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Facilities management: an analysis of evolving educational needs in a developing profession

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Abstract

Internationally the development of property, being part of the creation of fixed investment and wealth, is taking place unabated. The absence of a universally acknowledged profession, designated to manage and optimise the utilisation of the ever compounding fixed investments in the products of the collective built environment (buildings, engineering structures and infrastructure), is observed. In practice it manifests itself in the attempts, by various professions and others, to cast themselves into the role of facilities managers. The problem at hand is to extract, from the present practice of facilities management, a knowledge profile and secondly to contextualise the results in terms of other applicable managerial concepts. The main objective is to structure a tertiary education programme. There are reasons to believe that facilities management is in the process of becoming a driving force, not only in the scientific management and optimisation of fixed assets, but as an initiator of development in the built environment. A literature study was undertaken to make an overview analysis and a limited statistical sample was made regarding the views of practising delegates attending continuing education short training courses in facilities management. The outcomes indicate some consistent omissions in the literature, while the views of practitioners contribute to form an overview.

Keywords: Facilities management, knowledge profile, managerial concepts, built environment

Abstrak

Internasionaal vind eiendomsontwikkeling, as voertuig vir die skep van vasteinvestering en welvaart, onverpoosd plaas. Die afwesigheid van 'n universele erkende professie, aangewese om die groeiende vaste-investering produkte van die kollektiewe bou-omgewing (geboue, ingenieurstrukture en infrastruktuur) te bestuur en te optimiseer, is opvallend. In praktyk word dit gemanifesteer deurdat verskeie professies en andere, hulself in die rol van fasiliteitbestuurders bevind. Die probleem ter sake is om uit huidige fasiliteitbestuurpraktyke 'n kennisprofiel saam te stel en tweedens, die resultate daarvan binne konteks van ander toepaslike bestuurskonsepte te plaas. Die hoof oogmerk is om struktuur te verleen aan 'n tersiêre onderwysprogram. Daar is rede om te glo dat fasiliteitbestuur in die proses is om 'n dryfveer te word, nie net ten aansien van die wetenskaplike bestuur van, en optimisering van vaste-investering nie, maar as inisieerder van ontwikkeling in die bou-omgewing. 'n Literatuurstudie

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is onderneem om oorkoepelende waarnemings in dié verband te maak en 'n beperkte statistiese opname is gemaak aangaande die sienswyses van praktisyns tydens deelname aan voortgesette onderwys kortkursusse in fasiliteitbestuur. Die uitkoms van voorgaande dui op konsekwente onderbeklemtoning van sekere aspekte in die literatuur, terwyl die sienswyses van praktisyns 'n bydrae lewer om 'n oorsigtelike beeld daar te stel.

Sleutelwoorde: Fasiliteitbestuur, kennisprofiel, bestuurskonsepte, bou-omgewing

1. Introduction

Investment in properties, as fixed assets, is growing continuously internationally. These property development activities are served by a multitude of highly skilled professionals such as engineers, architects, quantity surveyors, construction managers, project managers, town planners, land surveyors and others. The absence of a universally acknowledged profession of the same standing, designated to manage and optimise the utilisation of the ever compounding fixed investments in the products of the collective built environment (buildings, engineering structures and infrastructure), is remarkable. This situation may be explained by the fact that, in the present day accepted vocabulary, facilities management as a managerial concept developed in the United States of America only during the 1970's, when a Facilities Management Institute was founded and the first known formal symposium was held in Washington DC in 1989 (Binder, 1989). Though these events started approximately 30 years ago, the development and spread were slow, and in comparison with the other built environment professions, it is still in its infancy. However, although perhaps lacking some of the prestige associated with other professions, there are reasons to believe that facilities management is one of the fastest growing 'new professions' in the built environment. Furthermore, it is becoming evident that facilities management is in the process of becoming a driving force, not only of scientific management and optimisation of fixed assets, but as an initiator of development in the built environment.

