

**CONTRACTING-OUT IN A
FACILITIES MANAGEMENT CONTEXT**

**AN INVESTIGATION OF THE ADVANTAGES AND DISADVANTAGES OF
CONTRACTING-OUT AS EXPERIENCED BY USER ORGANISATIONS; AND
THE INFLUENCE SUCH FACTORS EXERT IN DETERMINING WHETHER
FACILITIES MANAGEMENT SERVICES ARE RESOURCED IN-HOUSE OR
EXTERNALLY**

VOLUME II OF II

**A THESIS PRESENTED FOR THE
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VOLUME II

PART III : DATA COLLECTION AND
ANALYSIS

CHAPTER EIGHT

THE RESEARCH REVIEW

8.1 INTRODUCTION

The principles underlying a Research Review were considered in Chapter Five and consist of a synthesis of *existing* knowledge. The potential shortcomings were examined in Chapter Six, Section 6.4. This researcher could find no evidence of any similar exercise having been undertaken in this field.

The purpose of adopting this strategy for data collection was fourfold:

- (i) To establish the range of advantages and disadvantages of contracting-out FM services. To thereby examine whether any consensus existed, and establish parameters for the work.
- (ii) To establish an order of importance of the respective pros. and cons. (i.e. a ranking).
- (iii) To use the findings as one test of the hypothesis of this research.
- (iv) To use the findings to compare with the evidence from the case study strategy, to assess whether any generalisation was plausible.

8.2 METHODOLOGY

The methodology adopted was to collect and analyse, on a progressive basis, written references concerning the perceived advantages and disadvantages to a User of contracting-out FM services.

Each reference was categorised very simply at first, by commencing a new group for each reference. As the work progressed, the development of groups was continually monitored and sorted into bundles of groups, each possessing a prime common factor.

References were continued to be analysed by the Research Review methods until:

- (a) new groups ceased to be created;
- (b) additional findings matched the pattern of earlier findings in terms of frequency of occurrence.

A process referred to by Glaser and Strauss (1967) as "saturation".

At this stage a further re-assessment of the categories was undertaken to:

- (i) establish broad headings;
- (ii) rationalise the categories.

When the evidence that was being collected satisfied the completion of the data collection characteristics described above, a further assessment of categories was undertaken.

This was followed by an exhaustive quality control check, designed to overcome the potential weaknesses and criticisms of this method, namely subjective assessment and selective coverage. The quality control comprised the checking through of each reference in its entirety, isolating and re-recording each pertinent mention of an advantage or disadvantage, i.e. effectively, the exercise was undertaken twice. As an example of improving rigour by

such recording, a number of original mentions were rejected by this system (see Findings). Further, because this was a time-consuming process, as a spin-off, it did permit a small number of newly published references to be added.

The complete re-running of the exercise was also considered worthwhile, because it balanced the subjective, or judgmental, view of relevance of a reference taken at the start of the review, with the view taken after experience had been gained and the learning curve climbed.

The process collected, in parallel, separate findings for advantages and disadvantages. These findings were then subjected to a simple meta-analytical process, which compared a priority rating based firstly on the number of author-mentions for each category, and then on the number of individual mentions attributed to each category; i.e. there were non-repetitive multi-mentions appropriate to individual categories - 'non-repetitive' meaning that one author may identify, for instance, several *unrelated* 'reduced costs' advantages of contracting-out. For example, Hytch (1991) finds three separate examples of cost reduction supporting the advantages of contracting-out; and similarly three unrelated examples of selecting a poor supplier, supporting the disadvantages of contracting-out.

The joint strategy for the research design enshrined the principle that the *identification* of categories of advantages and disadvantages by the Research Review would be incorporated in the protocol for the case study strategy. *But*, as an essential caveat, it was reasoned that the *prioritisation* of categories by analysis (i.e. the ranking) should not be undertaken until the case study evidence collection had been completed, in order not to prejudice the findings, or risk criticism of bias. Consequently, the statistical or meta-analysis was not completed until the comparison stage of the Data Analysis Phase.

8.3 FINDINGS

The starting point for the process was a chosen-at-random reference, (although it is perhaps hard to imagine a more apt author reference for this role than Incognito, J. (1992)). This reference produced, by analysis, ten cited advantages to a User organisation by adopting contracting-out procedures. However, in one major respect it was a worrying start, because Incognito did not balance his argument at all by describing any disadvantage. The reason for the position taken became evident - the author proved to be an executive of a supplier organisation, and he was clearly reflecting in his work a partisan view. As a consequence of this realisation, only advantages and disadvantages of contracting-out relevant to a *User* were isolated in the Research Review - the numerous advantages/disadvantages which were described as accruing to a *Supplier* were ignored. Hence the work became directly related to the User's perspective.

Conclusions drawn from this opening experience were as follows:

FIRST, the exercise embarked upon would have three recognisable backgrounds:- suppliers, which judging by Incognito, would be putting a probably biased case in favour of contracting-out, and therefore would be concentrating on the advantages to a User. The second group would be from a User background, and there was initially no recognisable reason to expect bias in data from that source. However, the review had revealed a likelihood that many Users who had adopted contracting-out strategies were still in the first contract cycle, and were not fully able to assess the disadvantages accruing to their organisations. The third group was a collection of management advisers and academics, who, by being independent, would also have no anticipated bias to their preferences.

SECOND, subject to a reasonable number of references being analysed, the concern about bias could be reduced, *providing* the data did not attempt to assess a relative *comparison* of advantages with disadvantages; i.e. the data would be valid for comparing advantages with other advantages, and similarly for disadvantages with other disadvantages.

In addition to restricting the findings to comparisons, as per the foregoing, it was at this stage reasoned that to minimise bias, the Research Review should only take account of an author's own synthesis, and not relate to that author's original data. For example, Incognito's work itself was based on the survey of 100 companies. By ignoring this number and concentrating on the findings only, the potentially inherent weighting in favour of (in this case) advantages, was regulated. This could be described as using a form of secondary analysis.

Work then recommenced on the collecting and analysing of relevant references, and a further problem became apparent. The authors were seen to be using differing terminology. For example Takac (1993) referred to the use of latest technology, while Incognito referred to the avoidance of obsolescence; both have the same meaning. As a result it was determined to group the terms into categories as the process continued. A new reference could:-

- * fit an existing category exactly, requiring no additional descriptive; or
- * could fit an existing category, albeit using a differing term, and would have that term added to the descriptor, (e.g. the disadvantage arising from the problems of cessating a contract and reverting to an in-house option was variously termed 'broken egg', 'vasectomy', 'exiting', 'reversion'); or
- * a reference could justify the addition of a new category.

The proviso was that at the completion of this particular data collecting and analysing stage, a review of categories should be undertaken to determine whether any rationalisation could take place.

Having undertaken analysis of the work of 37 authors it was found that references 34-37 elicited only one new category of disadvantages, and that after reference 30, no new category of advantage was recorded. (The totals were later reduced - see below). Further, from the matrix, the pattern of mentions was, by a crude visual test, seen to be reasonably matching earlier recordings. It was consequently felt that sufficient categories had been generated in order to realistically represent the general views which the sources, (and hence the FM 'marketplace'), considered relevant.

To check the quality of the data, the *whole* exercise was checked with the result that the findings from five authors were deleted completely, on the grounds that their references to advantages or disadvantages, when scrutinised in the light of the whole exercise, were too vague or too general. Further, seven individual mentions of disadvantages, and eleven individual mentions of advantages, were deleted or re-categorised.

This left a total of 32 author references, of which 30 referred to advantages, and 23 referred to disadvantages. Two referred solely to disadvantages, 9 referred solely to advantages. (Put another way, 21 had balanced their references between advantages and disadvantages).

At this stage, the matrices were not subjected to any statistical analysis and, in order to comply with the caveat expressed in the methodology statement above (Sec. 8.2), work was suspended on this part of the strategy at this point, until the case study data collection was complete. In order to maintain the required level of rigour and validation, a record had been kept of each

individual reference. Examples of these records appear at Appendix VII.

It is important to draw the reader's attention to the terminology which was expressly used; i.e. these matrices listed *potential* advantages and disadvantages to *Users* by contracting-out FM services. It would be up to primary data to support or contradict such findings.

On recommencement of the Research Review, at analysis stage, and before carrying out a further rationalisation of categories, a prioritisation of categories for both the advantages and disadvantages was calculated, based on the total number of authors identifying each category. For example, the advantage of 'reduced costs/economies of scale' consisted of 25 author mentions out of a possible 30; 'reduced management burden' scored 12.

Similarly, the disadvantage of 'against the culture of an organisation' scored 4 out of a possible 23.

Before re-ordering the categories according to these correlated priorities, a further review took place to determine whether there was scope for rationalising the categories. The first attempts at this exercise brought forward two considerations:-

FIRST, radical rationalisation would require the abbreviating of some of the longer existing category headings, in order to make the compilation headings manageable. In some cases this would jeopardise the understanding of the individual categories; for example, by reducing potential advantage 10 to just 'added value' might obscure the fact that quality and value for money were important ingredients. However, the contrary position was, for example, potential advantage 13, which became a synthesis of categories originally numbered 13, 16 and 16b. These categories could accommodate a merger, becoming 'increased flexibility/workload pattern' without affecting comprehension.

SECOND, if the rationalisation exercise was taken to an extreme, most potential advantages could be reduced to a 'bottom line' cost factor; i.e. if money were no object, many of the in-house problems, which contracting-out purported to solve, could be addressed in-house. For example, skills shortages could be solved by paying higher wages to attract staff; flexibility could be achieved by employing additional staff - even over and above full employment; etc.

It was concluded that the primary purpose for analysing these references had been to provide data against which to test the findings of the case studies, to see if there was support for generalisable advantages and disadvantages. The benefit of the overall exercise would be, if such an outcome was achieved, the possibility of providing data to help guide User organisations in their contracting-out decision-making process.

It was therefore determined, after lengthy consideration, to keep the categories in their descriptive forms and in the established groups except where bundling of groups improved, rather than detracted from, clarity. The resultant matrices, including analysis showing Author Reference rankings, appear at Tables 8.1a and 8.1b, below. Examples of Research Review data appear at Appendix VII, with details of the authors at Appendix VIII.

Table 8.1(a): Research Review : Potential Advantages to the User Organisation

POTENTIAL ADVANTAGES TO THE USER ORGANISATION	REVIEW REFERENCES																										TOTALS	PLACINGS				
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z			a	b	c	d
1. Reduced costs/economies of scale	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	25	1
2. Improved Productivity/Operational efficiencies	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	15	4
3. Right-size headcount/reduce space	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	17	3
4. Career path/development	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	11	10
5. No or reduced capital outlay for latest technology/R & D benefits	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	3	18	
6. No obsolescence/latest technology and specialist knowledge (inc. statutory)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	4	15	
7. No operational headaches	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	5	16	
8. One-stop shopping: c/o supplier acts as screen between user organisation and vendors/one invoice	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	7	11	
9. Optimal equipment configuration	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	6	14	
10. Added-value (at no extra cost)/quality/value for money	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	20	2	
11. Concentration on core business/strategic appreciation of service	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12	9	
12. Reduce management burden	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	15	4	
13. Increased flexibility/Workload pattern	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	7	11	
14. Implementation speed - start-up/response time	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	14	7	
15. Overcome skills shortage/specialist skills	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	7	11	
16. Improved management control: performance levels targeted	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	6	14	
17. Improved accountability: performance levels monitored/risk reduced	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	5	16	
18. Assist organisation obtaining competitive advantage in marketplace	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	2	19	
19. Tax																																

[illegible]

Having prioritised the categories according to the number of authors recognising the existence of a given category, an exercise was carried out to prioritise according to the number of *individual* references made, cumulatively, i.e. the non-repetitive multi-mentions described in Section 8.2.

Tables 8.2(a) and 8.2(b) provide these statistics for advantages and disadvantages respectively.

Table 8.2(a): Potential Advantages of Contracting-out
Ranked by Non-repetitive Multi-mentions

Categories	Non-repetitive Multi-mentions	Ranking
1	58	1
2	34	2
3	20	7
4	14	10
5	4	18
6	26	4
7	5	17
8	8	13
9	6	16
10	17	8
11	24	5
12	15	9
13	31	3
14	10	11
15	22	6
16	10	11
17	8	13
18	7	15
19	<u>2</u>	19
	<u>321</u>	

Table 8.2(b): Potential Disadvantages of Contracting-Out
Ranked by Non-Repetitive Multi-Mentions

Categories	Non-repetitive Multi-mentions	Ranking
1	10	5
2	7	8
3	24	1
4	1	26
5	14	3
6	6	10
7	11	4
8	8	7
9	3	15
10	5	12
11	20	2
12	9	6
13	1	26
14	2	21
15	4	14
16	3	15
17	6	10
18	2	21
19	3	15
20	3	15
21	5	12
22	3	15
23	7	8
24	2	21
25	1	26
26	2	21
27	3	15
28	<u>2</u>	21
	<u>375</u>	

There is a close correlation between the placings given by the respective means of authors recognising a particular advantage or disadvantage, and the number of non-repetitive mentions, as shown in the histograms at Figs. 8.1a and 8.1b.

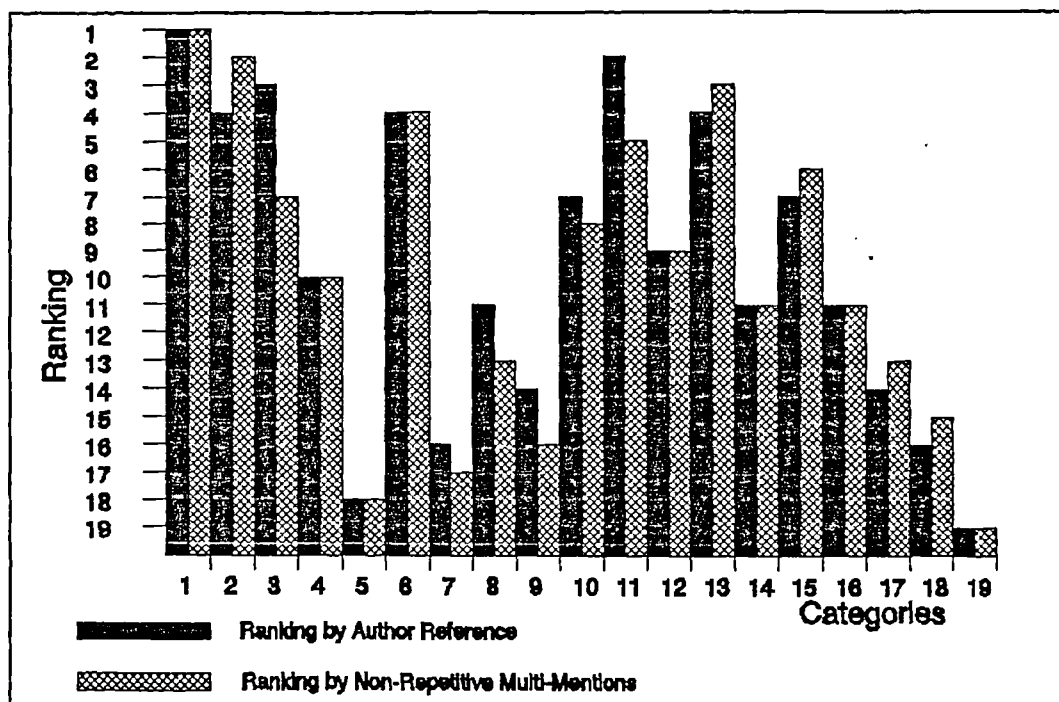


Fig. 8.1(a) : Author References -v- Non-repetitive Multi-mentions : Advantages

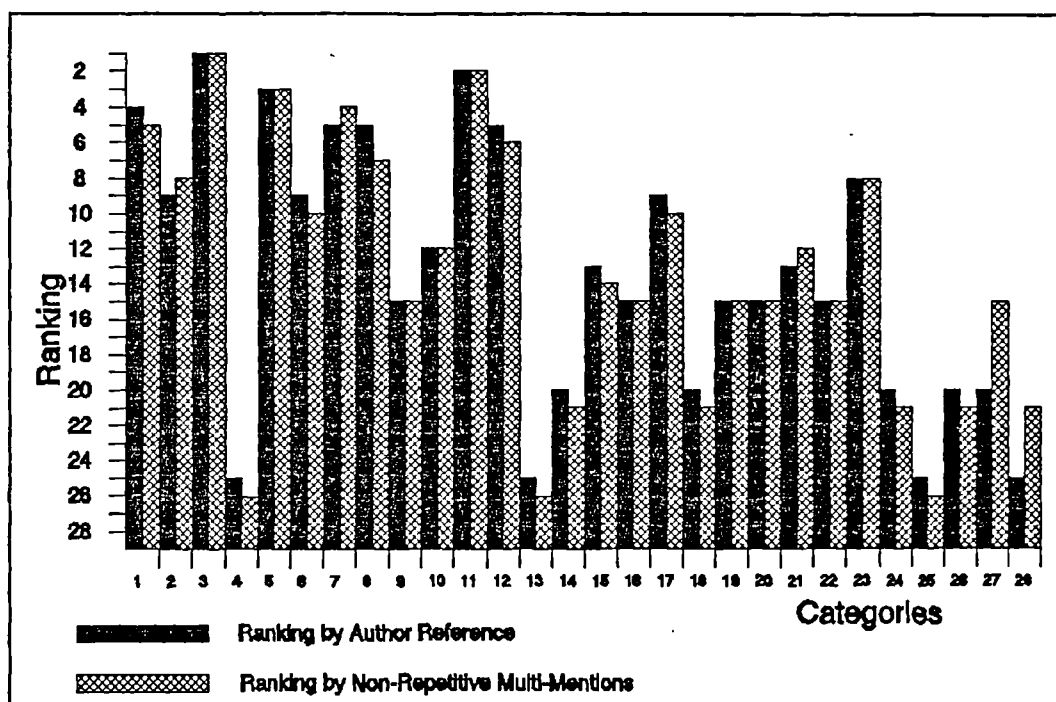


Fig. 8.1(b) : Author References -v- Non-repetitive Multi-mentions : Disadvantages

This analytical exercise was not designed to be subjected to complicated statistical theory. However, reasoning suggested that if there were to be bias, it was more important to take account of the number of authors *identifying* each category, than the number of non-repetitive mentions given, respectively, to each category. For example; if all 30 authors recognised category x, but only made 2 mentions each; this would be more significant than 6 authors with a total of 60 mentions between them, i.e. it recorded a more widely accepted advantage or disadvantage.

