum compiled the results. These results were analyzed to validate perceptions about the educational needs of the FM field, and used as the basis upon which to construct the proposed educational programs needed to correct deficiencies within the profession.

Data Characteristics and Results

Data Collected from both surveys was divided into two main categories:

1. General Data Describing the Facility Management Industry
2. Quantification of FM Industry Deficiencies and Industry Willingness to Support Proposed FM Academic Programs

General Data Describing the Facility Management Industry

General data was collected through both surveys to provide an overall description of the FM industry, with information on the gender, age, education levels before and after becoming a Facility Manager, number of professional certifications currently held, factors leading to FM career, previous fields of work, and overall career satisfaction. The distribution of data collection in the National Survey is shown in Figure 1.

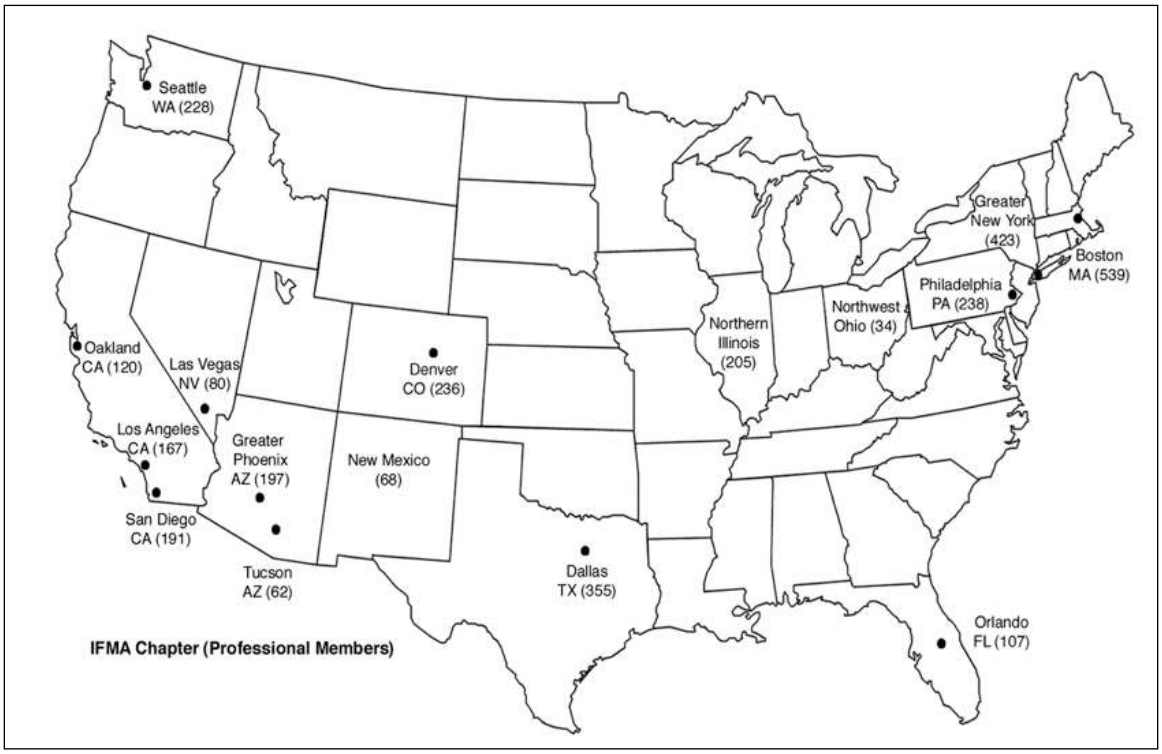

Figure 1: National IFMA Chapter Survey Distribution

The data collected confirmed perceptions that Facility Management is a male dominated field, with 75.3 percent of all respondents indicating they were male. Categorizing gender by age group revealed a much higher percentage of females in the younger age group of FMs, with 15.6 percent female in the 55 years or older group compared to 37.5 percent in the 29 years or younger age group (Table 2).

