

Output based Facilities Management Specifications in the National Health Service: Literature review and directional outcomes

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ABSTRACT

This review supported an investigation into the level of use and methods of performance management of Output-based facilities service specifications within the NHS. One hundred and ten works were assessed, related to five key themes: Outsourcing, Service Specifications, Performance Measures, Quality Aspects of Performance and Applicable Measures for Facilities Contracts Performance. Study of this literature revealed a bias towards opinion rather than evidence with Practitioner constructed articles (50%) dominating the pool of literature and Outsourcing material demonstrating levels of covert advertising. The review revealed little original research with writers tending to compliment or develop themes from a small pool of original authors, without a critical evaluation of that text. Prime candidates for this form of complimentary development were work by Parasuraman, Zeithaml & Berry (1985; 1991) and Kaplan, Norton & David (1992; 1996)

Introduction

Background

This Literature review was undertaken in the course of an investigation (Heavisides 2000), researching the use of *Output-Based Specifications within NHS Trusts in England*. Whilst the study allowed a wide ranging assessment of supportive texts on the key subject areas related to service specifications, wide discrepancies were noted in how such literature was put together, its technical or research based bias and how it attempted to direct the reader. A particular element of that direction was to be found in an assessment of the author and the commissioner of the work. Simplified, there appeared to be three different approaches to the provision of material from commercial organisations, research papers and facilities practitioners. The paucity of evidence based FM research, in relation to new ways of working, has been commented upon previously (Cairns and Beech, 1999) and the current study provides further evidence in a separate area.

The following work shows how the review was constructed, how it was geared to support the original thesis and the outcomes generated from the assessment of the researched literature.

Context

The National Health Service (NHS) functions on its ability to provide service of acceptable quality to the community it serves its stakeholders and its staff. Whilst its prime aim is the provision of clinical care, diagnoses and treatment, this service environment does not operate

exclusively within the clinical arena. Embedded within its overall framework is the provision of non-clinical support services under the common term Facilities.

Throughout the NHS Facilities services are provided through a number of avenues but within those differing systems, three dominate. These are the services provided through NHS employees (in house provision), the contractor (outsourced provision) and a combination of the two former systems (mixed economy). NHS Trusts have procured these services via Service Specifications - documents that in the case of the traditional methodology rely upon detailing the exact requirements of the service needed, likely hours required to provide that service and all the exact inputs needed to replicate or improve the existing service provision. This form of specification is termed an Input Specification and provides the Trust with a methodology of service description as well as an in-built assessment framework against which to monitor the service provider. The second less conventional form is known as an Output Specification, where the purchaser's reliance on descriptive inputs are discarded in favour of much less detailed information regarding the build-up of the contract. In this case the specification will note only **what service is required not how it should be provided** (HM Treasury 1996). Irrespective of the service delivery method, it is not unreasonable to expect that some form of service measurement system should be adopted in order that NHS Trusts can ascertain the value from the service given compared with its cost; thus enabling them to display the proper discharge of their duty to the taxpayer.

Audit and Benchmarking have been the prime methodology for the assessment of service costs across departments and functions within Facilities for some years with national compulsory audit systems (ERIC) and nationally organised voluntary benchmarking systems (e.g. Health Facilities Consortium Benchmarking Club) dominating. These systems, although essential for Facility managers to ascertain the cost and output position compared to other similar Trusts, are not geared to measuring the efficiency, efficacy and economy with respect to service provision. Such frameworks are related to measuring and assessing a range of parameters that go to make up the fixed and floating, tangible and intangible elements of the service and importantly, whether an individual Trust or Directorate attempts such measurement. For the In House service such assessment needs to be set against a formal agreement based on historical service parameters, known as a Service Level Agreement (SLA). Where this service either is 'sold' to other areas of the NHS or 'purchased' through a formal contract with the private sector for the provision of a range of services or an individual service, the arrangement is termed outsourcing.

There is little published research within the NHS regarding the spread of outsourcing at Regional, Health Authority or Trust level, let alone if such contracts are operated via Output Specifications or assessed for satisfactory performance or value for money. In addition there has been no published research within the NHS about the format of developed Output Specifications, their current usage and spread within the service and how the in-house, outsourced or mixed economy workforces meet these.

This review sets out to look at the available literature related to more general Facilities Management, concentrating specifically upon the areas of service performance by In-House and Outsourced providers.