2. Methodology

The problem at hand is to extract a body of knowledge from the present practice of facilities management, and secondly, to contextualise the results in terms of other applicable managerial concepts. This was done through literature study and by obtaining feedback from facilities management practitioners attending continuing education short courses (in order to create a limited statistical sample), and from non-quantified observations in practice. Figure 1 shows the generally perceived position of facilities management, in context

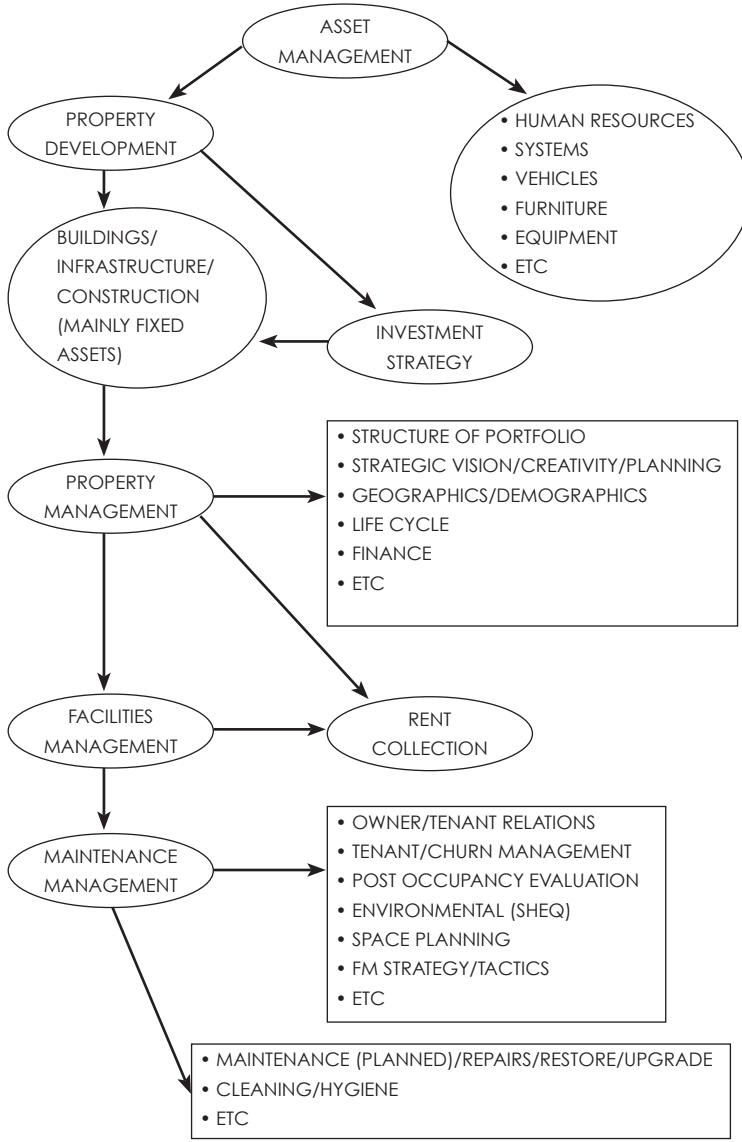

Figure 1: Facilities Management in context of Asset Management

of overall asset management, within an enterprise that holds built environment assets. This diagramme was tested for general correctness by subjecting it to 6 different groups of facility management practitioners taking part in continuing education short courses over a period of four years.

From the above it is clear that the research done was not hypothesis testing. The intention was to establish current thinking regarding facilities management, thus contributing towards the development of academic programmes, pre-empting the needs of industry, resulting in a structured knowledge profile.

3. Validation of literature

Literature was selected by undertaking a web search in order to identify and obtain suitable works regard facilities management and by identifying and utilising known local South African works, commonly used by training and education providers. The contents of the following literature have thus been analysed in order to establish what appears to be representative of a general knowledge profile in literature (see Barret & Baldry, 2006; Bender, 2002; Best, Langston & de Valence, 2003; Cloete, 2001a; Cloete, 2001b, Cloete, 2002a, Cloete, 2002b; Collins & Porras, 2000; Cornwell, 1973; Cotts & Rondeau, 2004; Crocker, 1990; de Vries, 2001; Grulke, 2001; Gross, 2002, Friday & Cotts, 1995; Hauptfleisch, 1999; Hauptfleisch & Sigle, 2007; Magee, 1988; Means Company, 1996; South Africa. Occupational Health and Safety Act, 2004; Owen, 1993; Pearce & Robinson, 2000; Project Management Institute, 2004; Robinson, 1999; Rondeau, Brown & Lapides, 2006; Seeley, 1987). To this was added those knowledge areas regarded to be of importance in continuing education programmes and in formal academic degree programmes. Table 1 provides an analysis flowing from surveying the sources as described above, divided into three categories: Firstly dealing with the 'contextualising of the managerial challenge', secondly with the 'practice' of facilities management and thirdly with 'property maintenance'. The topics contained in Table 1 are in main heading format, synthesised from comprehensive subdivisions.