Further inspection of these results shows that older age groups dominate the FM profession. Survey results revealed that nearly 86 percent of respondents were 40 years of age or older, with roughly 55 percent at least 50 years of age. These results are cause for concern, as they indicate that the number of younger FMs entering the field will not be sufficient to replace the volume of FMs projected to retire in the next 10 to 15 years (Figure 2).

Table 2: National Survey Respondents Grouped by Gender and Age

Gender	**Age**								**Combined Values**
	29 or Younger	30-34	35-39	40-44	45-49	50-54	55-59	60 and Older	
Male	62.5%	70.0%	72.7%	66.7%	79.5%	67.4%	84.4%	84.2%	**75.3%**
Female	37.5%	30.0%	27.3%	33.3%	20.5%	32.6%	15.6%	15.8%	**24.7%**

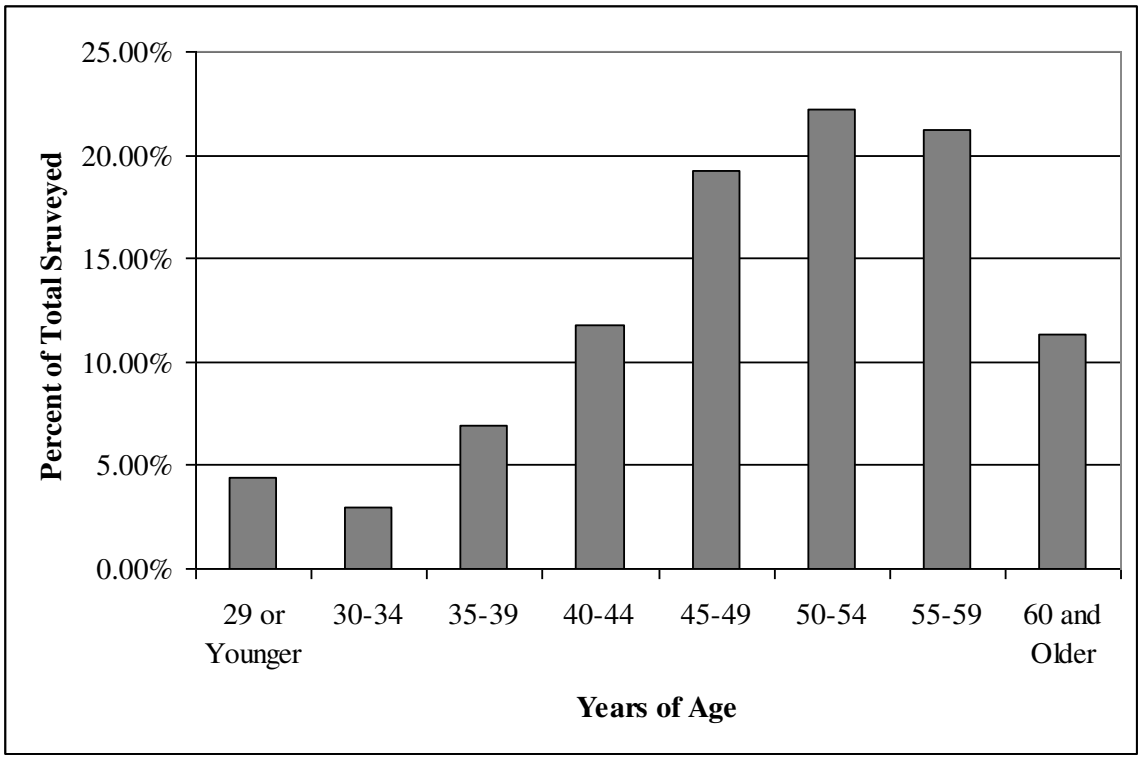

Figure 2: National Survey Respondents Grouped by Age

The National Survey also showed that 94.1 percent of respondents had at least some college experience at the beginning of their career. Once the respondents entered the facility management field, there was a shift towards higher levels of education. The greatest area of improvement was in the number of respondents that achieved a Master's degree after they became FMs, with an increase of 9 percent (Table 3).