Review Outline

This section takes literature available from the NHS and Local Government, from academic sources and finally literature from the commercial sector, linked to five main themes. These themes were selected as the prime areas related to the provision of NHS facility services through tender or negotiation. They are: -

1. ***Outsourcing*** - linked to the overarching concept of the provision of an in-house service by external providers and what information was available to support those FM managers seeking to learn about or develop an Outsourced service.
2. ***Service Specifications*** – seen as the key documents in the service procurement process.
3. ***Performance Measures*** – seen as the assessment system for obtaining contract value and adherence either from an In-house or outsourced supplier.
4. ***The Quality Aspect of Performance*** – seen as an important part of the overall service provision and worthy of assessment.
5. ***Applicable Measures for Facilities Contracts Performance*** – linked to the derivation of possible future measures for Output Specifications.

Facilities services cover a wide arena of activities and the link to only five themes may be seen as limiting the information gathering exercise. However, as there were demonstrable links to the hypotheses as well as the significant spread of service provision, the five themes chosen may provide reasonable subject coverage.

The objective of this section is threefold. First is a review and classification of the body of knowledge in relation to the outsourced provision of Facilities services, in terms of outsourcing, the role of the specification and the consideration and application of performance measures. Second is to highlight the publication from which the literature was originally published and ascertain whether the piece has been editorially assessed. In addition the review table indicates whether the information was available via the Internet as in most cases it had been accessed, from major databases such as Emerald or Proquest, from Internet access points linked to national or international Facilities associations, from commercial sources and finally from government publications. Lastly an investigation of the level of editorial quality, related to how the work was assessed for technical and academic content or subject relevance.

Review Process

Methodology

Dorch and Yasin (1998) produced a specific type of review and classification methodology linked to articles related to benchmarking. Whilst this classification had taken some of the themes identified by Dorch and Yasin, it has not rejected articles as they did after analysis, but has used a sub-categorisation system to allow selection by relevance and relevant category.

The General Search Criteria for the published literature consisted of: -

- Web searches based on key words related to the five selected topics
- Data base searches based on the same keywords
- Public, commercial academic and professional data
- Direct author and article searches, when supportive details were known
- Key citations from articles gained during the first search.

The specific relevance search criteria related to the five topics consisted of: -

- Ensuring relevance to current issues
- A maximum time band of five years for assessed material

- Whilst facilities services were seen as the essence of the search, other areas would be investigated if relevant.

The majority of the texts are within a four-year time band from 1996 - 2000. Whilst this may be seen to limit older material, a number of other publications were included if their content remained relevant and if they were subsequently noted as a key text. The classification methodology was concerned with whether the available literature was written from an academic, evidential background or as a range of practitioner type opinion statements with input from other academic work. The issue of guidance material for public services was included, as was work that appeared to be written in either a journalistic style or, being derived from commercial sources, could even be thinly disguised advertising material. It is hoped by this analysis of the material to isolate articles that relate directly to the rationale for Outsourcing, Output Specifications, Provider Performance and Contract Performance Measurement (metrics) in organisations and verify both relevance and work quality. Due to the volume of available literature on performance a decision was taken to separate that material into performance measurement linked specifically to service quality and that of a more general output. Articles were placed in tabular form, grouped by date of publication, noting the author(s) and giving a short insight into the scope and general aim. This classification methodology was chosen, as the material being accessed appeared to fall naturally into the seven main categories as shown in Table 1.

One Hundred and Ten articles were identified and assessed during the investigative review which, whilst not exhaustive, is judged to be at least representative of the area of study and inclusive of a significant range of supportive articles. Table 1 shows the codes adopted.

Analysis Limitations

Although a range of documents were accessed and time spent in assessing and identifying a range of applicable documents, the list may be not seen as exhaustive. In addition it was noted that the bulk of the documents were accessed from only two major databases, Emerald (MCB) and Proquest (Bell & Howell). However these international databases allowed access to a number of major publications providing Facilities, management, manufacturing and health related material, in most cases critically appraised through peer review, but in some cases journalistic articles only approved through editorial acceptance.

A second limitation could be seen as the personal and subjective analysis¹ of the self-chosen literature. An attempt has been made to link this analysis with the nature of the paper, its construction methodology, through reference material etc. and the research methodology incorporated. With this underpinning the assessment process, an attempt has been made to reduce the subjectivity of the analysis; nevertheless this issue should be noted.

¹ Whilst the selection of material was based on keyword searches linked to Outsourcing, Output Specifications, Performance, Performance Metrics and Quality Measures etc. The choice of material for full assessment was personal and subjective. This could have a tendency to bias the results in terms of material chosen to give a favourable return.