The mean average of advantages by author reference and non-repetitive multi-mentions found six of the calculations tended toward the latter; four tended toward the ranking by author reference; and 9 displayed no tendency. The same exercise for disadvantages displayed a trend toward non-repetitive multi-mentions, viz: five tended to the ranking by author reference, thirteen tended to the ranking by non-repetitive mentions and ten were equal. Mean averaging therefore developed a bias away from author references.

In order to achieve a balance, one further level of analysis was undertaken. Following Wheldon's theory of weighted arithmetic average (Wheldon (1962) pp.103-125), supported by Moroney (1976) (pp.52-54), a weighting was devised for this exercise by relating the category totals as a percentage of:

- (a) the summation of authors,
- (b) the summation of mentions,

Then by comparing the cumulations to two decimal places, instead of whole numbers, the number of tied placings was reduced. The resultant marginal bias was toward author reference. The comparison of the placings appear at Tables 8.3(a) and 8.3(b).

Table 8.3(a): Analysis Comparison: Advantages

1 Category	2 Ranking by Author Reference	3 Ranking by Non-Repetitive Multi-Mentions	4 Ranking by Mean Averages (Cols. 2+3)	5 Ranking by Weighted Averages
1	1	1	1	1
2	4	2	2	4
3	3	7	6	3
4	10	10	10	10
5	18	18	18	18
6	4	4	5	6
7	16	17	17	17
8	11	13	13	13
9	14	16	15	15
10	7	8	8	8
11	2	5	3	2
12	9	9	9	9
13	4	3	3	5
14	11	11	11	11
15	7	6	7	7
16	11	11	11	11
17	14	13	14	14
18	16	15	16	16
19	19	19	19	19

Table 8.3(b): Analysis Comparison: Disadvantages

1 Category	2 Ranking by Author Reference	3 Ranking by Non-Repetitive Multi-Mentions	4 Ranking by Mean Averages (Cols. 2+3)	5 Ranking by Weighted Averages
1	4	5	4	4
2	9	8	9	9
3	1	1	1	1
4	25	26	26	26
5	3	3	3	3
6	9	10	10	10
7	5	4	4	5
8	5	7	7	7
9	15	15	15	15
10	12	12	12	12
11	2	2	2	2
12	5	6	6	6
13	25	26	26	26
14	20	21	21	21
15	13	14	14	14
16	15	15	15	15
17	9	10	10	10
18	20	21	21	21
19	15	15	15	15
20	15	15	15	15
21	13	12	13	13
22	15	15	15	15
23	8	8	8	8
24	20	21	21	21
25	25	26	26	26
26	20	21	21	21
27	20	15	20	20
28	25	21	25	25

The weighted average results for advantages of contracting-out show that 9 categories display no bias to either ranking by author reference or non-repetitive multi-mentions; 7 tend toward author reference; and 3 tend toward non-repetitive multi-mentions. For disadvantages, 10 display no bias; 6 tend toward author reference; and 12

toward the non-repetitive multi-mentions. This is a converse and therefore balancing trend to that displayed by advantages.

The main benefit of using this weighted method is that the number of joint (or tied) rankings is reduced to only one for advantages. Whilst, for disadvantages, the highest joint ranking is now positioned at number 10. The lower priority findings for disadvantages still group together, but this is a function of the ratio of the relatively high number of categories identified compared with the number of individual references. This latter point supports the conclusion that data and thinking generally regarding the disadvantages of contracting-out, is less well advanced than for advantages. This possibly supports the theory that the current vogue of contracting-out *has been in place* for an insufficient time period for Users to assess the disadvantages.

For the purposes of this analysis, the findings adopt the priorities established by the weighted average method, producing an order of categories of advantages and disadvantages as per Tables 8.4a and 8.4b.

Contemporaneous analysis of the case studies' findings at this stage began to indicate a range of importance of advantages of disadvantages. Broadly, these factors could be divided into:

- * those which *influenced* the tactic to be adopted;
- * those which *supported* the choice of tactic.

Table 8.4(a): User-perceived Advantages of Contracting-out
in Ranking Order

Ranking by Weighted Average	Categories of Potential Advantages
1	Reduced costs/economies of scale
2	Concentration on core business/strategic appreciation of service
3	Right-sized headcount/Reduce space
4	Improved productivity/Operational efficiencies
5	Increased flexibility/Workload pattern
6	No obsolescence/Latest technology/Specialist knowledge/Current statutory knowledge
7	Overcome skills shortage/Specialist equipment shortage
8	Added-value (at no extra cost)/Quality/ Value for money
9	Reduced management burden
10	Career path development
11	Implementation speed (start-up)/Response time
11	Improved management control/Performance levels targeted
13	One-stop-shopping/One invoice/Contractor acts as screen between User and suppliers
14	Improved accountability/Performance levels monitored/User risk reduced
15	Optimal equipment configuration
16	Assist User obtain competitive advantage in market-place
17	No operational headaches
18	No capital outlay/Latest technology for least capital outlay
19	Tax gain

Table 8.4(b): User-Perceived Disadvantages of Contracting-Out in Ranking Order

Ranking by Weighted Average	Categories of Potential Disadvantages
1	Claimed savings = forecasted hopes/not always cost effective
2	Personnel problem - shift from User to supplier/those leaving -v- staying/unions/redundancies
3	Lack of control of suppliers
4	Broken egg/Vasectomy/Exiting/Reversion
5	Risk of selecting a poor supplier/supplier market insufficiently competent
6	Personnel problem - Loyalty to User
7	Confidentiality of data/Security issues
8	New (Different) management problems
9	Worse strategic focus/Can't separate strategic from operational
10	Strategic risk/Contracting-out critical segments may jeopardise User's organisation
10	Lose in-house expertise or capability
12	Longterm fixed contracts
13	Supplier's capacity
14	Contrary to Culture of User's Organisation
15	Ownership of New Applications with Supplier
15	Ignores in-house solution/In-house resource satisfactory
15	Supplier's Commitment
15	Supplier's availability
15	Supplier's continuity
20	Hidden costs
21	Decision time required when considering contracting-out
21	Lack of independent advice by supplier (manufacturer)
21	Learning curve for supplier
21	Slower response-time to problems
25	Lack of flexibility
26	User tends to wrongly rationalise c/o decision as correct
26	Taxation penalty (c/o supplier's fees taxable -v- hardware capital allowable)
26	All eggs in one basket

The first category was termed 'drivers'; i.e. they comprised factors which drove the decision-making process - the reason for doing it/not doing it. For example, an organisation may decide to contract-out FM services to reduce costs - this equates to the driver. The fact that

there may be tax advantages and/or better career paths for technical staff, if outsourced, support this change - but they would not represent sufficient reason/s alone to have initiated the contracting-out tactic. Such reasons fit the second category.

It should follow that the drivers - the important influencing factors - are amongst those most frequently mentioned in the Research Review. This proposition can be incorporated in the original fourth purpose for collecting and analysing data by Research Review (see Section 8.1), by amending it to read: To use the findings to compare with the findings from the case study strategy, to assess whether any generalisation was plausible, and to identify whether the driving factor/s corresponded to the more frequently occurring advantages/disadvantages.

To provide some measurement to the test, it was subjectively decided that, if all the driving factors identified in the case study findings corresponded to the first five categories of either the advantages or disadvantages, this would be considered to be highly supportive of the proposition; a driver from category ten onward would be considered to contradict the proposition.

By using this test, it was thought that some generalisation of driving factors may be possible, which would open up opportunities for future research and would demonstrate the benefits of this project's work (See Footnote 1).

Footnote 1: By further research after the completion of this project, it may be possible to grade the second category between these advantages/disadvantages which are of significant importance, and those which could be classed as spin-off. For example, a decision not to contract-out, based on a driver of 'against the culture of the organisation' might be supported by 'slower response times to problems', whilst a spin-off may be a disadvantage of a 'minor tax disincentive' or an advantage of a 'minor tax incentive' - either way, the latter spin-off would have little or no influence on the overall decision.

8.4 TEST AGAINST THE HYPOTHESIS

The third requirement of this Chapter was to use the findings of the Research Review as one test of the hypothesis of this project.

For ease of reference, the hypothesis is:-

"The potential advantages to a User organisation of contracting-out discrete aspects or bundles of FM services are likely to outweigh the potential disadvantages".

The Research Review findings record a broad range of potential advantages and disadvantages, 321 and 375 respectively, collected into a total of 47 groups. For the findings to support the hypothesis, analysis must demonstrate a preference for advantages; i.e not a like-for-like comparison of each advantage with a disadvantage (as rejected in the second conclusion drawn from the first review, recorded above), but an overall balance of findings in favour of contracting-out.

Section 8.3 records 30 authors referred to advantages and 23 referred to disadvantages. Further, only 2 authors referred exclusively to disadvantages. This could be viewed as tending toward a preference. However, 21 authors of the final list of 32 (66%), referred to both advantages and disadvantages; and of the 9 who referred solely to advantages some (e.g. Incognito) were considered to be offering not an inaccurate, but an imbalanced view.

To further balance the finding that suggests more authors recording solely advantages; of the total number of examples records, (696), 54% were disadvantages and 46% advantages.

The conclusion drawn is that the findings of this Research Review do *not* support the hypothesis. The contradiction suggested points toward an amended proposition. Numerous potential advantages *and* disadvantages have been recorded, but, from the findings of this chapter, it is not possible to state that one group significantly outweighs the other, or vice versa.

More importantly, the analysis of the findings suggests that it is not necessarily a *dominant number* of advantages or disadvantages of contracting-out which would direct a User towards a particular decision, but the presence of certain key drivers; (i.e. a numerical majority of one category over another would not necessarily prove decisive in decision-making).

It is proposed that the comparisons at the conclusion of this project include an analysis of whether the case studies support the recognition of such overriding factors.

8.5 CONCLUSIONS

This Chapter described four purposes for adopting a Research Review strategy.

The findings of the review fulfil the first requirement; i.e. the range of advantages and disadvantages to a User organisation of contracting-out FM services has been established.

By analysing the findings, a ranking of importance of these categories of advantages and disadvantages has been achieved, thus satisfying the second requirement.

The findings, subsequent to the analysis, are in a form whereby they can be used to compare with the case studies'

findings, with a view to assessing potential for generalisation, and to test the proposition that the contracting-out decision *drivers* will correspond to the more frequently occurring categories. This satisfies the amended fourth purpose of adopting this strategy.

The remaining purpose (the third) was to use the findings as one test of the project's hypothesis. Section 8.4 describes how the findings did not support the hypothesis, and proposes that the numerical balance of one category over the other, (i.e. advantages over disadvantages, or vice versa), was not as important as the presence of factors which actually formulated decisions - referred to as drivers. Not only does this suggest that a User may recognise more advantages than disadvantages but still not contract-out, because of the presence of one or more restraining driver/s, or vice versa; but it could be used as a proposition for explaining why other organisations maintain the status quo - i.e. there is an absence of a positive driving factor, needed to initiate change. If the findings of the case study support the Research Review's rejection of the hypothesis, this last suggested proposition could prove to be a useful subject for furthering the research beyond the scope of this project.

The next six chapters report the findings of the case studies, commencing with Chapter Nine : The Pilot Case Study.

CHAPTER NINE

THE PILOT CASE STUDY :

Hotel Services of a Private Hospital Group

PREAMBLE

Protocol Requirements

The Protocol for case study data collection and analysis was developed in Chapter Seven (Section 7.2) above; the working document being replicated at Appendix V.

The model developed at Fig. 9.1 below summarises the requirements of the Protocol and acts as a 'route map', describing the arrangement and marshalling of this study.

To safeguard and respect the confidentiality under which the data was made available, the identity of the Organisation to which the unit of analysis belonged will not be specified in written form, but will be referred to as 'PCSO' (standing for Pilot Case Study Organisation). By employing this tactic, the description of the study and the findings do not have to be disguised. Consequently there is no devaluing of the main points.

This study describes the manner by which the PCSO resourced the human and the skills elements of its Hotel Services (HS), which was one of ten elements comprising the Facilities Management function at the commencement of this study.

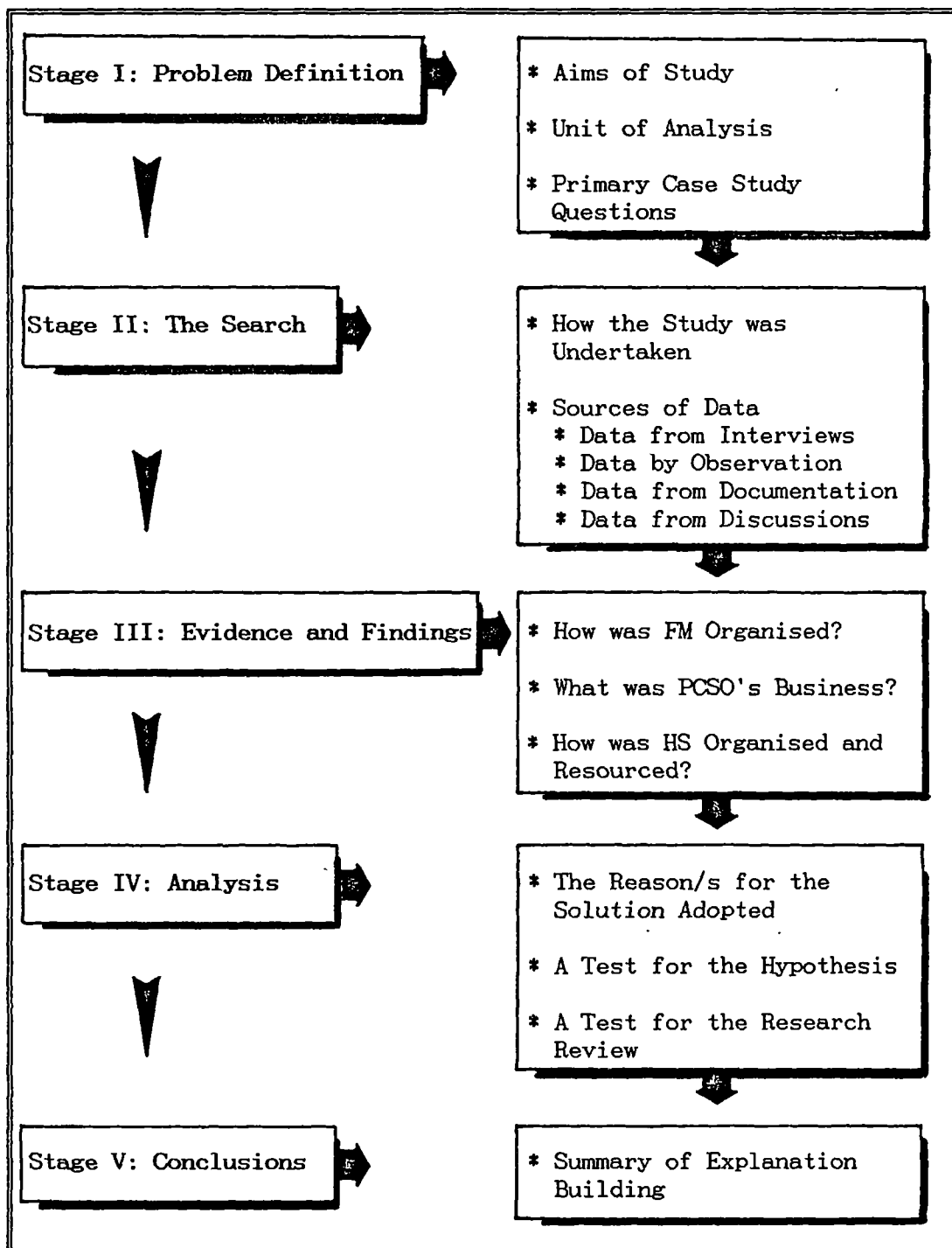


Fig. 9.1: Pilot Case Study Route Map

STAGE I : PROBLEM DEFINITION

9.1 INTRODUCTION : PURPOSE OF PILOT CASE STUDY (PCS)

The purpose of the Pilot Case Study was two-fold:

- (i) To act as a prototype study, in order to test the methodology proposed by the research project plan (RPP) and by iterative means refine the process.
- (ii) To ascertain the method/s by which Hotel Services were resourced within PCSO; and by subsequently analysing these findings, to establish User-perceived advantages and/or disadvantages of contracting-out FM services; i.e. PCS was a *primary* data-gathering study in its own right.