Table 3: Education Levels Before and After Entering the FM Profession

Education Level	Percent Before	Percent After
High School/GED	5.90%	3.90%
Some College	20.70%	13.30%
Associates Degree	9.90%	7.90%
Bachelor's Degree	47.30%	49.30%
Master's Degree	15.70%	24.10%
Doctoral Degree	0.50%	1.50%
	100%	100%

The number of respondents that had earned professional certifications demonstrated the tendency of FMs to supplement their professional education. Most of these certifications require substantial studying commitments and continual education to maintain active status.

Nearly half of all respondents indicated that they had achieved professional certification (44 percent), with the most common certification being Certified Facility Manager (CFM) held by 30.8 percent (Table 4).

Table 4: Currently Held FM Certifications

Certifications	Percent
None, Not sure	55.6%
I am a FMP	8.6%
I am a CPM	2.0%
I am a PMP	3.0%
I am a CFM	30.8%
	100%

Data collection also focused on uncovering the motivating factors that caused the individuals to choose a career in facility management. Of those surveyed, approximately 27 percent of those surveyed specifically sought the role as a career, while an additional 24 percent made the natural transition from buildings trades to FM. These two groups represent the portion of FMs who consciously chose the profession, 50 percent of the total FM population. The most common driving force in the FM career path was company selection for the position. Once these results are classified according to age, it is apparent that younger FMs are more likely to be selected by their company or specifically seek the position, whereas older age groups of FMs more often transitioned into the FM profession from the building trades (Table 5).

Table 5: Factors Leading to Facility Management Career

Factors Leading to Career	Age								Total Results
	29 or Younger	30-34	35-39	40-44	45-49	50-54	55-59	60 or Older	
Specifically sought this as a career path	25.0%	40.0%	45.5%	25.0%	28.2%	23.3%	31.3%	21.1%	**26.8%**
Came from building trades, was a natural choice	12.5%	10.0%	9.1%	20.8%	33.3%	25.6%	37.5%	36.8%	**23.8%**
Selected by my company	50.0%	40.0%	45.5%	41.7%	33.3%	44.2%	28.1%	31.6%	**40.4%**
Not sure	12.5%	10.0%	0.0%	12.5%	5.1%	7.0%	3.1%	10.5%	**9.0%**
									100%

Since results confirmed the perception that a large portion of Facility Managers entered the profession from varying career paths, the survey also attempted to identify the occupations that most FMs originated from. Responses showed the career pathways that led to current FMs were extremely diverse, with almost 60 percent listing "Other" to describe their previous work experience. Half of the remaining FMs (20 percent) indicated that they had originated in the building trades and construction industry. These results remained consistent across all age ranges, although older groups more commonly transitioned from the building trades. Overall, these results verified the perception that the career path to the FM profession is quite varied (Table 6).

Table 6: Field of Work Before Facility Management Career

Previous Field	Percent
Building Trades / Construction	20.1%
Business	12.6%
Finance	3.0%
Supply Chain / Procurement	3.0%
Sales	3.0%
Other	58.3%
	100%

Despite the wide range of pathways into the facility management profession, 88.1 percent of respondents were either satisfied or very satisfied with their career choice. Only 3.7 percent indicated they were dissatisfied with their careers in FM (Table 7).

Table 7: Satisfaction in Facility Management Career

Satisfaction level	Percent
Very Satisfied	53.1%
Satisfied	35.0%
Neutral/ Not sure	8.0%
Dissatisfied	1.6%
Very Dissatisfied	2.1%
	100.0%

Quantification of FM Industry Deficiencies and Industry Willingness to Support Proposed FM Academic Programs