Relevance Code	Type of Material
A	Academically accepted work
C	Written by a contractor
CA	Written by a Contractor's Association
G	Guidance document from central government
P	Practitioner Manual
PA	Written by a professional association
Type Code	Form of Publication
AS	Professional Association
C	Contractor Item
F	Facilities, Maintenance or Property based Journal
GP	Government Publication
H	Health related publications
l	Library based literature
M	Management and Finance Publication
Man	Manufacturing, Marketing and Production Publication
N	Non-profit Organisation
PS	Public Sector publication
Q	Quality Journal or publication
S	Service Industry generated
IT	Information Technology Publication
Editing Control	Codes
R	Review Studies
Ev	Evidence Based
eRe	Research Based
Op	Opinion Based
Th	Theoretical Work
Cs	Case Studies
J	Journalistic Article
Review Nethod	Meanings
PR	Peer Review
ER	Editorial acceptance
Location	Origin of Material
*	Internet Academic Database
**	Internet Facilities Associations
***	Internet Commercial Sources

Table 1 Key

Codes used to categorise individual data sources. The five areas combine a number of elements in order to provide an assessment of a range of criteria which involves the relevant area of the work, the journal or literature source and its editorial quality to allow appraisal through the written material and its style.

Literature Review Tables

Tables 2 to 6 briefly summarise and categorise the works located

Table 2 Outsourcing

Year	Author(s)	Scope & Comment	Type	Journal
1993	Graham. R	Key legal issues in setting an Outsourcing contract. Suggests need for bespoke contract	P Opinion	F*** EA
1994	Kleeman. Walter B	Discusses evidence of single service Out-tasking being more widespread then bundled service Outsourcing.	P Evidence	S*** PR
1996	Reilly.P & Tamkin .P	Discusses the HR flexibility and employment issues regarding Contracting Out (Outsourcing)	P Opinion	L PR
1996	Houston. A & Youngs G	Examines a specific outsourced relationship and strategic partnership at the rank Xerox Technical centre	P Evidence	F* PR
1997	Tarricone.P	Discusses the range and success factors of Outsourcing and highlights the mechanics of Outsourcing	P Journalistic	F* EA
1997	Outsourcing Institute	Discusses the goals, rewards & risks as well as failures in Outsourcing change.	CA Product Endorsing	C*** EA
1997 (Est.)	Outsourcing Institute	Discusses the advantages and disadvantages of procurement by single provider negotiation	CA Journalistic	C*** EA
1997	Gavin. T A & Matherly. CM	Examines general planning issues of Outsourcing. Discussed broad issues and frequently outsourced activities	P Opinion	S* PR
1997 (Est.)	Akhlaghi. F	Research based insight into the Outsourcing of Facilities with respect to people and value for money	A Theoretical	F* PR

1997	Outsourcing Institute	1997 annual assessment of Outsourcing activity in the USA	CA Evidence	C*** EA
1998 (Est.)	Moran. M & Taylor Dr J	Discussion on Outsourcing, its risks and strategies to overcome those risks	P Opinion	S* PR
1998	Bell. J	General discussion related to the Outsourcing market in the UK, both in private and public sectors	P Journalistic	M* EA
1998	Adams. Matthew. C	Staff reductions and changes following Outsourcing	P Journalistic	AS** EA
1998	Hounsell. D (Editor)	Discussion on the changes in attitude regarding Outsourcing. From antagonistic to proactive.	P Journalistic	F** EA
1998	Coombs. Prof. R & Battaglia. P	Concept of Outsourcing and its relationships to debates on how the boundaries of firms are determined	A Academic paper	WP* PR
1998	Embleton. P R & Wright. P C	Outlines a practical guide to Outsourcing with specific application to people within organisations	A Evidential	M* PR
1998	Smyth. J D	Comparing research on competition in public services from the USA with services in the UK	A Research	M* PR
1998	Anon.	Discusses approaches to Outsourcing at the Inland Revenue and the NHS	P Journalistic	M* PR
1998	Anon.	Very brief discourse on the potential of performance based Outsourcing	P Journalistic	F** EA
1998	Cameron. R	Contractor's perspective of Outsourcing in New Zealand relating to healthcare cleaning	CA Advertising Material	S** EA
1998	Tarsh. S	Corporate Outsourcing appreciation. Shared vision with effective performance and communication	P Advertising Influence	C*** EA
1998	Blumberg. L	Planned approach to strategic sourcing. Action steps and stage differentiators in the process	CA Advertising Influence	C*** EA

1998	Corbett. M F	Strategic Planning of Outsourcing discussing the top five tactical reasons firms outsource	P Advertising Influence	S* Ea
1998	Outsourcing Institute	Executive Survey of Outsourcing end Users	CA Evidential	C*** EA
1999	Renner. C & Palmer. E	Case study on demand-side tactics related to increasing Outsourcing capacity in a N Zealand hospital	A Case Study	PS* (NZ) PR
1999	Flynn. M J	Asks and tries to answer the question, 'why do companies send FM out of house'	P Opinion	F* PR
1999	Parr. R (Editor)	Gives up to date information of current PFI specifically related to FM contracts and payment mechanisms	CA Advertising Influence	C*** EA
1999	Mosher. D	Discusses the results of a recent reader survey on Outsourcing	P Evidential	F* PR
1999	Wiersema. W H	Offers a management accounting perspective on Outsourcing and how companies account for this change.	P Opinion	M* PR
1999	Keown. C	Uses independent research to identify the spread of Outsourcing and its influence on educational institutions in the USA.	P Opinion and case studies	F** PR