Stage I of this study seeks to build-up a picture of the problem to be addressed by first, in section 9.2, progressively focusing on the factors governing the choice of the organisation housing the unit of analysis; then describing the said organisation; and then defining the unit of analysis itself and the period of study.

The aims of the Pilot Case Study are then considered in section 9.3 of Stage I.

Section 9.4 concentrates on identifying the case study questions.

9.2 THE UNIT OF ANALYSIS

9.2.1 Factors governing the choice of the Pilot Case Study Organisation

The following factors influenced the choice of the organisation within which the unit of analysis was to be found, i.e. the PCSO:

- (i) PCSO in general, and the principal informant in particular, offered ready accessibility to data.
- (ii) A relatively recent and progressive introduction of FM philosophies into the organisation could be audited. This process commenced in 1989 and is still enduring at the time of concluding this project.
- (iii) Generally in FM, most data prior to 1990 relates to office use. A contrasting occupier-use was considered likely to throw findings into sharper relief.
- (iv) PCSO had a self-stated strategic understanding of core business. This researcher's previous experience was that many organisations, confronted with a requirement to define their *raison d'etre*, encounter difficulties in making an analysis of core/non-core business.
- (v) Being a private hospital, the PCSO presented a complex matrix of customer relations.
- (vi) PCSO appeared to possess appropriate case study material. FM services were apparently procured not only by in-house staff and by contracting-out, but also by a 'halfway house', thereby comprising elements of both.

9.2.2 Description of the Pilot Case Study Organisation

The PCSO was a private hospital group operating under a trust registered as a charity. The organisation comprised 32 acute surgical hospital sites (plus one clinic), located in England and Scotland, divided for administration purposes into four regions of eight hospitals each, plus one day care centre. Each hospital provided a full range of consulting, diagnostic and treatment facilities for both in- and out-patients.

The following briefly sets the scene:-

- * There are 200 hospitals in the private sector. BUPA is the main competitor for PCSO having 30 sites (but approx. 2,000 beds to PCSO's 1,300). Five operators control 50% of these hospitals, leaving a large number as one-off enterprises.
- * PCSO employed approximately 3,700 staff in 1992. (3,100 whole-time equivalent).
- * Consumable spend in 1991 was approximately £8 million.
- * Capital expenditure 1991 £4.6 million.
- * Revenue and capital expenditure (1991) £6.7 million.
- * PCSO owned all the buildings they occupied with the exception of a warehouse, workshop and the head office, which were leased.
- * Typical maintenance spend was £11.5 million (1989).
- * Projected R&C spend was £7.3 million, plus minor capital works spend of £4.2 million.
- * The capital asset register was approximately £100 million.
- * Depreciation of buildings - 60 years.
- * No completely new hospitals had been built for PCSO since 1982.
- * Because of the number of locations, PCSO's assets included: 32 diagnostic departments; 50 x-ray sets, 5 scanners, 70 theatres.

The PCSO set high standards, as witnessed by their annual reports, brochures and other documents, which were peppered

with comments such as the following, reflecting their objectives:

"It is vital for us to keep our hospitals in the forefront of private medicine, both in terms of the buildings and their equipment". (Axton, H., 1990)

"1990 has seen no change in our commitment to the provision of the finest quality of health care at a price which is perceived to be good value for money". (Ervine, D.T., 1990)

"The consultants believe that the (PCSO) style could be described as efficient, friendly, with a touch of homeliness thrown in". (IHG Report)

9.2.3 The Unit of Analysis: The Pilot Case Study (PCS)
To further develop the theme, described in Section 9.2.1 above, of focusing in on a non-typical example, in order to throw findings into sharper relief, it was determined to adopt a non-property function as the PCS. Hospital Hotel Services were chosen as the Unit of Analysis because it both met this criteria, and it apparently exemplified clear thinking concerning core -v- non-core split (Note: the fact that PCSO's clarity on this matter became clouded is dealt with in some detail, and is viewed as strengthening the rigour of this case. However, the 'volte face' did not occur until well into the evidence collection phase and the foregoing statement concerning choice criteria was accurate at the time it was made).

Note: The single day-care clinic operated by PCSO was, for the purposes of this study, excluded.

9.2.4 Period of Study

Research was undertaken during the period January 1991 - September 1993, but data was collected retrospectively to

1988. Information prior to '89 was largely uncorroborate-able documentary evidence.

9.3 THE AIM OF THE PILOT CASE STUDY

The aim was to establish PCSO's perceived advantages and disadvantages of contracting-out HS (being a part of FM Services), with a view to analysing whether these findings:- :

- (a) were generalisable to other FM services within PCSO;
- (b) were generalisable to other FM services in other organisations;
- (c) supported the findings of the Research Review;
- (d) supported the hypothesis of this research.

The need for, and importance of, a Pilot Case Study (PCS) is examined in Chapter Seven (Section 7.3) above. The strategy adopted for this research also designates the PCS as the *principal case study*; developing Yin's notion that the pilot case study "is not a pre-test ... (it) can be so important that more resources may be devoted to this phase of the research than to the collection of data from any of the actual cases". (p.80)

The PCS was to develop and test ideas over a period, (whereas other case studies could be snapshots in time), and to feed back experience gained for the benefit of the other case studies. The PCS thus permitted the dynamics of an organisation to unfold, (the presumption being that evolution was occurring as per a normal 'living' business), permitting this researcher's understanding of the problems to grow, and to enable the ironing-out of criteria test procedures.

The discipline of the study is to set down, in orderly form, sufficient detail of the PCS, in order for the

process to be replicable. To achieve this aim this study seeks, by following the Research Project Plan, to:-

- * outline the PCSO
- * record the parameters of the unit of analysis
- * record the field procedures adopted
- * record the sources of data used
- * record the evidence collected

The objective of the study was to enable an indepth examination to be undertaken of the unit of analysis and the organisational factors governing or restricting it.

9.4 THE QUESTIONS

By selecting a case study strategy, the research project plan demonstrated preference for an indepth study of a small sample. The predominant questions suitable for such an exploratory exercise are expressed in 'How?' and 'Why?' forms, with the emphasis on analysis of the findings to determine advantages and disadvantages of contracting-out. The direct, and arguably more superficial, approach would have been to enquire *what* the advantages and disadvantages of contracting-out FMS were.

The protocol devised three categories of questions, viz:

- * Primary Questions;
- * Supplementary Questions;
- * Support Questions.

The *primary* questions for PCS were designed progressively to:-

- * build up an understanding of the unit of analysis;
- * identify as findings, key determining factors for reasons governing the way the unit of analysis (Hotel Services) was organised.

The following figure (Fig. 9.2) describes the line of questioning adopted, and retrospectively includes the principal support questions, but excludes subsequent support questions, prompted or necessitated by interim findings.

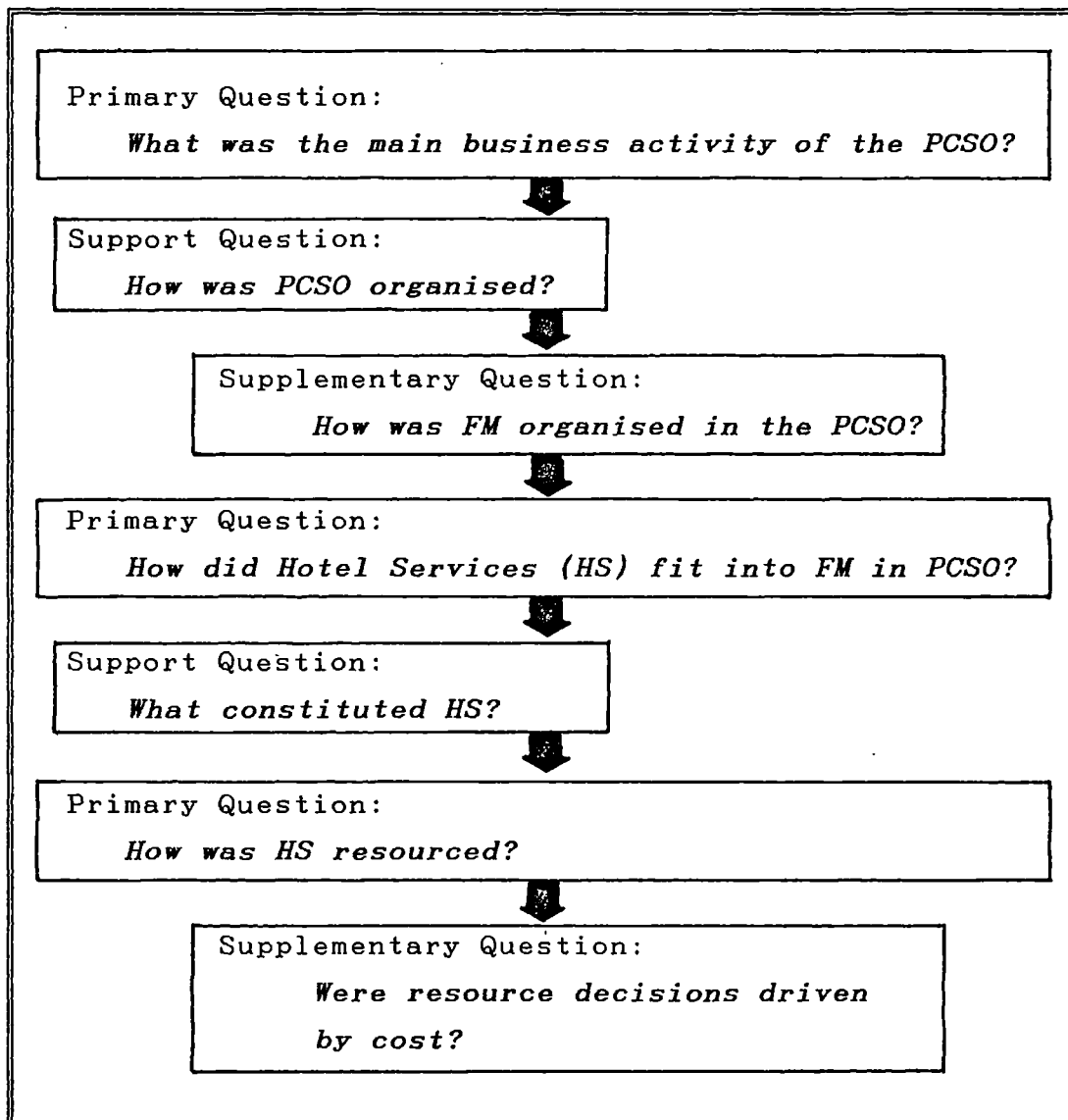


Fig. 9.2 : Line of Questioning

STAGE II : THE SEARCH

INTRODUCTION

Stage II of this study is designed to describe the manner in which the study was undertaken, and records the sources from which, and by which, evidence was gathered; linking the field work with the 'protocol' laid down in the Research Project Plan.

9.5 HOW THE STUDY WAS UNDERTAKEN

9.5.1 The System

Throughout the course of the PCS, the principles of feedback and design-looping were adhered to; influencing the structure of both the PCS itself and of subsequent supporting case studies.

The system of evidence collection, in response to case study questions, with consequential findings and subsequent analysis leading to conclusions and comparison making, can be described in skeletal form as per Fig. 9.3(a).

The complexity of the interrelation of contemporaneous questioning *within* the case study, due to the impact of the respective evidence and findings on other evidence and findings, etc., is demonstrated in Fig. 9.3(b), which shows a series of Primary Questions being tackled contemporaneously. The evidence, findings and analysis sequence triggered by each Primary Question is also subjected to the influence of parallel sequences. For example, the analysis of findings following one question could impact on the evidence collected as a result of another, which in turn could influence the findings of a third, and so on; i.e. in

three dimensions the model would display linking arrows between 'layers' of questions and resultant sequences.

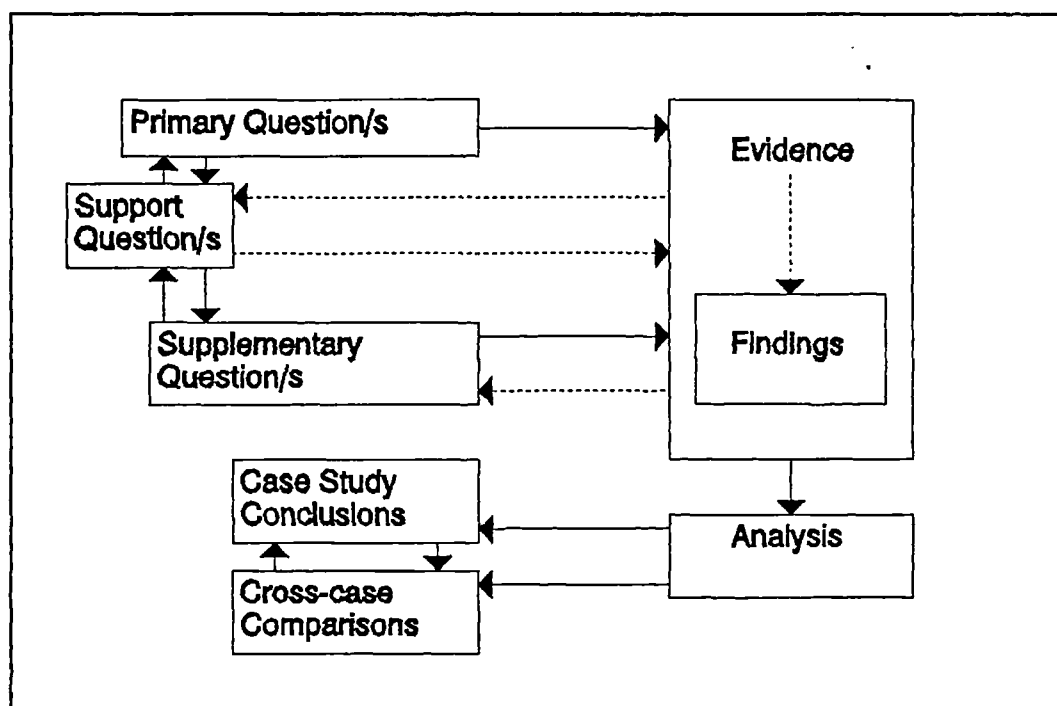


Fig. 9.3(a): The System of Evidence Collection

A working example of this complexity is given at the end of Section Four of Stage III below.

9.5.2 The Programme

The intent of the Research Project Plan had been to complete the majority of the PCS before embarking on the detailed data collection for subsequent studies. The flexibility built into the research project design enabled a decision to be taken, which altered this plan radically, and enabled the PCS to be viewed from a different perspective.

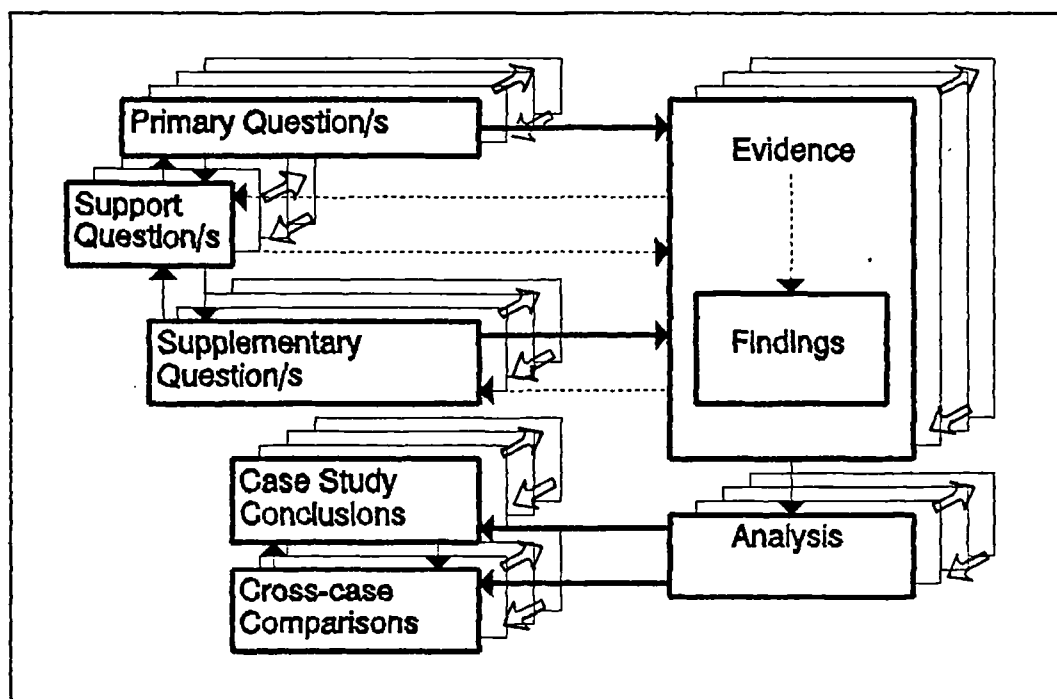


Fig. 9.3(b): The Multi-Layered System of Evidence Collection

In accordance with the original programme, the majority of desired data had been collected from the PCS by end of month eighteen. However, close contact was maintained with the Principal Informant, both in order to commence two other case studies with the PCSO, and because of his role as a key informant for the project as a whole. Information began to flow during the period of months twenty to twenty-five that PCSO were considering a major re-assessment of HS.