It should be noted that the literature survey covers sources from 1973 to 2007 but that the bulk of it has been published since 2000. For this reason no attempt was made to place the development of a knowledge profile on a development time scale over the publications' time span. Table 1 therefore represents an attempt to provide a contemporary 'balance sheet' rather than a 'developmental pathway' over time.

4. Under-emphasised knowledge areas

The knowledge areas that are perceived as important for practicing facilities management and the relevant emphasis of each in the surveyed literature are reflected in Table 1. This analysis is not substantiated by quantitative and triangulated research procedures, but has value as an attempt to observe general tendencies to under-emphasise perceived important knowledge areas, required in a validated knowledge profile for the development and practice of facilities management.

Table 1: Facilities Management Knowledge Profile

KNOWLEDGE AREA		COVERAGE IN LITERATURE			
		OFTEN		SELDOM	
		1	2	3	4
A.	FACILITIES MANAGEMENT: CONTEXTUALISING THE MANAGERIAL CHALLENGE				
1.	INTRODUCTION TO FACILITIES MANAGEMENT	•			
2.	AN OVERVIEW OF FACILITIES MANAGEMENT	•			
3.	DEVELOPMENT OF FACILITIES MANAGEMENT	•			
4.	FACILITIES MANAGEMENT PRACTICE MODELS	•			
5.	GENERAL MANAGEMENT FUNDAMENTALS				•
6.	STRATEGIC MANAGEMENT		•		
7.	PROJECT MANAGEMENT				•
8.	HUMAN RESOURCES	•			
9.	LAW AND CONTRACTUAL ARRANGEMENTS		•		
10.	FINANCE	•			
11.	MARKETING OF SERVICES			•	
12.	TOTAL QUALITY MANAGEMENT				•
13.	SERVICE LEVEL ARRANGEMENTS	•			
14.	INFORMATION TECHNOLOGY	•			
15.	SUCCESSFUL FACILITIES MANAGEMENT		•		
	FACILITIES MANAGEMENT: PRACTICE				
1.	STRUCTURING THE ORGANISATION			•	
2.	CLIENT AND/OR USER NEEDS EVALUATION	•			
3.	DESIGN TO SATISFY CLIENT AND/OR USER NEEDS	•			
4.	SPACE MANAGEMENT	•			
5.	CONSTRUCTION TECHNOLOGY BUILDING SERVICES AND COMPONENTS		•		
6.	QUANTIFICATION AND TENDERING				•

KNOWLEDGE AREA		COVERAGE IN LITERATURE			
		OFTEN		SELDOM	
		1	2	3	4
7.	PRINCIPLES OF LIFE CYCLE COSTING		•		
8.	GENERAL SERVICES				•
9.	CAPITAL PLANNING		•		
10.	PROCUREMENT & OUTSOURCING			•	
11.	RISK MANAGEMENT		•		
12.	POST OCCUPANCY EVALUATION	•			
13.	BENCHMARKING	•			
14.	THE STRUCTURE OF THE BUILT ENVIRONMENT				•
15.	OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS	•			
C.	FACILITIES MANAGEMENT: PROPERTY MAINTENANCE				
1.	INTRODUCTION TO MAINTENANCE MANAGEMENT	•			
2.	MAINTENANCE CATEGORISATION	•			
3.	PLANNING AND PROGRAMMING OF MAINTENANCE EXECUTION	•			
4.	OPERATIONAL MANAGEMENT		•		
5.	PEST CONTROL IN BUILDINGS			•	
6.	MAINTENANCE FINANCE	•			
7.	CONSTRUCTION RENOVATION AND MAINTENANCE WORK		•		

5. Analysis of continuing education short courses evaluation

Table 2 is based on the results obtained from a limited quantified 100% covered survey, assessing broad disciplines covered during continuing education short courses, soliciting recommendations regarding course content. Delegates are also prompted to make alternative suggestions. This survey has been conducted six times (from 2004 to 2007) amongst delegates, after they have completed a five-day continuing education short course offered to middle (and top) management practitioners of facilities management. Table 2 contains the results that emanated from the last three courses offered during 2006 and 2007. These courses are always well subscribed. Delegates that are required to take part in the above survey are also evaluated by way of assignments, in order to support continuous quality improvement.