Table 3 Service Specification

Year	Author(s)	Scope & Comments	Type	Journal
1991b	Central Unit on Purchasing	Gives guidance on the writing of specifications of a service nature. Gives acknowledgement to work by B Kalms 'guide to Specification Writing for Dept. of Admin Services, Canberra	G Public Service Guidance	PS**** (UK) N/A
1997	Private Finance Panel	Practical Guidance on Writing an Output Specification	G Public Service Guidance	PS**** (UK) N/A

1997	Centre for Facilities Mgt.	Practical Guidance for the production of Output Specifications. With reference to practical models and academic reference material	G Guidance Material	F**** PR
1999	Public Private Partnerships Programme	A comprehensive guide to preparing Output Specifications in relation to Schools PFI Projects. Used to develop a partnership arrangement with the selected bidder.	G Guidance Material	PS**** (UK) N/A

Table 4 Performance Measures (General Content)

Year	Author(s)	Scope & Comments	Type	Journal
1991a	Central Unit on Purchasing	Describes how incentivisation can be used in contracts. Highlights its features, sets out benefits, explains process and gives examples.	G Guidance Material	PS (UK) N/A
1993	Jones. O J	Focuses on how to get the best from contractors and addresses the achievement of this goal. Outlines the advantages of performance measures	P Opinion	F* PR
1994	Kincaid. D G	Considers the basis for measurement of performance for Facility Managers. Outlines objectives this must be based upon	P Opinion	F* PR
1995	Whitaker. M J	Advocates the use of a Facilities management audit to understand the performance potential of the organisation	P Opinion	F* PR
1995	Kaplan. R S & Norton. D P	Attempts to demonstrate how managers can use the scorecard tool to guide current and target future performance	A Builds on previous research	L PR
1995	Holloway. J, Lewis. J & Mallory. G	Whilst the overall focus is organisational performance it has specific reference to sub-system performance	A Case studies	L PR
1995	Gupta. Atul	Examines the issue of productivity in service operations within a healthcare environment	P Opinion	S* PR
1996	Ingram. H & McDonnell. B	Explores ways in which firms can improve service performance through people. Analyses team-working and how performance can be measured	A Opinion	S* PR

1996	Varcoe. B J	Highlights that although performance measurement is used extensively it is not done well. Seeks to address what is seen as a missed opportunity.	P Opinion	F* PR
1996	Akhlaghi. F	Builds on research work carried out in 1994-5 related to support service management and the control of internal and external FM contracts	A Opinion (Research Based)	WP* PR
1996	Heinbuch. S E	Draws on findings of multiple-case comparisons related to the contract process for managers seeking better control of service contracts	A Evidence based	H* PR
1997 (Est.)	Akhlaghi. F	Ensuring VFM in contract services discusses VFM in relation to the management of service contracts.	A Theoretical	WP PR
1997 (Est.)	Tranfield. D & Akhlaghi. F	Discusses how to use performance measures in relating Facilities into the business indicators of an organisation	A Theoretical	WP PR
1998	Massheder. K & Finch. E	Discusses, with the aid of research, how benchmarking can be properly used to improve Facilities to give firms a competitive edge.	A Research Based	F* PR
1998	Massheder. K & Finch. E	Develops the previous research paper to introduce benchmarking metrics for Facilities based on a study of 25 top organisations	A Practice based research	F* PR
1998	Varcoe. B	Identifies five dimensions of measuring the business value of Facilities to an organisation	P Opinion	WP* PR
1998	Tatum. R (Ed.)	Discusses the importance of effectively managing the outsourced partner.	CA Journalistic	F* EA
1998	Slember. R J	Discusses measuring Facilities performance metrics and benchmarks, on ideas from Canadian companies	P Journalistic	F* EA
1998	Klassen K J, Russell. R M & Chrisman. J J	Discusses the difficulty of performance measurement in high contact services and summarises a possible measurement approach.	A Theoretical	S* PR