After detailed consideration, including discussions with Director of Planning and Facilities (DoPF) concerning interim findings of the IHG Review (by the International Hospital Group Consultants Limited (IHG)), and the impact of same on the findings earlier achieved by this study; it was concluded that the PCS should be continued, in the revised guise of the *principal* case study, in order to take advantage of the opportunity afforded, to examine the

PCSO's re-assessment of contracting-out, i.e. it was to become a *longitudinal* case study.

The overall timetable for the *project* was not jeopardised by this decision, because sufficient experience and feedback had been gained from the initial phase of the PCS to enable other case studies to proceed contemporaneously with the now ongoing, but re-aligned, PCS.

There was, however, a change of emphasis incorporated as a result of this decision; namely that some of the subsequent case studies should be restricted to being shorter time-frame pictures, and thus supporting the principal case study, which was now attempting to cope with the difficulties of a dynamic situation, spanning a significantly longer time-frame.

9.6 SOURCES OF DATA

Four categories of data source were utilised.

9.6.1 Indepth Interviews

Indepth interviews as a source of data, relied on the following:-

Principal Informant

The Director of Planning and Facilities (DoPF) (pre. January 1993: The Group Facilities Manager) fulfilled the dual roles of principal informant for the PCS and a key informant for the project as a whole.

A total of 30 meetings were held over a 33 month period. Approximately half dealt exclusively with the PCSO and the PCS, with the remainder dealing also with the project as a whole, and two other case studies. The meetings included open-ended interviews; structured interviews; a conducted

tour of the HQ building, meetings at Location 3 (a London hospital site); discussion group meetings with BS MPhil researchers from this University; working meetings to analyse drafts such as draft Protocol; draft PCS report, etc.; meetings used as sounding-board meetings of key informants for feedback purposes; and, finally, a series of verification and corroboration meetings. Initially the meetings were used to clarify the scope and meaning of FM (i.e. the Field of Study) and then, through analysis of the implementation of FM services by the PCSO, the pros. and cons. of contracting-out certain FM services, grouped together as Hotel Services. The DoPF was also used as Principal Informant for two further case studies (see Chapters Ten and Twelve).

Hotel Services Manager (HSM)

An open-ended indepth interview was undertaken at one of the provincial hospital sites - known for the purposes of this study as Location 2 - towards the end of the study period, with the aim of:

- * collecting evidence from hospital (location) level management;
- * assessing the accuracy of information collected to date;
- * collecting evidence concerning the efficiency of the current systems;
- * collecting evidence concerning the perception of the changes to be implemented.

This interview expanded on data gathered from catering staff at HQ (Location One) and from the HSM at Location 3.

Hospital Manager (HM)

This open-ended structured interview was coupled with a conducted tour of Location 2. The aims of the interview were the same as for the HSM above. The interview expanded on discussions held and observations recorded at Location 3.

Tape Recordings

Recordings of key sessions with the DoPF were made and stored. The primary purpose of this method of data recording was to permit the interview to flow without the otherwise necessary intervention of note-taking. On other occasions a RA attended interviews and took notes by shorthand. Tape recordings of parts of interviews with the HSM and HM were also made.

9.6.2 Data Collected by Observation (Direct and Participant)

(i) Evidence was collected at Location 3 over a seven day period from November 10th - 17th 1992. This demonstrates further advantages of a flexible approach to research plan strategy. For the period in question this researcher's wife was admitted as an in-patient at this location - a case where a private patient influenced a consultant as to which hospital to use (see below). As she had worked previously as a research assistant on this project, during the background phase in particular, she was experienced in the aims of the project, and well versed in the background theory. Her evidence was collected as a 'participative observer' and was verified by the researcher's own recorded observations. The accumulated evidence included:

- * talks with the HM and the Matron;
- * discussions with the HSM, DoPF (on site), medical consultants (x2), admission nurse, case nurse, staff nurses, contract nurses, cleaners, security staff, receptionists, ward hostess;
- * observations of HS working practices, e.g. telephone operator, receptionist, housekeepers, porters;
- * sampling of catering services;

- * survey of general facilities available in wards, common parts and floor kitchens;
- * participant and direct observation of medical/ surgical services and facilities, and patient care.

This period also enabled the location to be observed through the eyes of a patient and a visitor; following the progress of a patient from admission for surgery, through pre. and post. op. and recovery, to completion of questionnaire on discharge.

- (ii) Evidence was collected from Location 1 (Corporate HQ) by direct observation over six visits by this researcher; on one occasion joined by the researcher's wife acting as project research assistant (RA). Evidence was also collected by an RA from the LINK CMR Programme: FM Good Practice Project.
- (iii) Evidence was collected from Location 2 by direct observation over one visit.
- (iv) The RA from the FM Good Practice Project programme visited a further two locations during the course of this project.

9.6.3 Documentation including Archival Records

The following schedules the principal records from which key data was collected:-

- * Annual Reports and Accounts 1989-1992 inclusive.
 - * Summary Profit and Loss Accounts - August 1993
 - * Patient satisfaction survey.
 - * Confidential IHG report, plus associated correspondence, including client's instructions.
- Note: The IHG consultants' study leading to their report was also deemed to be a data gathering exercise

for this project, because duplication of data collection by this researcher, contemporaneously with the consultants, was not acceptable to PCSO. For the purposes of this work, this method of evidence gathering is considered akin to a laboratory bench experiment, undertaken by research assistants, with the *subsequent analysis* of data being the relevant role.

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* 'Progress report on the move to in-house hotel
services and guidelines for implementation plans'
received 7.8.93.
* Hotel Services Manager : Job description
 : person specification
* Hotel Services Control Clerk : Job description
* Correspondence from C.E.O. to all staff dated 13.8.93
re. changes.
* FM Manual
* Electricity, Gas and Water Report dated May '91
* Organisational charts:-
Jan. '88
Jan. '89
Jan. '90
Jan. '92
Jan. '93
* Undated, but projected organisation structure post
Jan. '94
* FM organisation charts x 3 for period '89-'92
* FM structure (Professional) chart, circa 1991
* Papers for meeting dated 12.8.92 with consultants to
examine property occupancy management
* Regional consolidated Profit and Loss Accounts, July
'93
* 'All Hospital' consolidated summary Profit and Loss
Account, July '93
* R & R Budgets 1992
* '1987 Facilities Management Budget - Unitary Analysis
of Costs'
* Manpower Control report - August 1993
* Paper re. FM in PCSO dated August 1992

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- \* 'Convincing the Board': paper by Group F.Mgr. dated 30.10.92
- \* 'Integrating and Evaluating Support Services': paper by Group F.Mgr. dated 9.12.92
- \* Correspondence was built up over the course of the study; mainly in letter and memo form between this researcher and the DoPF. Of particular relevance are letters to DoPF setting down specific questions, together with respective replies.

#### 9.6.4 Informal Discussions

- \* *Telephone discussions*: of note for the PCS were a series of frequently lengthy 'phone calls with the principal informant (often lasting in the region of an hour).  
Other calls were used with specific informants, normally to seek evidence on one particular point or to corroborate (validate) data or conclusions drawn.
- \* *Written notes*: included informal notes of meetings (some transcribed, other in hand writing), notes of 'phone calls, notes added to more formal documents to amplify/clarify, etc.

## STAGE III : EVIDENCE AND FINDINGS

### 9.7 INTRODUCTION

Fig. 9.1 above provided what could be described as a 'route finder' or small scale map for this study. Because of the complexities encountered with PCS, a more detailed guide (or 'large scale route map') is developed at Fig. 9.4 to assist the reader follow both the logic and explanation building of how data was converted into findings for analysis. The figure shows how this Stage of the PCS is

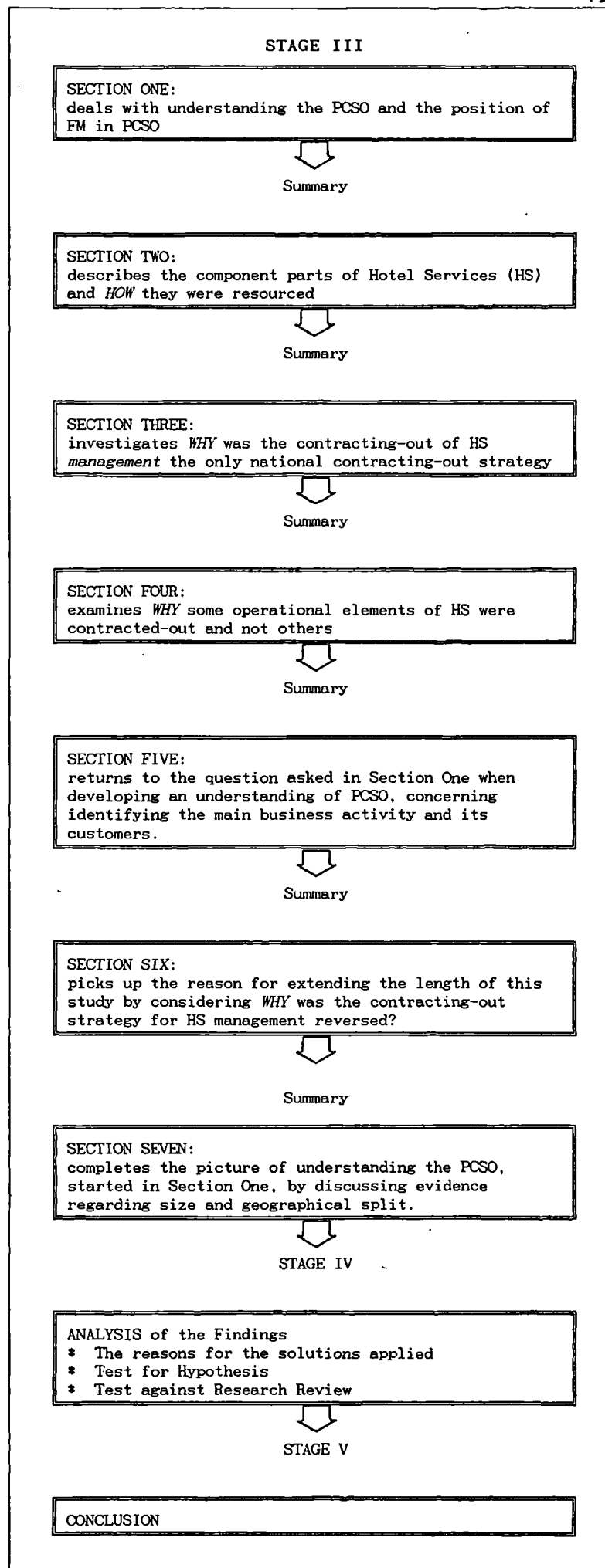


Fig. 9.4: Route Map  
for Stages III - V



divided into seven sections, leading into the analysis of findings and, finally, the conclusions.

### STAGE III SECTION ONE: UNDERSTANDING THE PILOT CASE STUDY AND THE ROLE OF THE FM FUNCTION

The description in 9.2.2 above provides sufficient data to understand the parameters of the PCSO and goes some way to answering the *primary question*: '*What was the main business activity of PCSO?*' But to gain a fuller understanding, more detailed questions were required and these are posed in Section Five below. The question of size of PCSO completed the evidence needed to understand the organisation, and is dealt with in Section Seven. The remainder of Section One now deals with FM in the PCSO.

Supplementary Question: *How was FM Organised in the PCSO?*

#### *Overview*

FM within the PCSO evolved during the course of this study. Prior to 1988 there were separate support functions, as per Table 9.1.

The service departments, with the exception of HS, were not accountable to managers delivering health care services.

In May of that year, an Estates Manager was appointed to run both the independent Building Maintenance Department (formerly Property Department) and the M&E Services Departments.

The subsequent merger of these two functions into an Estates Management Department formed a working basis for the introduction of an FM strategy. This developed further

Table 9.1: PCSO's Support Functions (prior to 1988)

|                                           |                                               |
|-------------------------------------------|-----------------------------------------------|
| * Property Department                     | (reporting to the Planning Manager)           |
| * M&E Services Manager                    | (reporting to the Planning Manager)           |
| * Capital Projects<br>Development Manager | (reporting to the Planning Manager)           |
| * Office Services                         | (reporting to Company Secretary)              |
| * Nurse Call System                       | (reporting to Purchasing Manager)             |
| * Furniture                               | (reporting to Purchasing Manager)             |
| * Medical Equipment                       | (reporting to Purchasing Manager)             |
| * Consumables Purchasing                  | (reporting to Purchasing Manager)             |
| * Hotel Services<br>(i.e. Catering)       | (reporting to Director of Clinic<br>Services) |

the following year with the recognition of nine service elements that had not been incorporated within the newly introduced three-tier management structure, which comprised:-

- \* Strategic Planning and Management (HQ staff)
  - \* Regional Planning and Management (4 regional HQ's)
  - \* Day-to-day Management (The 32 hospitals)
- approximating to strategic; tactical; and operational management.

January '90 saw the Group Estates Manager appointed as Group Facilities Manager to implement the strategy of co-ordinating FM functions.

From 1991 a shift in strategic thinking at Board level was encouraged by the newly appointed Group Facilities Manager. There was an understanding that 'facilities' were all the services which supported the core business. FM at that time was recognised as "the hospitals without patients and medical staff". (Source: Group Facilities Manager, May '91)

Retrospectively, it was reasonably straightforward to chart the development of FM, and with it HS, in the PCSO. Examining it, as *it evolved* during the course of this study, often left a less clear picture. For example, as late as August 1992, FM was being divided into ten groups. By 1993, the then *eleven* elements constituting FM, were described as:-

1. Capital planning and development, including the acquisition and disposal of land and buildings
2. Building Maintenance
3. M & E Maintenance
4. Hotel Services Management
5. Utility Services Negotiations
6. Purchasing of specialist systems - nurse call, fire alarm, piped medical gas etc.
7. Purchasing and maintenance of general hospital furniture and equipment
8. Purchasing and maintenance of medical, surgical and diagnostic plant and equipment
9. Purchasing of medical and surgical consumable products, including prostheses
10. Purchasing and maintenance of office furniture, equipment and stationery
11. Purchasing and maintenance of voice and data communication systems and computers

This meant that FM became:

"The co-ordinated planning and management of the eleven elements .... (to) ensure that each of (the) 32 hospitals are designed, equipped and maintained to support hospital staff, who organise and deliver a range of health care services to (the) patients". (Source DoPF - internal paper used for training purposes)

Essentially there was much commonality with the original strategy of Building Maintenance and M&E Services and nine others; however, comparing the ten groups of August '92 (- the merged Building Maintenance and M&E Services were shown as one) with the subsequent eleven of 1993 shows that the 1992 list took three groups to cover the single 1993 group of Capital Planning and Development - but, more importantly, HS was not mentioned. The reason for this omission is connected with the process of implementation of the FM strategy. It proved one thing to develop a strategy and obtain board sanctioning, i.e. the first management tier, but it took longer for the implementation of the strategy to become acceptable (politically and operationally) at the third management tier.

The stated responsibilities can be traced by referring to the organisational charts for 1988, 89, 92 and 93 at Annex One of this study.

#### FINDING

An overview finding as far as FM as a whole was concerned within PCSO, is that it reflects a continuing evolution.

## SECTION ONE SUMMARY

- \* PCSO was a private health care operator comprising 32 hospitals and one clinic (the latter being discounted for this study).
- \* From 1989 there was growing awareness of the importance of grouping support services under an FM banner.

## STAGE III SECTION TWO: HOW 'HOTEL SERVICES' WAS ORGANISED AND RESOURCED

Primary Question:

*How and Where did HS fit into FM in the PCSO?*

Support Question: *What constituted HS?*

The PCS unit of analysis, i.e. Hotel Services (HS), was chosen because it was, at the time of the commencement of the project, described as a recently contracted-out FM service (Source: Group F.Mgr).