Table 2: Recommendations for Programme Content Weighting

KNOWLEDGE AREAS	*ACTUAL LECTURE %*	*RECOMMENDED LECTURE %*
Management (assets property facility general)	35	34.1
Client care	6	7.1
Finance	15	13.9
Legal	18	17 2
Quality	13	12.9
Maintenance	13	14 8
Total	100	100

From the results reflected in Table 2 it is concluded that the respondents that have attended continuing education short courses, are satisfied that the course content is on target.

6. Conclusions

It may be concluded that the knowledge gained from offering continuing education short courses, expanded with the analysis of a literature survey and non-quantified observations of academia and practice, a first attempt in structuring a knowledge profile of facilities management renders useful information. Being a "new" discipline makes it a moving target that requires continuous evaluation and development, particularly regarding the structuring of a tertiary education programme.

The next step to be taken is the structuring of a three year educational programme on National Qualification Framework (NQF) Level 6, in order to satisfy the perceived needs of industry. The proposed contents of this programme are to be subjected to quantified evaluation by prospective students as well as by organised industry. Once the educational programme has been introduced, continuous evaluation processes will be implemented to further develop evolving educational needs, to be reflected in a facilities management knowledge profile.

References

Barret, P. & Baldry, D. 2006. *Facilities management: Towards best practice*. 2ed. Oxford: Blackwell Science.

Bender, P.U. 2002. *Leadership from within*. Toronto: The Achievement Group.

Best, R., Langston, C. & de Valence, G. 2003. *Workplace strategies and facilities management.* Oxford: Butterworth Heinemann.

Binder, S. 1989. *Corporate facility planning. An inside view for designers and managers.* New York: McGraw-Hill Book Co.

Cloete, C. (ed.) 2001a. *Principles of property maintenance.* Sandton: The South African Property Education Trust.

Cloete, C. (ed.) 2001b. *Risk management in property.* Sandton: The South African Property Education Trust.

Cloete, C. (ed.) 2002a. *Management of commercial and industrial properties.* Sandton: The South African Property Education Trust.

Cloete, C. (ed.) 2002b. *Introduction to facilities management.* Sandton: The South African Property Education Trust.

Collins, J.C. & Porras, J.I. 2000. *Built to last.* London: Random House Business Books.

Cornwell, P.B. 1973. *Pest Control in Buildings.* London: Hutchinson Benham Ltd.

Cotts, G.C. & Rondeau, E.P. 2004. *The facility manager's guide to finance and budgeting.* New York: American Management Association.

Crocker, A. 1990. *Building failures: Recovering the cost.* Oxford: BSP Professional Books.

De Vries, M.K. 2001. *The leadership mystique.* London: Prentice Hall.

Gross, J.M. 2002. *Fundamentals of preventive maintenance.* New York: American Management Association.

Grulke, W. & Silber, G. 2001. *Lessons in radical innovation.* Johannesburg: @One Communications.

Friday, S. & Cotts, D.G. 1995 *Quality facility management: A marketing and customer service approach*. New York: John Wiley & Sons, Inc.

Hauptfleisch, A.C. (ed.) 1999. *Building practice, Volume 1&2.* Sandton: The South African Property Education Trust.

Hauptfleisch, A.C. & Sigle, H.M. 2007. *Structure of the built environment in South Africa.* 4th ed. Pretoria: CONQS.

Magee, H.M. 1988. *Facilities maintenance management.* Kingston: R S Means Company, Inc.

Means, R.S. 1996. *Cost planning and estimating for facilities maintenance.* Kingston: R S Means Company, Inc.

Owen, D.D. 1993. *Facilities planning and relocation.* Kingston: R S Means Company, Inc.

Pearce, J.A. & Robinson, R.B. 2000. *Strategic management: Formulation, implementation, and control*. 7th ed. Singapore: McGraw-Hill.

Project Management Institute, Inc. 2004. *A guide to the project management body of knowledge*. 3rd ed. Pennsylvania: Project Management Institute, Inc.

Robinson, R.R. (ed.). 1999. *Issues in security management: Thinking critically about security.* Oxford: Butterworth Heinemann.

Rondeau, P.R., Brown, R.K. & Lapides, P.D. 2006. *Facility management.* 2nd ed. Hoboken: John Wiley & Sons, Inc.

Seely, I.H. 1987. *Building maintenance.* 2nd ed. London: Macmillan Education Ltd.

South Africa. 2004. *Occupational Health and Safety Act (Act 85 of 1993, Revised Construction Regulations 2003)*. Johannesburg: LexisNexis Butterworths.