1998 (Est.)	Hutchin. N L	Discussed performance metrics as they could be used to measure outsourced systems.	P Theoretical	CA* PR
1998	Bovaird. T	Focuses on the role of competition, benchmarking and performance networks in achieving best value.	A Case Studies	WP* PR
1999	Neely. A	Asks why business performance measurement has become so popular. Argues seven main reasons. Draws from evidence from academic and practitioner literature.	A Theoretical and evidence based	Man* PR
1999	Thompson	Describes a case study of an USA state government agency that used Performance Measurement to improve service.	P Case Study	Man* PR
1999	Anon	CIMA paper related to performance management in relation to achieving best value.	PA Case Studies	M* PR
1999	Otley. D	Presents a framework for analysing the operation of management control systems.	P Opinion	M* Abstract PR
1999	Sampson. S E & Showalter. M J	Provides mathematical model enhancing an Importance/Performance Model (IPA), with empirical results to back up theory.	A Theoretical & field study	S* PR
1999	Parkan. C	Summarises a study carried out on a government department in Hong Kong. Studying the department's performance profile with an OCRA analysis	A Research Study Based	Q* PR
1999	Kouzmin. A, Loffler. E, Klages. H & Korac-Kakabasase. N	Argues that public sector is too overloaded with benchmarks needing improved methods of performance measurement. Critically analyses examples to establish specific vulnerability points.	A Research study of public sector	Ps* PR
1999	Vogt. J A	Presents five steps for non-profit organisations to get an outcome measurement	P	N*

		system started	Theoretical	PR
1999	Chenet. P, Tynan. C & Money. C	Study re-evaluates and redevelops the concept of a Service Performance Gap. Identified when the service is not performed to set standards.	P Evaluative Studies	M* PR
1999	Walters. M	Discusses the problems for Facilities managers in measuring the contribution of property towards the primary task.	A Case Study	F* PR
1999	Volkman R	Presents guidelines for initiating an outcome measurement programme.	P Theoretical	N* PR
1999	Price. I & Akhlaghi. F	Examines best practice in several areas of FM from case work over the last four years, Including cultivating environments for performance	A Case Studies	F* PR
2000	Grossman. R J	Discusses performance metrics linked to Human Resource Management for internal and external stakeholders.	P Opinion	M* PR
2000	Amaratunga D, Baldry. D & Marjan. S	Paper looks at performance measurement of FM practices. Argues that future measurement will shift in emphasis to measurement & management systems	A Theoretical	F* PR

Table 5 The Quality Aspects of Performance

Year	Author(s)	Scope and Comments	Type	Journal
1985	Parasurman. A, Zeithaml. A & Berry. L L	Investigates service quality in four businesses and offers a developed model of service quality	A Case Study Evidential and Theoretical	Man PR
1991	Parasuraman. A, Berry. L L & Zeithaml. V A	This paper argues that the key to providing superior service is understanding and responding to customer expectations	A Theoretical	M PR
1994	Pratt. K T	Discusses changes in service level agreements introducing strategic concepts and performance measurement with Facility managers playing a lead role	P Opinion	F* PR

1994	Hiles. A N	Discusses current service level agreements (SLAs) and how they can be misrepresented if not properly monitored	P Opinion	Q* PR
1994	Waldman. D A	An empirical work which attempts to provide a better conceptual basis on which to incorporate TQM into organisations to guide future research efforts	A Research Based	M* PR
1996	Baggs. S C & Kleiner. B H	Relates to making measurement more effective and discusses a number of measurement methods of customer service	P Opinion	Q* PR
1996	Pheng. L S	Discusses how total quality management (TQM) can help to rationalise and enhance effective Facilities management	P Research based Opinion	F* PR
1998	Voss. G B, Parasuraman. A & Grewal. D	Discusses the roles that price, performance and expectations play in determining service satisfaction. Provides empirical support for normative guidelines	A Research Based Models	Man* PR
1998	Mei. A W O, Dean. A M & White. C J	Examines the dimensions of service quality in the hospitality industry by extending the SERVQUAL scale to include eight new items, referred to as HOLSERV	A Research Based paper	Q* PR
1998	Johnston. R & Heinke. J	Brings together several empirically based works on service quality to derive a set of quality functions	P Research based opinion	S* PR
1998	Terziovski. M & Dean. A	Paper based on a cross-sectional study of 550 Australian service organisations to determine dimensions of service quality outcomes	A Research paper	Q* PR
1999	Ho. D C K & Cheng. E W L	Re-examines the traditional approaches in studying value and quality. Argues that you must tie in quality with output to get the value mix.	P Opinion	Q* PR
1999	Curry. A	Paper focuses on a strategic approach to best value involving measurement of customer perceived service quality	A Case Studies	Q* PR