During the 1960's two hospitals, Bournemouth and Harrogate, experienced a complete loss of catering staff to the summer season hotelier trade. An emergency resolution of the problem was achieved by the then CEO who negotiated a deal with Grand Metropolitan Group to supply the necessary labour. Without a catering capability, a hospital of the type run by the PCSO cannot function. There was no retrievable data to explain why temporary agency staff were not recruited. The current DoPF, who was not employed by PCSO at the time, believed that there were no agency staff available, and that only staff directly employed by a hotel and leisure business would have had the capability.

As a consequence of this breakdown in service, the method of resourcing HS was re-evaluated.

By January '91 (and the commencement of this study period), the evidence recorded at that time was that PCSO had contracted-out the catering, on three year terms, as follows:

at 22 hospitals to Suttcliffe Catering  
8 hospitals to Gardner Merchant  
2 hospitals to in-house resource - (one later became the 9th unit for Gardner Merchant to manage).  
(Source: Group F.Mgr)

Hotel services (HS) at the commencement of the period of study had evolved to comprise catering, cleaning and linen services.

More detailed questioning, coupled with examination of documentary evidence, revealed that PCSO's statement concerning the contracting-out of HS was a *major* generalisation.

#### FINDING

The contracts covered the *management* of HS only, by externally resourced Catering Managers at all but two locations.

The role of the contractor's catering manager, known as an Hotel Services Manager (HSM), was to provide a service within agreed budget limits; to purchase food and associated items (from suppliers selected by the contractor); to directly manage the catering staff at that location; and to have line management responsibility for other HS staff; in return for an annual management fee, including the full employment costs of the manager; i.e. it was the tactical and supervisory *management* of HS that was

contracted-out on a *national* basis, as per the appropriate sectors of the following diagram (Fig. 9.5), which itself builds on Fig. 2.5 (Chapter 2).

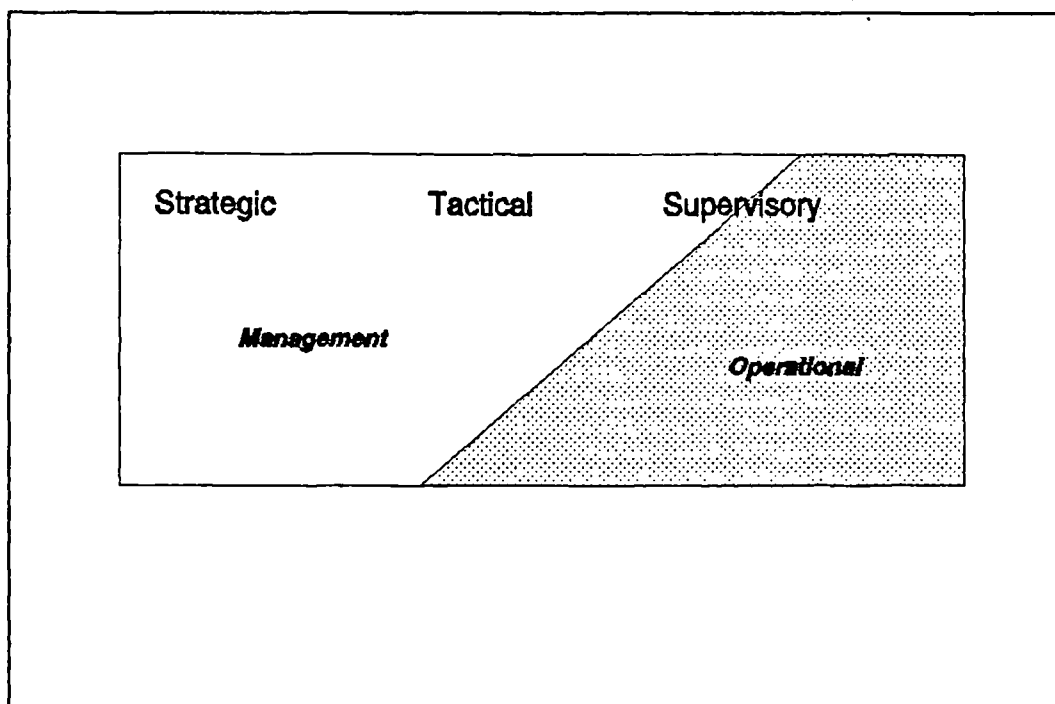


Fig. 9.5: Management: Operational Continuum

Revised data from Group F.Mgr, later in the study, was that *all* HS staff, with the exception of the 31 No. managers provided by the contractors, were employed by PCSO, viz:

**Management**

\* No. of contracted-out managers 31

**Operational**

\* No. of catering staff 280

\* No. of cleaning staff )

\* No. of linen service staff ) 450

This evidence was itself then also challenged following interviews and other investigations at Locations 2 and 3.

demonstrating the importance of seeking convergence in data collection.

It was discovered that some of the *parts* comprising the *operational* aspects of HS were contracted-out on a location-by-location basis; for example, Location 2 contracted-out laundry services, Location 3 retained an in-house laundry service.

The data did establish that Hotel Services was a conglomerate grouping, (i.e. a 'bundle' of services) variously comprising:

- \* Catering Services
- \* Cleaning Services
- \* Laundry and Linen Services
- \* Porterage Services
- \* Window Cleaning Services
- \* External Security Services
- \* Gardening
- \* Waste Management

and that there was a lack of clarity at senior management level concerning what was and what was *not* contracted-out.

Support Question:

*Is the Hotel Services Manager responsible for all HS, or just catering?*

There was no clear-cut answer to this question. In some locations the Hospital Manager (HM) took direct responsibility for *some* HS; in others, for example Location 2, the HSM was in day-to-day control of all HS.

#### FINDING

Contracting-out had not consistently reduced overall management burden of line managers.



DoPF and the Hospital Managers interviewed considered the existing system reflected the variation in abilities of the HSM's. The more skilled, e.g. at Location 2, took charge, reporting up to HM.

The existing system did demonstrate a lack of ability by PCSO and the contractors to establish a uniform standard of skill and training at HSM level.

**FINDING**

Contracting-out had not improved management effectiveness.

In future there is planned to be a matrix system of reporting to the HM on a location level, and to the Planning and Facilities line on national and technical matters.

**SECTION TWO: SUMMARY**

A range of research techniques were required to disclose how HS was organised and resourced, taking the study from a commencement point where evidence pointed to:

- \* all aspects of HS were contracted-out;  
to:
- \* only HS management was contracted-out;  
to:
- \* HS management and some operational elements were contracted-out.

**FINDING**

Hotel services comprised a bundle of FM support services which consistently included catering, cleaning and laundry; and variously included five other categories.

**FINDING**

The *management* of HS was contracted-out as a national policy.

**FINDING**

Elements of the *operational* functions of HS were contracted-out on a location-by-location basis, but there was no occasion where catering or cleaning services were contracted-out.

These findings gave rise to two lines of enquiry, viz:-

- \* Why was the management of HS the only nationally contracted-out element of FM?
- \* Why were some operational elements of FM never contracted-out?

Section Three seeks to find solutions for the first problem; Section Four deals with the second.

**STAGE III SECTION THREE: WHY WAS THE CONTRACTING-OUT OF HS MANAGEMENT THE ONLY NATIONAL CONTRACTING-OUT STRATEGY?**

Support Question: |

*Why was only the management of HS contracted-out (on a national basis)?*

No hard data was traceable to show why contracting-out was adopted originally as a method of resourcing HS, but evidence was that it was not cost-related (Source: DoPF).

The likely explanation, put forward by Group F.Mgr, was as follows: HS, at the time of contracting-out, consisted of catering only. The then manager of catering nationally made it known that he was seeking a career move outside PCSO. Prior to leaving, to join a major national catering supplier, he made the proposal that, instead of replacing him, the management role could be undertaken by a contractor.

This proposal was accepted and, judging by the lack of documentary evidence, it is surmised that this decision was treated as one of expediency. None of the senior staff, who may have been directly involved in any decision-making, remained in post by the time of the study.

The proposal was implemented by tendering the management of the HS (Catering) on a national basis. At which point the manager left for his new appointment.

DoPF, whilst validating these findings, suggested a possible motive for the tactic adopted, but no corroborating evidence could be found to support his theory. No further contracting-out of management was attempted pending analysis of the performance of the HS management contract.

**FINDING**

The contracting-out of HS was not based upon a cost-related decision.

If cost was not a prime factor in contracting-out, DoPF firmly stated that it was a prime factor in reviewing the

performance of the contracts, and the subsequent decision to bring the HS management back in-house.

### SECTION THREE : SUMMARY

- \* In the absence of hard data, the likeliest reason for contracting-out HS management had been one of expediency to overcome a staffing problem.
- \* The HS management contract was subsequently treated as a prototype.

STAGE III SECTION FOUR: WHY WERE SOME OPERATIONAL ELEMENTS OF FM NEVER CONTRACTED-OUT (whilst it was acceptable to contract-out others, based on locational decisions)?

Support Question:

*Why were some operational parts of HS contracted-out and not others?*

The evidence collected revealed the original supposition - that HS was contracted-out - was not, in practice, such a tightly ring-fenced situation. Chapter Three explained the nature of contracting-out within an FM context, and demonstrated that FM services comprised, inter alia, a management level and an operational or implementation level.

The Focal Review examined examples of contracting-out of FM Services. Various permutations were shown possible, but full contracting-out, known as outsourcing, included a transfer of assets, management and operational functions. The *original* understanding for PCS was that whilst outsourcing itself may not have occurred; i.e. assets such as human resources, catering or housekeeping equipment,

etc. may not have been transferred, the management, operational functions, and associated staffing for HS were all performed by a contractor in each of thirty-two locations. Data shows this was not the case.

The deviation from the initial evidence is complex because of variations between locations, but can be summarised as follows:-

**FINDING**

- \* The contracts for the provision of HS required the contractor to provide a catering manager per location. Responsibilities were to manage HS at a location level, reporting to the HM, and to procure the catering provisions.
- \* The contractor did not supply any other human resource.
- \* All catering staff, except the catering manager, were employed direct by PCSO but reported to the contractor's inplacement.

Source: Contract documentation  
HSM x 2  
HM x 2  
DoPF (validation)

Further data, collected by the LINK RA and by this researcher from HQ, confirmed the inconsistencies found between Locations 2 and 3 and showed that, on a national basis, only two operational components of HS were consistently not contracted-out, viz: cleaning and catering.

Support Question:

*Why were neither the operational elements of cleaning nor catering contracted-out?*

Initially the research could not find data to satisfactorily answer this question. Analysis of the evidence questioned why no concern was expressed about the contracting-out of waste management, window cleaning and laundry and linen service (despite being more expensive), compound security and gardening. The general management response was that the contracting-out of HS management had not worked, and that two principal elements of HS, namely catering and housekeeping, should not be considered for contracting-out. However, the solution was to be found in the unease expressed about the HSM's significant patient contact whilst not being a PCSO employee. It was felt this 'problem' could be contained as long as it was one senior management individual per location.

A theory was proposed by this researcher, based on analysis of common denominators. This theory was put to DoPF, two HM's and one HSM in a validating process, and became accepted by them as articulating a previously unrecognised key decision driver for which services could be considered for contracting-out. Namely, PCSO expected (intuitively) that staff who came into regular contact with patients (i.e. not less frequently than daily), should be PCSO direct employees.

This theory satisfactorily answered why waste management et al above could be 'safely' contracted-out - there was no regular patient contact. Bearing in mind average stays of between three and four days, few patients would interface with, for example, window cleaners, and would be very unlikely to see them twice.

However, all patients had regular contact with the housekeepers (cleaners) whilst cleaning the rooms.

This line of thought was developed with DoPF, who proposed that, as per a stick of 'rock', such staff with regular patient contact should have 'PCSO' stamped through them - not the name of a supply company. DoPF reasoned that this

was due to the 'very very personal personal (sic) nature of a business which looks after people in potentially traumatic/stressful and intimate circumstances'.

DoPF and the HM's interviewed all felt it totally unacceptable for anyone having regular patient contact to be "wearing a uniform of a company other than PCSO". This went beyond quality control of staff and became an ownership matter, in the way that directly employed staff have ownership of the company's culture.

It was accepted that regular patient contact with HS staff could be recognised in Fig. 9.6 below.

Fig. 9.6 models the working patterns of staff contact with patients over the course of average stays, and was developed following direct observations at Location 3 over a seven day period and then tested against staff at Locations 1 and 2. The model shows, for example, that personnel concerned with Laundry would have little contact with patients - certainly not regular contact; porters may have some regular contact with a minority of patients; cleaners would have regular contact with nearly all in-patients. Below the continuum interface line the model proposes it would be acceptable to contract-out HS operational services.

**FINDING**

PCSO's culture expected staff with regular patient contact to be directly employed.

The theory did not satisfactorily explain resistance to the notion of contracting-out catering staff, because the majority of catering staff were confined to the general food preparation/kitchen/staff canteen areas and did not interface with patients. However, the staff delivering

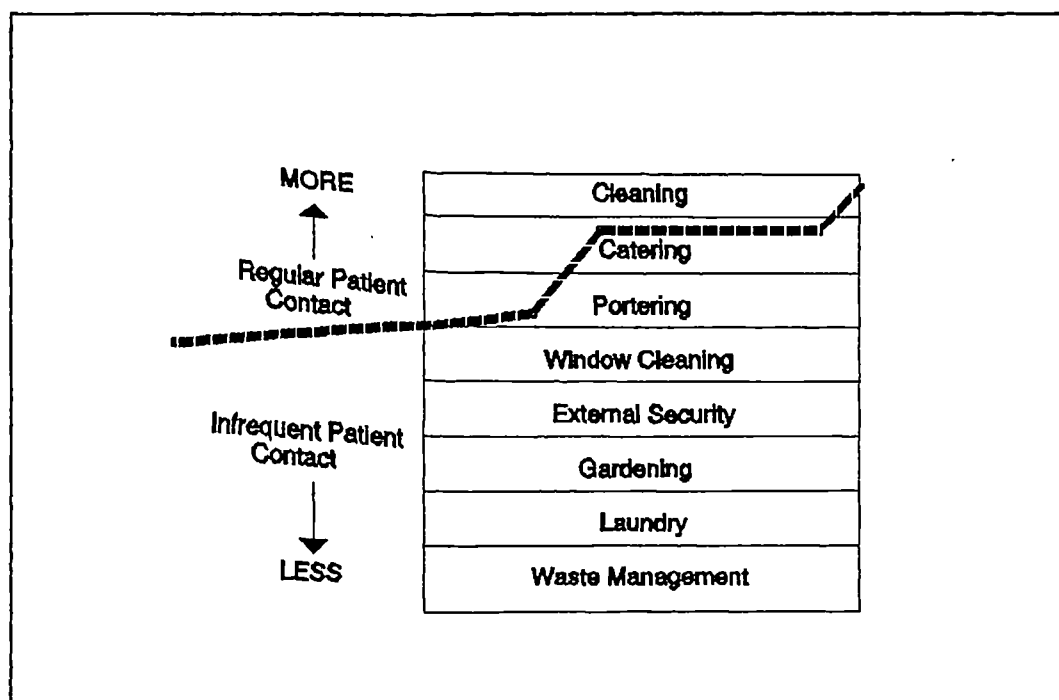


Fig. 9.6: Patient Contact Continuum for HS Operational Component Parts.

food and beverages to patients had to be part of one catering team, and clearly had close liaison with patients. On further questioning on this point, toward the end of the programme, DoPF agreed that cultural reasons did not prevent catering operational staff from being externally resourced. He indicated that, following a period of consolidation with the HSM role in-house post January '94, it was entirely possible that catering staff could be considered for contracting-out.

This analysis of what, at first, seemed a 'soft' finding developed into a key finding, as far as the PCS is concerned. Questioning of general management apparently developed clearer thinking of the importance of the PCSO culture, as expressed in their mission statement - but perhaps more expressively described by DoPF in the quote above, namely, "a very, very personal personal service". By the end of the study he was placing significant emphasis on this point - which had not featured in early findings.



His description of patients being very vulnerable, in dressing gowns in strange surroundings and, at best, at anxious periods of their lives, underlines why he believed there should be regular patient contact with staff. He discounted the comparison with IBM's high profile contracted-out receptionists - who this researcher reported are accepted by visitors to IBM locations - on the grounds of dissimilarity between the levels of personal service involved. This answer, however, was still felt to be unsatisfactory.

Further analysis yielded another solution, also new to DoPF, which is dealt with in Section Seven, and provides a good example of the complexity of the interlinking of data searching and analysis described in 9.5.1 above.

#### SECTION FOUR : SUMMARY

- \* PCSO developed a caring culture because of the personal service nature of their business, which was required to be delivered at a high quality level.
- \* To maintain these standards, PCSO intuitively believed that personnel with job responsibilities involving regular patient contact should be directly-employed.

#### STAGE III SECTION FIVE: PCSO's BUSINESS AND CUSTOMERS

This section picks up the question only partly answered in Section One:

Primary Question:

*What was the main business activity of PCSO?*

The data collected in response to this question from multiple sources, from the start of the study, did not converge satisfactorily. This led to repeated probing, encouraged by the fact that the evidence traced a shift in thinking concerning HS's role, in relation to the business overall.