In order to better establish the specific weaknesses within the facility management industry, data collection was further directed towards determining how the FM industry is currently planning to resolve the perceived deficiencies within the FM field. As anticipated, the most

pertinent problem facing the Facility Management industry is the high rate of retirement of FMs in the near future. Results from the Phoenix Metropolitan Valley (PMV) survey revealed that over the next 10 years, 49 percent of respondents will retire from the workforce. This result is rather alarming, since almost half of the current FM population will no longer occupy FM related positions in 10 years time. If this time period is extended to only 15 years, a total of 73 percent of respondents indicated that they plan to retire. When these results are coupled with the small number of young FMs entering the profession, it does not appear that the FM industry will be able to backfill its projected vacancies with new, skilled FMs. While only the Phoenix Metropolitan Valley (PMV) was surveyed, it provides a good representation of the breadth of the problem. This fact emphasizes the urgent need for a proactive solution to attract new talent to the FM profession (Table 8).

Table 8: Projected Rate of Retirement for Current FMs

Time Until Retirement	**Percent**
Less Than 5 Years	13%
5 to 10 Years	36%
11 to 15 Years	24%
Over 15 Years	27%
	100%

In order to measure the severity of this challenge to the FM industry, the PMV survey attempted to quantify how companies planned to respond to the high retirement rates among their current employees. Of all industry representatives surveyed, 64 percent stated that their company did not currently have a succession plan ready to replace their retiring FMs. When asked how they planned to account for this, only 57 percent indicated that their companies anticipated to be actively recruiting new FMs within the next 5 years. Of even greater concern is that 67 percent of industry representatives surveyed do not have confidence that enough sufficiently trained young Facility Managers will be available to fill the void created by retirement (Table 9). These results revealed that the current FM industry is not prepared to manage the high rate of retirement among its FMs.

Table 9: Current FM Industry Recruitment Procedure

Succession Plan in Place	36%
No Succession Plan in Place	64%
Planned Recruiting Within 5 Years	57%
No Planned Recruiting Within Next 5 Years	43%
Confidence in Future FMs Availability and Skill Level	33%
Do Not Have Confidence in Availability and Skill Level of Future FMs	67%

The most logical solution to this problem is to provide a greater number of academic programs to attract and train new FMs, since so few programs currently exist. To attract a higher volume of young talent into the field, the FM Forum of industry experts and higher education representatives agreed that the establishment of new undergraduate facility management degrees is necessary. For this solution to succeed, however, it must be accepted and encouraged by the industry as a whole. To determine if this result is achievable, the PMV Survey questioned industry representatives on their willingness to utilize the proposed academic programs for FMs. When asked if they would support the creation of an undergraduate program to train new Facility Managers, 90% of respondents signified that the would value such a program. As a gauge for the willingness of companies to actually utilize an FM undergraduate program, 76% of industry representatives stated that their company would indeed utilize a recruiting program to work with undergraduate FM students. These results are encouraging, as they reveal the desire of the FM industry to develop the skills of young FMs before the achievement of an undergraduate degree (Table 10).

Table 10: Willingness of Industry to Utilize Proposed FM Academic Programs

Would Use Recruiting Program	76%
Would Not Use Recruiting Program	34%
Values Creation of FM Undergrad Program	90%
Does Not Value Creation of FM Undergrad Program	10%

The PMV Survey also aimed to receive industry feedback regarding how to establish an undergraduate curriculum to train FM students. To accomplish this, industry representatives were asked to rank the most important skills needed to ensure the long term success of Facility Managers. Of those surveyed, 53 percent rated leadership abilities as the most important skills FMs need. Communication skills was designated as the second most important skill set by 53 percent of participants, and technical skills were voted as the least important of the three skill sets by 70 percent of respondents (Table 11, Figure 3).