1999	Galloway. L	This paper investigates models of consumer behaviour and demonstrates that these models share a commonality with the physical sciences 'hysteresis model'	A Research and concepts	Q* PR
2000	Audit Commission	Contains a number of surveys that can be used as guidance for authorities wishing to progress on best value.	G Research and case studies	GP* N/A
2000	Nobel. E & Klein. E	Uses the concept of managed care in the USA to discuss the issue of metrics of care and customer service	P Opinion	Q* PR
2000	Gilbert. G R & Parhizgari. A M	Paper introduces nine scientifically developed measures of service quality applicable to organisations in both the public and private sectors. Developed for analysis of 8924 employees	A Research based measures	Q* PR
2000	Donnelly. M	Reports on the application of the data envelopment analysis (DEA) to the classical scoring system of quality management assessment used in the European Foundation for Quality Management - Business Excellence Model	A Analysis Based Model	M* PR

Table 6 Applicable Measures for Facilities Contract Performance

Year	Author(s)	Scope & Comments	Type	Journal
1991	Showalter. M J & White D	Attempts to define the nature of demand-output management problem in service organisations. Examines existing research and adds additional limited research to develop a conceptual decision model	A Research based model	Man* PR
1994	Fitzgerald. L et al.	Aims to help service managers to develop measures of business performance. Builds on premise that measurement of performance is central to its control	A Developed from research & case studies	L PR
1995	Neely.A,	Paper produced during a research project	A	Man*

	Gregory. M & Platts. K	into manufacturing strategy and performance measurement. Provides significant research into available literature on performance measurement	Research based	PR
1995	Adams. S M, Sarkis. J & Liles. D	This work discusses the deficiencies of current performance measurement systems. Presents a quality function deployment-based methodology for identifying relevant performance metrics	P Opinion	M* PR
1996	Hounsell. D (Ed.)	Looks at two case studies on the use of benchmarks to improve the operation of a maintenance department	P Journalistic	F** EA
1996	Kaplan. R, Norton. R S & David. P	Discusses the Balanced Scorecard approach to the measurement of a business unit. Gives an idea of a scorecard that contains relevant outcome measures, linked to strategy	P Opinion developed from research	M* PR
1996	Kennedy. K, Mirmirani. S & Spivak. R	Discusses the use of an American quality measurement model (HEDIS) used to assist health maintenance organisations	P Application of researched model	H* PR
1997	Levitt. J	Taken from the 'Handbook of Maintenance Management' and excerpts from the 'Engineered performance Standard Usage Plan'. This work looks at how a service can be performance measured	P Opinion	S* PR?
1997 (Est.)	Varcoe. B J	Article reviews the techniques of performance measurement and benchmarking as being a fundamental way in which service objectives are delivered	P Opinion	F PR
1997	Jones. P E	Discusses the establishment of a policy that creates a workable partnership agreement with your contracted provider. Includes a section on assessing and measuring performance	P Opinion	F* PR
1997	Rubin. H A	Looks to the benefits of both parties in an Outsourcing agreement. Argues for the use of key performance monitoring parameters built into the agreement and assesses on an on-going basis	P Opinion	IT* PR?

1998	Hacker. M A & Brotherton. P A	Discusses an effective measurement system within a facility that supports the business objective. Considers the use of several measurement concepts as the system is designed.	P Opinion	F* PR
1998 (Est.)	Treasury Task Force	Identifies an operational performance measurement system for an outsourced Facilities Contract through a PFI at a new Durham Hospital	G Evidence based	PS* (UK) N/A
1998 (Est.)	Association of Higher Education Facility Officers	Identifies a specific assessment tool for the control and management of Facilities contractors. The APPA balanced scorecard Strategic Assessment Model (SAM) is used to achieve organisational excellence through continuous improvement	G Evidence based	PS* (USA) PR?
1999	Southern. G	Demonstrates the value of a systems approach in considering performance management in the hospitality sector	A Research based	S* PR
1999	Rolph. P	Discusses the balanced scorecard as a management philosophy to measure a company's performance.	P Opinion	M* PR
1999	Mooraj. S, Oyon. D & Hostettler. D	Discusses the advantages and disadvantages of the balanced scorecard philosophy.	P Opinion	M* PR
1999	Ingalls Jr. T S	Uses the balanced scorecard concept to produce five specific safety performance measures in safety management. Likely wider use of the concept.	P Theoretical	S* PR
1999	Deloitte & Touche & L.O.R.D	Review of the efficiency and effectiveness of FM in museums and libraries. Includes specific examination of the performance measurement systems for managing FM contractors	R Evidence based	PS* (UK) N/A