A deciding factor in selecting HS as the unit of analysis for the PCS had been the apparent clarity of thinking of the PCSO regarding core business identification, see 9.2.1(4) above.

The provision of catering services might be considered by contemporary Western standards to be essential to a hospital. However, as noted above, PCSO had formed the strategic view that HS generally, and including catering, was not so essential as to be considered core business. Hospitals in other parts of the world where patients (and their relatives) are responsible for their own catering, linen, etc. would make an interesting comparative study for the purposes of identifying core products, core business and support services.

Supplementary Question:

*What was the core business of PCSO?*

The PCSO's core business was variously considered to be clinical, medical and nursing care, or "the diagnosis and treatment of acute ill health" (DoPF). Some other health care/nursing care operators were found to consider HS for in-patients to be essential and to be part of core business arguing that, as per hotels, HS in a hospital is core business, with a medical/clinical/nursing function added. This demonstrates a continuum between core and non-core, as per Fig. 9.7, permitting a latitude of deviation for organisations to determine core and non-core.

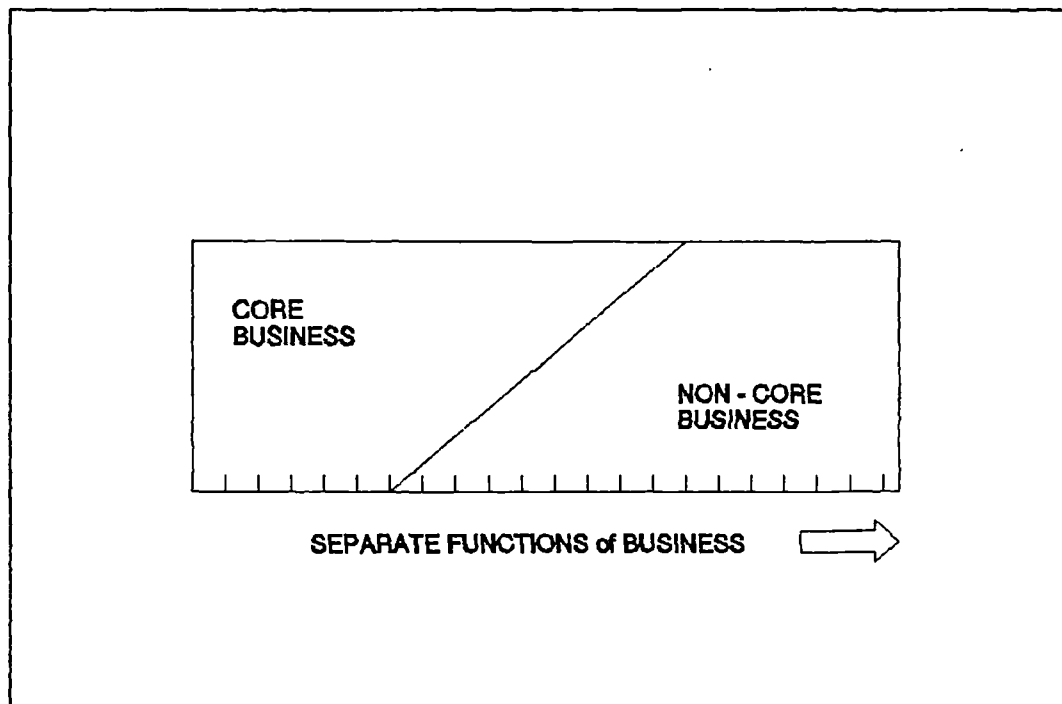


Fig. 9.7: Core -v- Non-Core Business Continuum

The diagram demonstrates that certain business functions can be considered either exclusively core or exclusively non-core. Others have a varying mix. It could be argued that those of this third category, which are perceived to be non-core but contain a significant, albeit minority, element of core, could be described as essential support services.

In the PCSO, HS was attributed with a range of descriptors during the course of the study. The trend in the variation is interesting. In 1991, HS (along with FM) was described as non-core business. By 1992, this description was perceptually changing from non-core, to support service, to 'essential non-core support service, (DoPF); with a compromise description of "... non-core, but not a non-essential function ..." (undated paper produced in 1992).

For much of the period of study, the strategy statement that HS equated to non-core business caused this researcher concern, primarily because the evidence being collected away from HQ did not sit comfortably with this notion.

The problem was analysed from various viewpoints which led to the following findings:-

FIRST: from the point of view of the product. An analysis was undertaken to answer the following question:

Support Question: *Who is the Customer?*

The answer forms an important part of this particular puzzle. To get to the answer a lengthy process was followed. The findings show that there were four distinct customer groups, (two being the principal customers), and which can be categorised as follows:

(i) Patients

Patients could be sub-divided as a group into two, viz, those with medical insurance and those who were self-funded. Generally, the former had no expectations regarding value for money, i.e. price, they judged the service received based on qualitative standards. The latter were in a small minority and were more cost conscious, expecting value for money and including quantitative judgments in their overall assessment.

(ii) Consultants

The specialists of the medical world, as far as private health provision is concerned, are self-employed, and *independent* of any given hospital. They have to be registered with a hospital in order to practise there, but having become registered - probably at several, if not many, hospitals - they have the *choice* of which facilities to use. From observations during this study these choice factors include, *inter alia*, location; suitability of medical/clinical facilities and competencies of theatre and

nursing staff; juxtaposition with consultants' other patients; extent of patients' medical cover, if any. E.g.<sup>1</sup> this researcher's wife would *not* have been admitted to a PCSO hospital without a strong patient preference being displayed, (a euphemism for insistence), because of the inconvenience to the consultant of having no other patient in the same premises.

E.g.<sup>2</sup> this researcher also required treatment during the study and had medical samples analysed at one of PCSO's hospitals - by consultant choice - because their service was cheaper; but subsequent treatment was at a BUPA hospital because PCSO did not possess the equipment preferred by the consultant.

DoPF estimated that approximately 75% of admissions were due to the choice of consultants.

#### (iii) Fund-Holding General Practice Doctors

Otherwise known as budget-holding GP's, this relatively recent phenomenon enables GP's to 'shop around' to choose to which hospital to send their patients. In the main this involves NHS hospitals, but GP's do refer directly to the private sector. Indirectly they also have a say in hospital choice by *selecting* a given consultant for referral.

#### (iv) Insurance Companies

The companies who operate the medical cover schemes have a vested interest in the standards being achieved by the private health care sector. By restricting their policyholder's choice they can have a major impact on business potential.

The argument propounded by the analysis was that there was a different order of priority for the two principal customers, as seen by PCSO 'corporately', and as seen by the individual hospitals and their respective staff. Put simply, to PCSO corporately, the prime customer was the one who brought in the majority of the business, i.e. the

medical consultant; whilst at hospital level, the prime customer was the patient.

A subsequent translation of PCSO's original core business definition would be: the provision of medical and clinical care facilities to satisfy the requirements of the prime customer (the medical consultant). Locally, core business related to patient care and satisfaction, and in this respect HS were central.

SECOND: an analysis was carried out from the viewpoint of the components of HS. Chapter Three (3.3.4) describes how FM services can be contracted-out singly, in bundles (bundling), or in larger critical mass groupings approaching the level of total facilities management.

Part of the problem encountered in identifying core and non-core business in this study was the bundling that constituted HS. The original concept was that HS equated to catering, cleaning and linen services; collectively seen to be a support service, i.e. a part of FM, which itself equalled 'the building and all services in it which support the requirements of medical and clinical care' (Source: Group F.Mgr.).

Conversely, the data demonstrated, for example, that a stronger argument could be put forward for catering services to be considered an intrinsic component of PCSO's core business, than could for linen services. By 1992 PCSO, as above, was beginning to consider a successfully delivered catering service to be an essential support service. The standard this service needed to achieve, in order to fulfil this criteria, merits examination.

Although no health care group would describe it thus, patients could be likened to raw material units of production, (i.e. the process involved in core business). These 'units' are brought to the hospital primarily by

consultants; processed by the consultants and hospital in partnership; and despatched - a fee being paid to cover the input of both medical partners in the process.

This researcher reached an interim conclusion, at the end of 24 months, that the original perception that the PCSO had a clear understanding of core -v- non-core business was *inaccurate*, particularly in relation to HS. Repetitively, statements were taken from the Group F.Mgr. concerning a suitable definition, only to have changes proposed when these statements were submitted for verification. The LINK R.A., pursuing an independent line of enquiry, repeatedly reported the same scenario. It became apparent that what was being observed was a dynamic and evolving situation, which was possibly exacerbated by a lack of structured thinking concerning core business on PCSO's part.

By summer 1993, Board thinking had developed to considering that if a particular service was an 'essential support service', whether it should be recognised as core business?

Third tier management (i.e. at hospital level), at the same time, had a more simplistic view of core business. To the HM at Location 2 it was 'health care and patient care'. Consequently everything that the PCSO did was core: buildings were central to patient recovery, a leak in the roof could materially affect recovery periods - QED core business. Similarly, catering was part of patient care; and cleaning, as with catering, was a major subject area for assessment of patient (customer) satisfaction.

Following separate and then joint interviews with the Hospital Manager (HM) and the HSM at Location 2, the position was thought through in a discussion between the two.

The Hotel Services Manager concentrated on the catering aspect of work throughout the interview. The HM contended that catering played a major part in recovery. It was not

true to say that day one was pre-op. starvation, day 2 was post-op. and catering therefore applied only to day 3. According to the HM: first 'some treatment does not affect appetite'; second 'taste buds may be damaged by general anaesthetic and therefore a very important patient care role is to stimulate recovery'. Consequently, catering was important in both scenarios.

The mix between in-patients and out-patients, including those admitted for less than one night's stay, was important. Generally the latter did not test HS catering to any degree - beyond light refreshment.

Data shows an inter-related shift toward more out-patient treatment, and in-patients are also tending toward a shorter length of stay, averaging less than four days, viz:-

Table 9.2: Average Length of Patient Stay

| Year | Average Stay |                                                                                                    |
|------|--------------|----------------------------------------------------------------------------------------------------|
| 1968 | :            | 11 days plus (Source: Annual Report)                                                               |
| 1988 | :            | 7 days (Source: GFMgr)                                                                             |
| 1993 | :            | 3.2 days (for a mixed community)                                                                   |
|      | :            | 4.5 - 4.7 days (in seaside location with a high proportion of 'retired' persons in the population) |

(Source: DoPF  
: Annual Report  
: HM)

DoPF stated that "the patients require a safe environment - response to button (emergency nurse call) - pampered - (they) are feeling vulnerable and need to be visited



regularly by the catering staff to make sure the coffee pot is hot", etc. (discussion 5.8.93).

Further HM considered food to be central to patient comfort ("good food can overcome the impact of a poorly appointed room") and was a re-assurance.

Analysis of patient questionnaires (known as 'patient satisfaction survey') carried out by the HM at Location 3, showed that 'Section 14, Overall Satisfaction', had more to do with Hotel Services than with medical care. This analysis was supported by Crumm and Roberts (1993) whose research found "... that patients probably judge the quality of hospitals they use primarily on the basis of their perception of the quality of the hotel services ..." (p.145).

At 31 months a copy of a consultant's report (the IHG report) was received, which endorsed this researcher's view that HS was given a lower priority rating by corporate management than by location (third tier) management, viz:-

"The consultants are of the opinion that the importance of HS within (PCSO) has been under-estimated. Initially during discussions with senior management, the impression was gained that HS were regarded as a necessary but rather boring subject with relatively low priority in unit operations. Once the debate was joined this view seemed to change, as it was then agreed that HS probably was the prime area where patients judged quality factors". (p.10 - emphasis added)

This conclusion replicated the observations and analyses of this researcher.

# FINDING

Patients were a unit of production/process and were considered only as a secondary customer grouping by PCSO corporately. However, patients were the primary customer group for the staff at the individual hospitals, and HS was critical to their perception of satisfactory treatment.

## SECTION FIVE : SUMMARY

- \* The main business of PCSO was the medical and clinical care of patients.
- \* The primary customers of PCSO were:
  - \* the medical consultants,
  - \* the patients.
- \* The importance of the respective customer groupings varied from level one to level three management (corporate to 'coal face' workers).
- \* The constituent parts of HS varied in importance in relation to the main business.
- \* Catering performance was a major factor affecting customer satisfaction:
  - \* for consultants it assisted patient recovery;
  - \* for patients it assisted comfort and assurance levels.
- \* Cleaning (housekeeping) formed an important point of contact with patients.
- \* The laundry and linen service and the waste management service were two essential support services for PCSO's 'production line'.
- \* The remaining four elements of HS were not high priority areas for PCSO or its customers, and were variously classified in the range necessary-essential.
- \* Parts of HS were of greater significance to the patients than to either the consultants or PCSO at corporate level.

### STAGE III SECTION SIX: WHY WAS THE STRATEGY OF CONTRACTING-OUT HS MANAGEMENT REVERSED?

The evidence that PCSO was bringing the HS management back in-house was deemed highly relevant to the study (and resulted in the extension of the investigation). It led to the following question:

Support Question:

*Why did PCSO Decide to Revert to In-house Management of HS?*

According to DoPF: the reason for discontinuing contracting-out HS management was the high cost of the contracting-out management fee. This view was independently corroborated by the HSM and HM at Location 2.

In the IHG Report on the Hotel Services of the PCSO, which came out strongly against contracting-out, cost was a factor but not the only concern. The following draws together the various cost references which were scattered throughout that document:-

- \* Hidden costs of redundancy were mentioned as a disadvantage of extending the contracting-out, policy which could be calculated to summate to approximately £520k.
- \* Comparing the existing situation with a more developed form of contracting-out, (i.e. contracting-out operational services), the report considered:-  
 "Financial exposure ought to be considerably reduced as the contractor should work within the agreed budgets laid down in the contract. The question is: are the contracts sufficiently watertight to ensure that the contractor bears the cost of any major deviation from budget? It is probable that this is not so, and should (PCSO) seek to make them more

robust the contractors would wish to increase the management fees substantially".

i.e. contracting-out 'properly' would cost more than the existing 'half-way house'.

- \* The management fee, effectively the annual contract sum, of £367,000 was considered "exorbitant for the amount of effort actually involved ...".
- \* IHG believed a total of 32 staff posts could be eliminated, irrespective of whether a status quo or an in-house option for management, was adopted. This claim was not examined in detail by the researcher because of 'political' sensitivities. However, it points to cost savings attributable to improvement in efficiency, rather than relating to in-house/out-house comparison, i.e. 'don't contract-out a mess'.

The only comments in the report suggesting a possible cost saving by contracting-out were:-

- \* IHG report: "there may be some short term savings on offer' (by contracting-out) (para. 1.1 App. 2).

This was listed as the third of four (only) advantages of contracting-out; although elsewhere in the same appendix it is indirectly noted that:

"Higher administrative costs (of undertaking management role in-house) will offset other financial gains to some degree".

As can be seen, the weight of comment regarding costs was anti contracting-out.

The cost findings of *this* study can be recorded under three headings, viz:-

(i) **Value for Money**

The existing contract for the HSM's was seen as offering poor value for money. PCSO paid the full employment costs of each HSM plus an annual management fee of approximately £367,000, paid between the two contractors. It was this management fee that formed the focus of discontent. DoPF could not itemise the input the contractors made to justify the quantum. IHG referred to it as 'horrendously expensive'.

Part of the original expectation had been that the 'value for money' in investing a management fee yearly with the contractors, would be in maximising 'cost effective' purchasing. The evidence drawn together by this and the following sub-section shows that this was not happening - in fact, with one contractor in particular, PCSO were paying twice - through the management fee, and with higher costs for food consumables.

(ii) **Cost Effectiveness**

This came top of the CEO's prioritised list of eight requirements for any change to the HS service, recorded in the instruction to IHG.

Further, PCSO, at the time of commissioning the report, had recent evidence that one of the principal potential areas of saving - bulk purchase of food and other catering goods, including crockery, etc. - was not being passed on. PCSO instigated a comparative exercise, using (a) the actual costs encountered by one of the two catering contractors, (b) the actual cost encountered by an NHS DGH, (c) cost information based on quotes obtained by PCSO's buyers. The figures are reproduced in Table 9.3 below.

Of the twelve items selected, PCSO's buyers obtained cheaper quotes than their contractor for every single item, and were overall cheaper by 22% (the DHG was marginally cheaper than PCSO in 7 instances, with one direct correlation; being approximately 4% cheaper overall).