Table 11: FM Critical Skill Set Rankings

Highest Rating	Leadership	53% 1st Rank
Second Rating	Communication	53% 2nd Rank
Third Rating	Technical	70% 3rd Rank

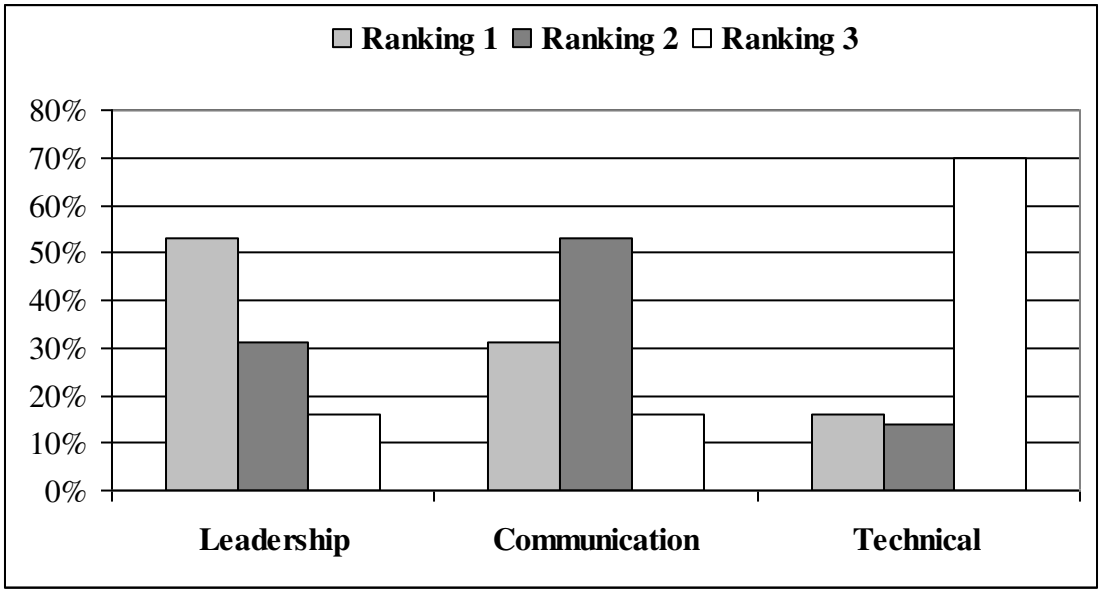

Figure 3: Critical Skill Sets Ranking

Analysis

Facility Management Profession Data and Prior Perceptions

General survey results describing the facility management profession validated certain perceptions of the field, such as the fact that facility managers are generally male, have a widely varied career path, and are an aging workforce that is rapidly approaching retirement. Results also revealed misconceptions held about the field, since the education levels of FMs and their overall job satisfaction were shown to be higher than expected. These results are summarized in Table 12 to easily compare perceptions about the facility management industry with the empirical data.

Table 12: Facility Management Perceptions vs. Reality

Criteria	Perception	Results
Level of Education Before FM Career	Trade School of Some College	64% Bachelor's Degree or Higher
Current Level of Education	25% Bachelor's Degree of Higher	75% Bachelor's Degree of Higher
Industry FMs Originate From	Building Trades	20% Building Trades / Construction
Professional Certifications Held	20% Have a Certification	44% Have a Certification
Level of Job Satisfaction	50% Satisfied with FM Career	88% Satisfied with FM Career
Years Until Retirement	35% Retiring in 10 Years	49% Retiring in 10 Years
Level of Confidence in Future FMs	Moderate Level of Confidence	Low Level of Confidence
Recruiting of FMS	75% Recruiting	57% Recruiting
Succession Planning for FMs	80% Have a Succession Plan	36% Have a Succession Plan
% Who Would Take Advantage of an Undergrad Program	60% Would Take Advantage of an Undergrad Program	76% Would Take Advantage of an Undergrad Program
Value Placed on an FM Undergraduate Program	90% Value Program	90% Value Program

Problems and Proposed Solutions

The lack of a well-defined career path into the facility management profession is contributing to the low levels of young FMs that are entering the field. Since so few academic programs exist that are specifically designed to train new FMs, the career path of current FM professionals has become very diverse, originating from a wide range of professions and training backgrounds.