1999	Hinks. J & McNay. P	Describes the process of developing a management -by -variance tool for monitoring the performance of the FM dept. Also describes the process of creating the pilot version of the tool	A Research based work	F* PR
1999	Hodgkinson. A	Develops an outcome measure of productivity which meets both externally and internally imposed cost efficiency requirements and client needs for service effectiveness	A Research based	PS* (Aus) PR
2000	Hanson. J & Towle. G	Uses the idea of the balanced scorecard to produce performance metrics for financial institutions	P Opinion	M PR
2000	Lee. S F & Ko. A S O	Conjoining the SWOT matrix and the balanced scorecard this paper makes a systematic strategic management system. Seen as a more structural approach in setting up the foundation of a balanced scorecard	A Research based	M* PR

Statistical Review

Review material

Table 7 Breakdown of Review Material

Key to Literature Type	Area of Literature Reviewed	Number Found	% Coverage
A	Academic Articles	40	36
C	Contractor Item	1	0.9
Ca	Contractors Association	7	6.4
G	Government Publication	8	7
P	Practitioner Articles	51	47
PA	Professional Reviewer	2	1.8
R	External Reviewer	1	0.9
		110	100

Table 7 notes the two areas of Practitioner (51) and Academic (40) articles, which dominate the pool of literature reviewed, with all other literature sources in single figures.

Table 8 Source and levels of review material

Web Source	Meaning	Nos accessed	% accessed
Origin of research material		110	100
*	Accessed via Internet - Academic database	80	72.7
**	Accessed via Internet - Facilities Associations	6	5.4
***	Assessed via Internet - Commercial Sources	9	8
****	Assessed via Internet - Guidance Material	4	3.6
No asterisk	Non-Internet Assessed - Library Hard Copy	11	10

Table 8 analyses the main areas that the review material was accessed from. It shows a dominance of web accessed articles mainly from academic databases

Statistical Breakdown of Literature Type

This breakdown concentrates upon a further sub-division of each literature type, in terms of its evidential basis, with Opinion dominating followed closely by research.

Breakdown by theme of article/paper and the five main sections of work analysed

Table 9 Review Material

Literature	Analysi	Case Study	Evidnc	Guidnc	Theor	Researc	Opinion	Covert Advert	Evalu	Totals
1.		1	6		1	2	7	7	6	30
2. Output Specification				4						4
3. Measure		6	1	1	9	5	10	2	1	35
4. Quality Performanc Measure	1	2			1	7	7			18
5. Application Performanc Measure		1	3		1	7	10	1		23
Totals	1	10	10	5	12	21	34	10	6	110
%	0.9	9	9	4.6	11	19	31	9	5.6	100

Analysis of Literature Aspects

Table 10 % Breakdown of Review Material linked to the five

Literature	Analysis	Case Study	Evidence	Guidance	Theor	Research	Opinion	Journal	Cover Advert	Evalu	Totals
1.		3	20		3	6.5	24	24	20		30
2. Output Specification				100							4
3. Measures		17	2.5	2.5	26	15	29	5.5		2.5	35
4. Quality Performance Measures	5.5	11			5.5	39	39				18
5. Application Performance Measurement		4.5	13		4	30	44	4.5			23
Totals	0.9	9	9	4.6	11	19	31	9	5.6	0.9	100

Outsourcing

This area of literature is dominated by the articles from practitioners and by other material from within the outsourcing profession. Very little research material is evident (6.5%) and is significantly less than the noted advertising material. Whilst it is necessary to guard against the promotional element of the material, nevertheless it does allow the reader to obtain information on the levels of private and public sector involvement with outsourcing.

Performance Measures

In this area there is some academic research (15%), but this is far less than the theoretical (26%) and opinion based (29%) articles which are as yet untested by research.

Quality Performance Measures

This area shows a balance between practitioner opinion and research, which are both at 39%. However numbers are low and care should be exercised in the interpretation of these figures.

Application of Performance Measurement

This analysis indicates that the two dominant areas of literature reviewed are from opinion-based articles (44%) and from research (30%). Whilst not based upon a great number of articles it continues to support the trend of practitioner dominance related to this subject. However it may be argued that grouping the evidence and research based material together as one category, this could provide a better balance in the result with almost a 50/50 split then between practitioner (31%) and academic (28%) articles.

Breakdown of Editorial Quality – based on editorial peer (blind) review or editor acceptance

2.3.1 Spread of Editorial Vigour in relation to material analysed

Table 11

Literature Aspect	Peer Review		Editor Acceptance		Not Applicable	
	Nos	%	Nos	%	Nos	%
All Aspects	87	79	17	15	7	6
1. Outsourcing	16	52	15	48	0	0
2. Output Specifications	1		0		3	
3. Performance Specifications	33	94	1	3	1	3
4. Quality Performance Measures	17	94	0	0	1	3
5. Application of Performance Measures	20	87	1	4	2	9

All Aspects

Assessment indicates that within the whole literature research, 79% of material was deemed to have had some form of academic or peer review. However there is no validation of the 15% that were generated from journalistic or other similar sources. 6% of material was government supported guidance and was omitted from the analysis.