Table 9.3: Comparison of PCSO's Purchasing Department's  
Costs -v- Alternatives

| ITEM                  | 'X' SUPPLIER | PCSO         | 'Y' USER     |
|-----------------------|--------------|--------------|--------------|
|                       | £            | £            | £            |
| 11lb. Beef Topside    | 3.05         | 2.22         | 1.73         |
| 11lb. Minced Beef     | 1.35         | 0.90         | 0.73         |
| Fillet Steaks each    | 2.01 3 oz.   | 1.74 4 oz.   | 1.50 4 oz.   |
| 11lb Lamb Joint (leg) | 1.75         | 1.25         | 1.62         |
| Boneless Gammon       | 1.92         | 1.54         | 1.39         |
| Ovaltine              | 8.95         | 5.50         | 4.64         |
| Vegetable Oil         | 11.06        | 10.47        | 8.98         |
| Butter Portions       | 18.00        | 14.34        | 14.34        |
| Bacon (rindless)      | 2.44         | 1.56         | 1.59         |
| Yoghurt (gallon)      | 6.75         | 4.82         | 5.01         |
| Cheese                | 3.28         | 2.96         | 3.60         |
| Fruit Juice           | <u>0.83</u>  | <u>0.62</u>  | <u>0.57</u>  |
| Total                 | <u>61.39</u> | <u>47.92</u> | <u>45.70</u> |

Note: Identities changed to protect confidentiality  
agreement

'X' Supplier = One of PCSO's two existing contractors

'Y' User = Comparison figures obtained by PCSO  
from a NHS District General Hospital.

To put that into perspective, annual food costs for PCSO were approximately £1.2m (circa. 1992).

There was no information to clarify whether Table 9.3 reflected a random 'basket' of goods, or whether there was bias in the selection. PCSO were certainly very disturbed to learn that their own purchasers could achieve a better deal than the purported might of the bulk-purchasing supplier.

Evidence to support this view was directly observed. This researcher was present in Group F.Mgr's office when a member of the PCSO's buying staff reported that he had been checking a proposal, put by one of the existing contractors, for the purchase/supply of crockery. Despite the contractor's claims of bulk-purchasing power, PCSO's purchaser achieved quotes of between 7.5% and 5% lower.

In other respects, various senior managers were less exercised about cost-effectiveness as an overriding factor. Laundry and linen service provided a good example. Group F.Mgr provided data to show the cost per item of laundering in-house, and with a contractor. These 1991 figures were for Location 3, which retained an in-house facility, and average costs paid by other units to external laundering. This researcher obtained costs from the York Health Authority, as a comparison. The latter had commercialised its laundry and had secured contracts over a relatively wide area, e.g. a daily service for hospitals and hotels in Cambridgeshire.

Table 9.4: Comparison of Laundry Costs

|                           | PCSO<br>(in-house) | Laundry | York H.A. |
|---------------------------|--------------------|---------|-----------|
| Cost in pence<br>per item | 17                 | 21      | 10        |

The finding displayed in Table 9.4 shows that PCSO had not found the most cost-effective suppliers, but were content to contract-out, despite the (unnecessary) cost penalty. Location 2's HM, in 1993, felt very strongly that despite in-house being cheaper for laundry and linen service, and irrespective of the importance to the business, it was

worth contracting-out this service. HM: "the rationale for contracting-out laundry services is to do with shifting risk; it is more expensive to contract-out but it is not worth the hassle of doing it in-house."

Note: items sent to laundry (sheets, towels, gowns and the like) were central to the business; the manner by which they were laundered was not (albeit subject to strict Health and Safety controls and quality audit).

(iii) Hidden Costs

This third category of cost was also closely inter-related to the previous two. Examples of hidden cost:-

- (a) The cost element of management time needed to set-up the HSM contracts and subsequently reviewing performance.
- (b) The cost of carrying extra linen service stock, as a contingent item against transportation difficulties between location and out-house laundry.
- (c) The data collected by IHG suggested the need for a future extra cost of £30k p.a. to allow for more efficient quality control of the HS contractor.
- (d) The consultants believed there to be, on average, one ancillary catering staff member too many per location (p.18 Strategic Study), i.e. a potential saving of 32 staff. This would equate to a current hidden cost of approx. £264,000 in PAYE terms, plus burden costs of employment. PCSO considered that this exemplified a criticism they had of the contractors, namely a general lack of innovation by the HSM's, which in this case resulted in not identifying a potential saving; (i.e. a lack of reviewing staffing levels/performance levels, etc., thus ignoring opportunities for improvement).



In addition to potential cost savings, and the apparent failure of contractors to pass on a suitable percentage of discount, the following factors influenced PCSO against continued contracting-out of its management.

- (i) DoPF was concerned that the contractors had shown no initiative in seeking to find ways of improving performance. An example of one location continually re-cycling a one week menu, rather than rotating a four week menu was given. An IHG finding of potential over-staffing of 32 supports the view that the contractors were not effectively adding value or improving operational efficiency.
- (ii) The CEO, in a letter dated 13.8.93, recorded the overall raison d'etre for bringing HS managers in-house as: "This area is too important to leave to others as it is often the key criteria by which our customers judge us."
- (iii) HSM's, having two masters, was deemed unsatisfactory. This IHG point appeared to be an indictment of contracting-out management per se.

The study drew evidence that PCSO considered the following downside of resourcing HS management in-house:-

- \* PCSO would take on risks under the Health and Hygiene legislation;
- \* Staff cover would become a PCSO problem;
- \* Training would become a PCSO problem;
- \* There would be a hand-over period from the contractor which would need careful managing;
- \* There would be new management monitoring and supervision roles to resource.

The foregoing identified factors led to a series of support questions, which went beyond just HS management:

Support Question 1: *Who Takes the Risk?*

The contracts were on a cost plus basis; i.e. the User and contractor agreed a budget, based largely on the contractor's figures. The contractor could control catering costs by 'manipulating' the menu. This also applied to areas where there were variables, e.g. consumables purchase. Linen, on the other hand, could be accurately budgeted for and controlled.

The data at Table 9.3 showed that the contractor was not passing on the full benefit of 'economic batch quantity' buying; suggesting that the figures used to build the budgets up, had a hidden profit element and, consequently, a buffer against cost risk for the contractor.

**FINDING**

Under the current management of the HS contract, the cost risk was *not* underwritten by the contractor.

Support Question 2:

*How did PCSO Provide Cover for HS Staff Who Undertook Essential Tasks?*

**FINDING**

An advantage of contracting-out HS management was the reduction of risk and the management burden of dealing with staff absence at a key position.

**FINDING**

By contracting-out the operational aspects of the service, the contractor ensured replacements to cover for absence (illness, leave, etc.)

Evidence to support these findings came from those Hotel Services which were contracted-out, e.g. laundry and linen service, window cleaning, external security, etc., as well as HS management. For example, it was the contractor's responsibility to ensure that the laundry fulfilled its contract, irrespective of staffing problems. Where PCSO retained an in-house laundry and linen service, e.g. Location 3, this essential support service was staffed by three workers. The potential for illness to affect an entire workforce of three (e.g. influenza epidemic) posed a higher risk than similar staffing problems for a commercial size laundry.

However, the same risk applied to the small teams of catering staff - on average 3-4 kitchen workers per location - and this provided a contrary finding:

**FINDING**

By operating a flexible in-house staffing policy; replacements were available to cover for absence (illness, leave, etc.)

By virtue of the number of locations operated by PCSO, there were a relatively high number of specialist staff within the group. During the study, examples were witnessed whereby catering staff were temporarily moved to other locations to cover; for example, a trainee chef in Location 2 was relief-working in Bristol.

DoPF also described how the type of working environment of PCSO's business encouraged another form of flexibility - namely 'bank workers'. Because health care is a continuous process, most staff work shifts and many are part-time. The exact split is difficult to assess from the data, due to the conversion to 'whole time equivalents'. Each location is encouraged to develop its own bank of casual workers - a system which apparently works well, except in central London.

The proposition that it might be easier for a User, such as PCSO, to maintain a workforce of cleaners on both a permanent and casual basis, than a contractor, was put to the manager of a national cleaning and catering company, Pat Hartey. Unexpectedly he agreed, citing extreme difficulty for contractors in recruiting workers. In cities the problems tend to relate to ethnic minority workers forming the bulk of the labour pool; for example, language skills being inadequate to comprehend instructions, particularly for high specification work. In provincial areas, especially shire county environments, national contractors find it difficult to tap any recognisable labour pool.

DoPF believes that by being part of the local community, they were able to maintain links with casual workers, who had often worked for PCSO previously on a regular basis.

Drawing these points together, PCSO had developed three identifiable solutions to overcome staff shortage problems, excluding contracting-out:-

- (i) By developing a network of 'bank workers' at each location. PCSO positioned itself close to the local community at each location and often the bank workers were ex-employees seeking occasional 'pin money'.

- (ii) The second fall-back was to a staff agency. In each location the HM and HSM kept a list of agencies dealing with various staffing specialisms, e.g. chefs.
- (iii) A strength of PCSO's structure was that by having a diversity of locations, skills were replicated nationally, 32 times. Where staffing shortages were likely to cause a problem, staff from other locations were co-opted.

Support Question 3:

*Was PCSO's workload, and hence staffing requirement, constant throughout the year?*

Workload pattern involved variations such as the peaks and troughs of clinical treatment. PCSO did not deal with life-threatening or emergency cases; as a consequence the through-put of patients was largely at the behest of the medical consultant. Increasingly, work patterns reflect the trend that most consultants took August as a vacation month; and now take a week for Bank Holidays and take 2-3 weeks at Christmas. For example, a visit to Location 2 in August found not a single bed occupied, whilst in November all beds in Location 3 were occupied.

PCSO believed that because of the relatively small scale of their *individual* businesses, such fluctuations were better controlled by employing in-house staff:-

- \* There is a high degree of teamwork, and because the majority of staff were all employed by the one organisation, an element of multi-skilling was possible within HS.
- \* By using part-time staff, the necessary flexibility to accommodate daily workload peaks was achieved, i.e. peaks at:

- \* Breakfast - catering and cleaning
  - \* Lunch - catering and cleaning
  - \* Early evening - catering and cleaning
- \* By utilising bank workers, seasonal peaks could be allowed for.

**FINDING**

The degree of flexibility to cope with workload pattern was considered by PCSO to be better with in-house staff.

Support Question 4: *How were HS staff trained?*  
*Nationally/locally?*

Data showed the training of staff to be particularly important where vital health and safety issues were concerned. For example, in HS terms, the Food Safety Act placed stringent requirements on catering staff, food preparatory areas, kitchens and eating areas. The standard required by the Regulations under the Act are subject to frequent change. The specialist catering firms had systems to accommodate this critical aspect of their core services. PCSO had to manage the training of their two small in-house teams (later sole team), and experienced difficulty in ensuring the currently required standard was both understood and achieved.

This was one aspect of the existing contract to supply HSM which was considered to have worked well, with the managers receiving regular training from their own employers. However, an outbreak of salmonella poisoning in 1992 did encourage the Hospital Managers to question more openly the effectiveness of the current contracting-out management system.

To demonstrate this was an advantage of contracting-out, the evidence collected showed that whilst PCSO are reverting to in-house management of HS, they will be appointing external consultants to take over the training and monitoring role to cover the requirements of the Food Safety Act and similar legislation, i.e. training will be contracted-out.

**FINDING**

A contractor may be required to provide the necessary training and monitoring of staff. This can be particularly advantageous to a User with dispersed locations employing small teams/single individual specialists per location.

Support Question 5:

*Was there a saving in management time expenditure by contracting-out?*

PCSO had under-estimated the time requirement to manage the contracting-out process. At the start of the study, memories were still fresh with recollections of the time input required to prepare the HS contracts and undertake the tender procedures. Expectation that the contractors' take-over would be smooth was also miscalculated, with one location replacing three HSM's before accepting a fourth.

The nature of management tasks *changed* when contracting-out was adopted for HS. Instead of being operational management, there was first a period of strategic input, which effected the change; but then, on a day-to-day basis, management became monitoring, supervision and audit.

A further aspect of this same problem was the extent of senior management time resource committed to reviewing the effectiveness and efficiency of the three year contracts at

the halfway point, with the subsequent decision to change policy.

#### FINDING

The nature of management input by in-house staff altered when operational services were contracted-out. The expectation that the quantum of management would be reduced by contracting-out operational services was not identified.

Support Question 6:

*Why didn't PCSO contract-out the main operational elements of HS?*

The main operational elements, on a staffing level basis, were catering and cleaning (see figures in Section Two above). The alternative of contracting-out catering services completely was examined by PCSO at the time of the IHG consultancy. It was discounted at an early stage on the following grounds:-

- \* Up to one third of staff at a location would become contract staff;
- \* The problem of suppliers performing to a point of equilibrium (i.e. lack of added value, initiative, etc.) would not be resolved;
- \* Culturally, PCSO were devolving management responsibility to location level under the control of HM's. It was considered unacceptable to boost the HM's by giving them more responsibility, only to reduce it by withdrawing a significant number of their staff from their control;
- \* It would not necessarily improve the discount problem.

Three of these four points had been previously accepted as findings of this study. The first point, identified by IHG, provided 'research convergence' for a theory developed



by this researcher, in response to the unsatisfactory solution proffered by DoPF in connection with observed unwillingness to contract-out certain tasks. (Refer Section Four above concerning resistance to contracting-out a majority of catering tasks, despite passing the 'litmus test' of irregular patient contact). This matter is of such importance as to be dealt with separately in Section Seven below.

The contracting-out of cleaning has been analysed as being unacceptable to PCSO because of the level of patient contact.

**FINDING**

PCSO found it disadvantageous to contract-out the main operational elements of Hotel Services.

**SECTION SIX: SUMMARY**

The policy of contracting-out the management of HS was reversed because:

1. It was not cost-efficient.
2. It was against the evolving culture of PCSO, which called for retaining in-house the management control of the key sectors of the business, interlinked with the policy of devolving responsibility to the locations.
3. PCSO's contingencies for providing cover for key staff were effective.
4. The contracted-out service had not reached the required standard in terms of:
  - \* continually updating and improving the service and maximising efficiency;

- \* passing on discounts;
  - \* effectiveness of bulk purchasing;
  - \* competitive budgeting at the contractor's risk.
5. The alternative of contracting-out operational services as one bundle (with or without contracted-out management), was rejected because of:-
- \* the lack of success of the management contract and resultant shortcomings in the service provided;
  - \* the impact on staff ratios (considered more fully in Section Seven);
  - \* the culture policy (considered in Section Five);
  - \* the belief that workload fluctuations were better controlled using directly-employed staff plus occasional workers, rather than wholly contract-supplied staff.
6. Disadvantages of resourcing HS management in-house were:-
- \* some cost-plus factors;
  - \* the need to contract-out the training of key staff to keep them 'current' with legislation and standards changes;
  - \* accepting the whole of the risk for the services;
  - \* taking on new management tasks, including the initial job role specifying and recruiting;
  - \* managing hand-over problems.

### STAGE III SECTION SEVEN: PCSO'S SIZE AND GEOGRAPHIC DISPERSION

Support Question:

*How did the size : geographic location ratio affect HS contracting-out decision-making?*

This section provides data to complete the understanding of the PCSO started at Section One.

Gaining a full understanding of both the size of the PCSO business and the diversity of locations became an important factor (See Sections Three and Six above).

Taking size on its own, measured either in terms of beds (the traditional hospital measurement) or staff, would equate PCSO to a very large NHS district general hospital, i.e. 1300 beds or 3,100 whole-time equivalent staff.

When the size was considered in relation to the number and geographical spread of locations (32), the picture became vastly different. This relationship was, for the purposes of this study, termed '*scale of operation*', and gives rise to the following two inter-related findings.

(i) **Scale of Operation:- Staff:Contract Labour Ratio**

The total staff role (excluding contract staff) exceeded 3,700, but this figure included part-time staff (Source: Annual Accounts). To control staff numbers PCSO adopt a system of 'whole time equivalents' (WTE). The total directly employed manpower on this basis approximated to 3,130 (1993 figures) - against a budget of 3,241. Using the budget figure, only 201 of the total were not employed at hospital locations (see Manpower Control Report).

From calculations based on data obtained by this study, an average location would therefore employ, on a WTE basis, 95 staff. See Table 9.5 below.

For the purposes of this comparison it is *assumed* that the nursing staff of 44 are all directly employed (in practice, at any one time there was likely to be a small number of temporary agency staff or bank workers). PCSO believed that, from a patient's viewpoint, anyone in nurse's uniform would be presumed to be employed by PCSO.

Table 9.5: Average Directly-Employed WTE Staff  
per Hospital Location

|                 |          |           |
|-----------------|----------|-----------|
| Nursing         |          | 44        |
| Clerical        |          | 16        |
| Technical       |          | 8         |
| Hotel Services: |          |           |
| * Household     | 15       |           |
| * Catering      | <u>9</u> | 24        |
| Other           |          | <u>3</u>  |
| Total           |          | <u>95</u> |

One other variable needs to be addressed. HS employed various contract staff *on site*. On a WTE basis the HSM, compound security and groundsmen were the regular presences, comprising approximately 6 contract staff on site per location (waste management, laundry, etc. where contracted-out were, as a matter of course, carried out *off-site*. These services did not, therefore, affect the staff ratio under consideration). Thus, of a total of 101 staff (95 + 6), 30 were the responsibility of the HS function, (i.e. approximately 30%).