The proposed solution is the establishment of a greater number of academic programs to train new FMs, including undergraduate programs to make this training more accessible and attract a greater number of students. Phoenix Metropolitan Valley industry representatives indicated a strong desire to establish and utilize these programs for future recruiting purposes, and even provided feedback as to the skill sets most important to successful FMs. As a result, a FM Forum was created, composed of industry experts and higher education representatives. The role of the industry experts was to provide the feedback and support needed to create and sustain an undergraduate program specializing in Facility Management at a respected state university. The forum used the research results, personal experience, and industry trends in order to develop the necessary curriculum to specifically train new facility managers. This proposed program is outlined in Figure 4, and is mainly comprised of construction engineering courses in addition to facility management major topics.

Major Courses • Project Management I & II • Cost estimating • Scheduling • Electrical & Mechanical Systems • Cost Accounting • Contracts & Business Law • Safety • Structural & Geotechnical Engineering	**Engineering Core** • Building Materials & Methods • Computer Applications • Strength of Materials • Science Elective • Statistics • Engineering Statics • Material Testing
Facility Management • Operations & Maintenance • Energy Management • Facility Administration • Leadership • Best Business Practices	**General Studies** • English Composition • Calculus • Physics • Economics • Public Speaking • Humanities

Figure 4: Proposed Curriculum for Undergraduate Facility Management Degree

Conclusion

This study has shown that the Facilities Management industry is currently at risk. While many widely held perceptions regarding the profession were proven false, including low education level and job satisfaction, there were many concerning issues that have been validated. These include:

- Little empirical data exists to validate the generally accepted perceptions of the facility management industry's current state.
- The facility management workforce is comprised of older age professionals that will soon be retiring, with an insufficient volume of new entrants into the FM profession to support the high rate of attrition.
- Very few facility management specific formal education programs are currently available to properly educate new facility managers.

As the majority of companies surveyed do not have a clear plan to replace retiring FMs and do not intend to recruit new FMs in the near future, these issues are troubling. Furthermore, industry representatives stated that they were not confident that the future generation of facility managers would be readily available and sufficiently trained to meet the needs of their

organizations. The results suggest that new FM academic programs are needed to solve this issue.

With industry declared support for a FM program in higher education, a forum of industry experts from the Phoenix Metropolitan Valley and higher education representatives from Arizona State University was able to be created. A proposed curriculum for undergraduate degree programs in facility management has been developed. This curriculum focuses on a core of construction engineering and facility management training courses.

The benefit of these research results is the collection of empirical data that signifies the need to establish structured facility management academic programs. The findings also isolated the core skills that the programs should address in order to train successful Facility Managers. It provided the information to create a direct path of study to ensure the success of future Facility Management professionals.

References

"Arizona Workforce Informer: Industry Employment Projections", available at http://www.workforce.az.gov/cgi/dataanalysis/AreaSelection.asp?tableName=Indprj (Accessed in 2008).

Badger, WW & Garvin, MJ 2007, "Facilities Asset Management: A New Career Field for construction Management Graduates", paper presented at the Proceedings of the Associated Schools of Construction 43rd Annual International Conference, Flagstaff, Arizona, USA, 12-14 April 2007.

Badger, WW & Garvin, MJ 2007 "Facilities Asset Management: Challenges and Opportunities."

Cotts, D. G. (1999). *The facility management handbook,* American Management Association, New York, New York.

Edum-Fotwe, FT, Egbu, C, & Gibb, AGF (2003), "Designing facilities management needs into infrastructure projects: Case from a major hospital", *Journal of Performance of Constructed Facilities,* Vol. 17, p. 43.

Georgoulis, SW 2008, "Facility Management: A Profession At Risk", MA thesis, Arizona State University, December 2008.

"International Facility Management Association: Definition of Facility Management", available at http://www.ifma.org/what_is_fm/index.cfm (Accessed: May 26, 2009)

Then, D.S. & Huemann, M. (2003), "Integrated resources management structure for facilities provision and management", *Journal of Performance Constructed Facilities*, Vol. 17, no. 1, pp. 34.