Individual aspects 1-5

Outsourcing

This breakdown highlights the direct spilt between material, which has been academically challenged and that, which appears to be journalistically approved. However it would be wrong to dismiss the latter material as poor or unsuitable as the area covered appears to be supported by little research material to allow any greater range of information

Output Specifications

Numbers are too small to allow meaningful analysis

Performance Specifications

In this area professional journal articles account for 94% of the available material and whilst this gives a level of confidence of their academic and quality merits, it must not be assumed that their content cannot be challenged.

Quality Performance Measures

The issues relating to this aspect are the same as noted in table 8 above. As highlighted later in the review, the development of material based around a few quality theories reduces the 'new' element of some of the articles.

Application of Performance Measures

This area is again dominated by material, which has been reviewed for acceptable standards. However, whilst this assures the reader of its relevance, academic acceptability and editorial quality, it requires careful scrutiny to ascertain its particular relevance to the area under question.

Discussion

Analysis literature shows the literature to be mainly academic articles and those written by Facilities or other related practitioners. However, the number of articles written by Contractors Associations or by individuals writing on behalf of contractors must be noted. These could be seen as thinly veiled advertising material and should not be confused with other balanced, research based or evidential articles. Whilst only 5% of this covert material was noted overall, within the literature found on Outsourcing it occupied a greater level of 20%.

An analysis of the literature type highlighted that a far greater number of papers were generated from research: 19% overall was directly associated with research and from the 31% accredited to opinion, at least one third was derived from a research base. Evidential papers, mostly from case studies were the next highest with untested theory close behind

Whilst the review into the application of performance measures has resulted in a significant amount of material, the majority of the articles were either early research, or theoretical systems requiring practical application or validation. Breakdown of the editorial quality of the material indicated a small number of non-peer review papers within the Performance Measures and Application of Performance sections but a significant number in the Outsourcing section, suggesting little valid research based work in this growing area. In accepting that a considerable amount of data was editorially challenged and evidence based, it still showed that 47% are Practitioner Articles, and 40% linked to Academic papers.

These results although unique to the issues of Outsourcing, Performance Measures and Quality, support work by Cairns & Beech (1999) who tried to stimulate controversy and conflict over the issue of limited true research in FM. They offered the view that much FM research remained concerned with the validation of practice-based concepts. It would be too easy to claim a direct correlation without further research; nevertheless both independent outcomes do tend to confirm their supposition.

Significantly, there was little research material or case study material related to the issues of Performance Metrics for Outsourced FM Specifications linked to the NHS. Indeed there is little material of this nature for Facilities in general, save a number of theoretical or practitioner based articles with possible systems for adoption.

Review Conclusions

In accessing the body of knowledge related to the five sections of assessment, it was noted that articles varied significantly in technical and academic quality dependent upon the source of the data, i.e. whether it was from an independent academic source, linked to a commercial organisation or contractor's association.

Whilst research and case studies were found and accessed from educational databases, those looking for balanced practical applications of Outsourcing, Output based Specifications or Performance Measurement systems may be somewhat surprised at the journalistic and even commercial content of some of the material. Critical editorial review was seen as essential in providing some assurance to the reader or researcher that the article was balanced and academically or technically viable. It has not been possible in this review to fully analyse this issue and further research would be needed in order to be able to provide this form of verification.

Finding material that offered a contrasting view or elements of critical analysis was difficult to uncover and there was a tendency by writers to compliment or develop themes without some critical evaluation of issues or problems raised by the initial work. Neeley et al. (1995) provide an exception through offering critical analysis of the ideas and concepts by writers on the subject of performance management. In the assessment of the material within the review it was noticeable that in the area of Quality Measures and Performance Measures two key texts dominated the practitioner work. These were the initial and subsequent research areas by Parasuraman, Zeithaml & Berry (1985; 1991) related to Service Quality Measures and the work of Kaplan, Norton and David (1992; 1996) regarding Applicable Measures, of which the 'Balanced Scorecard' dominates. A significant component of the material deemed to be research, was from a limited evidential base (supported by or generated by practitioners) and confirms the conclusion reached in the [occupier.org review](#) concerning the lack of evidence based FM research. This review identified the importance of assessing a wide range of associated material in order to ensure a balanced view of the available literature.

Notwithstanding the literature assessment and the issues raised the review did not uncover a range and depth of literature linked to management of Output Specifications¹.

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ⁱ The specific investigation of the output specifications will be published elsewhere (Heavisides and Price, 2001)