Therefore, approximately 6% of staff employed *on site* were contracted staff. (Note: this figure would rise to approximately 12-15% if *total* staffing strength were to include off-site workers - for example, a typical in-house laundry operation would require three workers (as per Location 2), waste management 3, etc.).

**FINDING**

If HS were to be contracted-out *completely*, 30% of on-site manpower would be contract staff.

The IHG Report variously concluded "almost 30%" and "one-third of total workforce", which supports this finding.

During night shifts the balance would alter. Despite few clerical or technical staff present, a likely scenario would be 10 nursing: 1 clerical: 1 technical: 4 HS, i.e. potentially 25% HS staff at night.

During a typical day-shift, conversely, the HS proportion would be above 30% - typically 31-33%; i.e. there were likely to be approximately 42 WTE staff present, of whom 13 would be HS, i.e. 29:13.

Although none of the interviewees had calculated either an average figure for a typical location, or an actual figure for a given location, *all* independently raised the concern of the effect of contracting-out HS, and thereby having a 'high' proportion of contract staff:directly-employed ratio. The HSM's and HM's were primarily concerned about tensions between the two groups and general loss of loyalty to PCSO, fearing that there would be a knock-on effect disturbing the quality of performance of directly-employed staff.

Corporate management principally expressed the latter point in terms of culture and the importance of 'personal service'. They also saw, in addition, the likelihood of more than one contractor (one for catering, one for household and individual contracts for security, etc.), giving rise to tensions between the various contractor groups.

# FINDING

The ratio of directly-employed: on-site contract staff was a *key factor* to PCSO.

This finding would make a suitable subject for more detailed research; i.e. an investigation of the sensitivity of differing organisations to a range of staff:contract labour ratios.

## (ii) Scale of Operation:- Number and Geographical Spread of Units

The foregoing point concentrated on the *number* of staff in a given location. The second factor to consider was the *number* of locations.

By dividing PCSO into 32 hospital locations, it was 'converted' from one large £100m+ turnover organisation, into a series of operational units with mode average turnovers of £2.5 -3.0m, i.e. small-medium sized businesses. DoPF used the analogy of running corner shops as opposed to one superstore.

From a HS contracting-out viewpoint, both the number of units and their geographical spread, were relevant and inter-linked parameters. For example, 32 units, all located within a small geographical area with good communications, e.g. in the South East of England, would offer a reasonable business proposition to a number of national and regional catering or cleaning contractors.

However, PCSO's estate spanned from Glasgow in the North to Plymouth in the South West; Shrewsbury in the West to Hull in the East.

During the study the one *recognised* contracted-out agreement was for HS *management* only. Two national

catering contractors supplied 31 catering managers. Although the catering contractors would not verify the point, because of admitted commercial conflicts, the evidence collected - notably from the HSM's - was that national or regional catering contractors would be variously unable or disinterested in supplying an average 3-4 operational workers to a series of scattered locations. The range of probable scenarios suggested varied from utilizing four national/regional catering contractors; to using these four, plus up to ten local contractors, i.e. between 4 and 14 contractors, in order to supply catering services to all locations.

The problem of resourcing cleaning operations has already been referred to. The need for high standard cleaning, which cannot be accomplished by blitzing out-of-hours, as per a typical office building, compound the problems of contract cleaning for small scattered locations as far as national or regional companies were concerned.

The spread of locations also impacts on a possible policy for contracting-out laundry services.

**FINDING**

The 'scale of operation' was a key factor in contracting-out decision-making.

**SECTION SEVEN : SUMMARY**

By analysis of the data collected, identification of two significant interlinked findings was possible, which the PCSO did not directly articulate, viz:-

- (i) The strategy of operating from 32 bases predetermined that:

- (a) Each location would be a relatively small business of typically 100 employees.
- (b) The locations would be geographically remote from each other.

The result of this strategy was termed by this study 'the scale of operation', and was analysed as being both a major influence of policy and a barrier to effective contracting-out of some of the operational services, on a *national* basis.

- (ii) The ratio of full-time employees to on-site contract workers was significant, because of the potential impact on the 'culture' of PCSO at location level, which could be adversely affected by too many outsiders. Exact parameters of acceptable ratios did not exist.

Having completed the collection of evidence, Stage IV of the Research by Case Study was to analyse, in more detail, the findings so far derived from the collected evidence. This analysis is approached by first examining the reasons why PCSO resourced Hotel Services by the means identified in the findings; second by comparing the findings with the Hypothesis and third by comparing the findings with the findings of the Research Review.



## STAGE IV : ANALYSIS

### 9.8 THE REASONS FOR THE SOLUTIONS ADOPTED

To isolate the main factors that determined PCSO's policy toward resourcing HS, it was *first* necessary to recognise the importance of the management/operational split, and deal with each part separately; i.e. these became *variables*.

A *second* category of variable was generated by PCSO's cultural attitude to its patients. Analysis of the evidence has shown that it was felt that personnel with *regular* patient contact should be directly employed. This factor results in the need to treat the operational services of HS not holistically but according to two small bundles, i.e. services with regular patient contact and those without.

A *third* variable was generated by PCSO's attitude to the on-site ratio of employees to contract staff (see Section Seven above). Consequently, it was useful to group operational services according to the time spent on site. Broadly, three groupings can be proposed: one requiring full-time, or near full-time, attendance on site; the second would require occasional attendance on site (e.g. window cleaning/gardening); the third would be *process* orientated (e.g. waste management, laundry) and would therefore be chiefly conducted off-site. Having determined the on-site time, the first two groups have to be qualified by the extent of the resource required. The groupings became:-

- (i) *Large on-site resource; i.e. a full or near full-time presence by a number of contract workers sufficient to upset the equilibrium of the in-house -v- out-house personnel balance.*

- (ii) *Small on-site resource*; EITHER: full, or near full-time, presence by a small number of contract workers, insufficient to affect the equilibrium balance;  
OR: a greater number of contract workers, but on an irregular or occasional basis, and therefore not threatening the equilibrium.
- (iii) *Off-site process*; i.e. the delivery of a process rather than a service, for example using the contractor's own plant, etc. and requiring a minimum of site presence (e.g. to collect/deliver); resulting in no effect on equilibrium.

A *fourth* variable, which the findings showed was closely inter-related with the ratio of contract workers to employees on site, was the 'scale of operation'; i.e. the number of geographic locations the organisation was divided into, coupled with the resultant effect on staffing numbers at each location. In PCSO's case, this variable had the effect of producing 32 geographically dispersed locations with a typical staffing level of 100 each.

The embedded principle of looping in the research strategy permitted the PCS to benefit from *methodological* improvements made to the analytical process during the course of other case studies. CS5 proposes the recognition of *Driving Factors*. Driving Factors could be: (1) overriding advantages or disadvantages of contracting-out; or: (2) other influences on decision-making, which either took precedence over any advantage:disadvantage balance (e.g. organisation culture, User strategy, etc.), or which dictated/pre-determined the method of resourcing; (e.g. size of the organisation. If small, this may pre-determine a very small requirement for a particular human resource and consequently dictate the use of contracting-out; for instance, a User's very occasional need for architectural services).

The four variables recognised for PCSO's Hotel Services, namely, management/operational; patient contact; contract worker:employee ratio; and scale of operation, all relate to the second category of Driving Factor, as above, (or a 'Category Two Driving Factor').

For this project it became important to identify these second type Driving Factors as a precursor to analysing whether advantages/disadvantages were themselves Driving Factors; or whether they were subservient (or spin-offs) of Driving Factors. This would assist subsequent attempts to carry out cross-case analysis, and to indicate to what extent the results could be generalised.

The analysis of the data collected for this study directs that the Category Two Driving Factors, which determined the four variables that part-controlled the extent of PCSO's use of contracting-out for HS, were, in the same order:-

- a) Strategy decision: to control the management of FM (inc. HS) in-house;
- b) Policy decision: directing that regular patient contact should be with directly-employed staff;
- c) Policy decision: that the culture of the organisation would be weakened - hence threatening the standard of delivery of services - if the equilibrium of employees to on-site contract workers was imbalanced.
- d) Strategy decision: directing that PCSO would operate from 32 locations.

The common denominator of these four Driving Factors was that they were all decisions taken at corporate level; two strategic - including the decision to base PCSO's business at a local level (i.e. 32 small dispersed hospitals) - and two policy or *tactical* decisions.

The overall process of determining whether the contracting-out of all or part of Hotel Services in PCSO would occur, is represented in the model at Fig. 9.8 below. This model brings together the four variables as above, described as

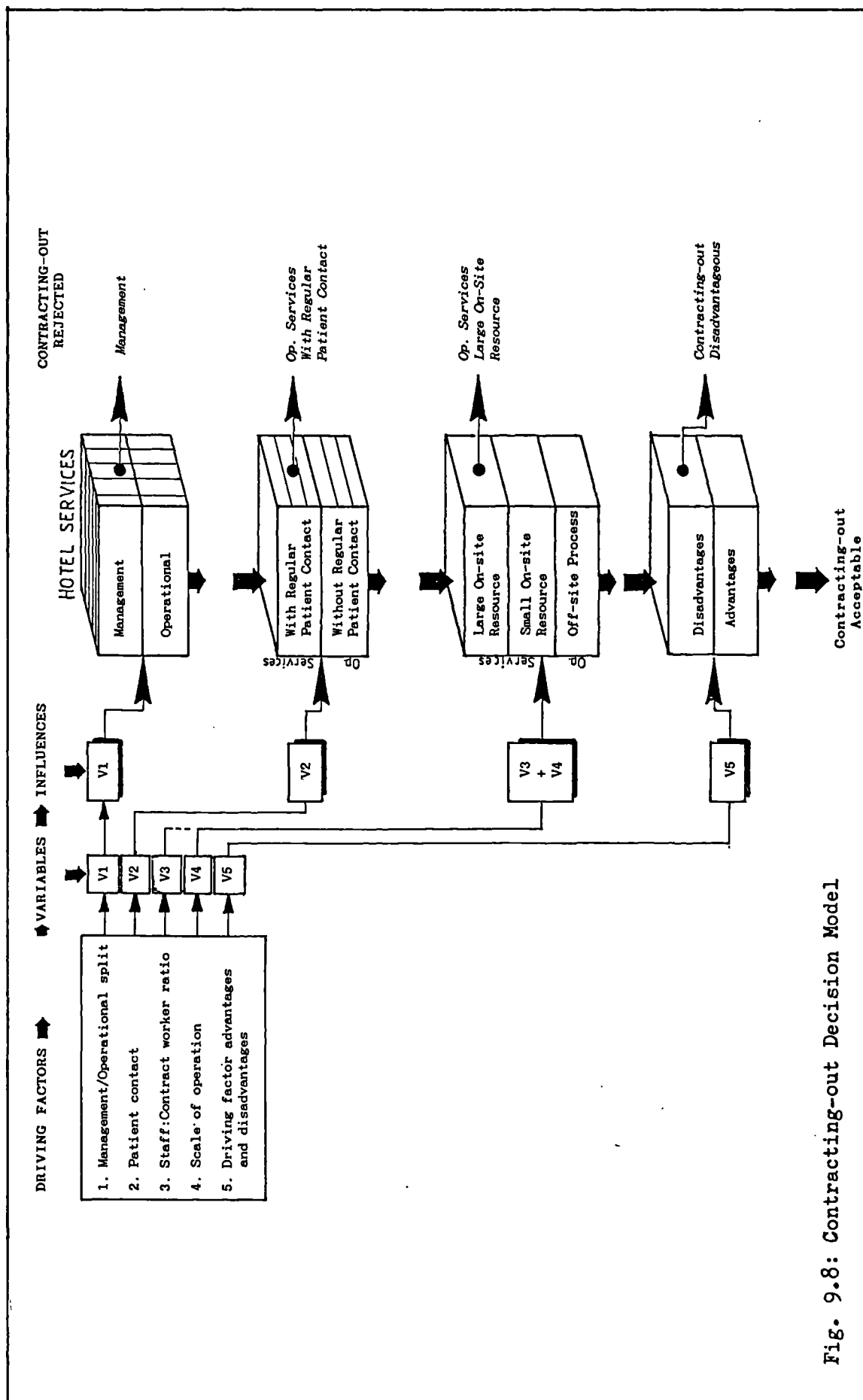


Fig. 9.8: Contracting-out Decision Model

Category Two Driving Factors, plus a fifth variable, namely, the Category One Driving Factors, i.e. 'overriding advantages or disadvantages of contracting-out'; which at this stage are considered as one *single* entity. It should be stressed that the variables can be applied in any order, or can be thought of being applied contemporaneously. The purpose of the model is to describe the reasons for the solutions adopted.

Fig. 9.8 collects the five variables together as *driving factors*. Each variable is then applied to Hotel Services in turn, shown as an *influence* upon resource decision-making, viz:

- (i)        *The influence of management/operational split:*  
In PCSO's case, the policy of contracting-out the *management* of HS was found to be unsatisfactory, and a decision was made to *reject* it as a method of resourcing. This leaves the possibility of contracting-out the operational aspects of Hotel Services.
  
- (ii)      *The influence of Regular Patient Contact:*  
The evidence shows that PCSO found it unacceptable to contract-out tasks which included regular patient contact; i.e. they *rejected* the contracting-out of operational services with regular patient contact, leaving the remaining operational services available for resourcing by contracted-out means, if considered appropriate.
  
- (iii)     *The Influence of Staff:Contract Worker Ratio:*  
Remembering the caveat that the influences could be applied in any order, the model at Fig. 9.8 shows this influence as 'Variable 3' linked with 'Variable 4' - *Scale of Operation*. In PCSO's case these closely related influences had the effect of rejecting contracting-out as an option where the resourcing of operational services

required a disproportionately large number of on-site contract workers, relative to the total workforce of a given location.

The 'sieves' of these four influences, so far considered, result in contracting-out being considered a viable option where:

- (a) a small on-site human resource is required (relative to the total workforce), for operational services without regular patient contact;
- (b) work (i.e. an operational process) is carried out off-site.

The final 'sieve' in the decision-making process is then applied to these two surviving groups. This final sieve - shown as Variable 5 - comprises the *Category One Driving Factors*.

Consequently, the next stage of the analysis was to compare the resourcing solutions adopted for HS with the evidence of the advantages and disadvantages of contracting-out. The purpose of this exercise was to:

- \* summarise the advantages and disadvantages;
- \* assess which, if any, were Driving Factors in their own rights, i.e. which fitted the model at Fig. 9.8 as a component of the fifth variable.

The process adopted was to synthesise the evidence of advantages and disadvantages of contracting-out as experienced by PCSO in connection with HS:-

*Disadvantages of contracting-out:*

- \* Cost ineffectiveness - applying to HS *management*.
- \* The relatively large number of suppliers, who would be needed in order to contract-out HS operationally on a national basis, was perceived to be unmanageable.
- \* And a category, which was at first thought not to equate to one recognised by the Research Review,

namely, the number of contract staff overwhelming an organisation. After further analysis it was concluded that this did equate to Research Review category: 'contrary to the culture of the User's organisation' - because it was largely a cultural pre-requisite that required the balance of staffing to be directly employed.

*Advantages of contracting-out:*

Of the advantages of contracting-out, three can be analysed as being powerful enough to *drive* action, but two of these applied only on a piece-meal local basis.

- \* First, where the process concerned specialist contractors' plant, such as laundering or waste management.
- \* Second, to provide, again on a local and piece-meal basis, a range of skills relevant to HS, such as gardening, window cleaning, external security.
- \* The third advantage was the supply of training for catering staff nationally, which was to be maintained as a contracted-out service following the reversion to in-house management of HS.

These findings are incorporated in Tables 9.6(a) and 9.6(b) later in Stage IV.

Having identified the Driving Factors, and analysed the relationship of resourcing solutions to advantages and disadvantages of contracting-out, the final stage of this analysis was to examine further the question of core business recognition.

Section Five of Stage III above had considered PCSO's Business and Customers, and concluded that PCSO did not have a clear understanding of what respectively constituted

their core business and their non-core business. This could be partly due to the nature of the industry - health care - being more difficult to categorise according to core and non-core than, say, manufacturing industry.

Section 3.3.5 of Chapter Three attempted to define core business. However, the analysis of data from the PCS was not greatly assisted by the core -v- non-core business split proposed, although the Kennedy (1993) suggestion that definition of core business should be seen as organisation-specific, underlined the complexity of the problem.

The research of Crumm and Roberts (1993), referred to in Chapter Three, placed HS (in their case, of a district general hospital) close to the business of health care. Did this mean it was part of core business?

The solution proposed by this researcher is in two parts.

(i) *The bundling of Hotel Services*

The findings of Stage III Section Five were that stronger arguments could be found for proposing some elements of HS equated to core business, than for others. For example, PCSO's eventual recognition of catering as the prime area where patients judged quality factors, brought the corporately-held view of catering closer to the operationally-held view at hospital level, that catering was part of core business.

By analysing each *element* of HS separately, rather than HS an entity, the model at Fig. 9.9 was developed.



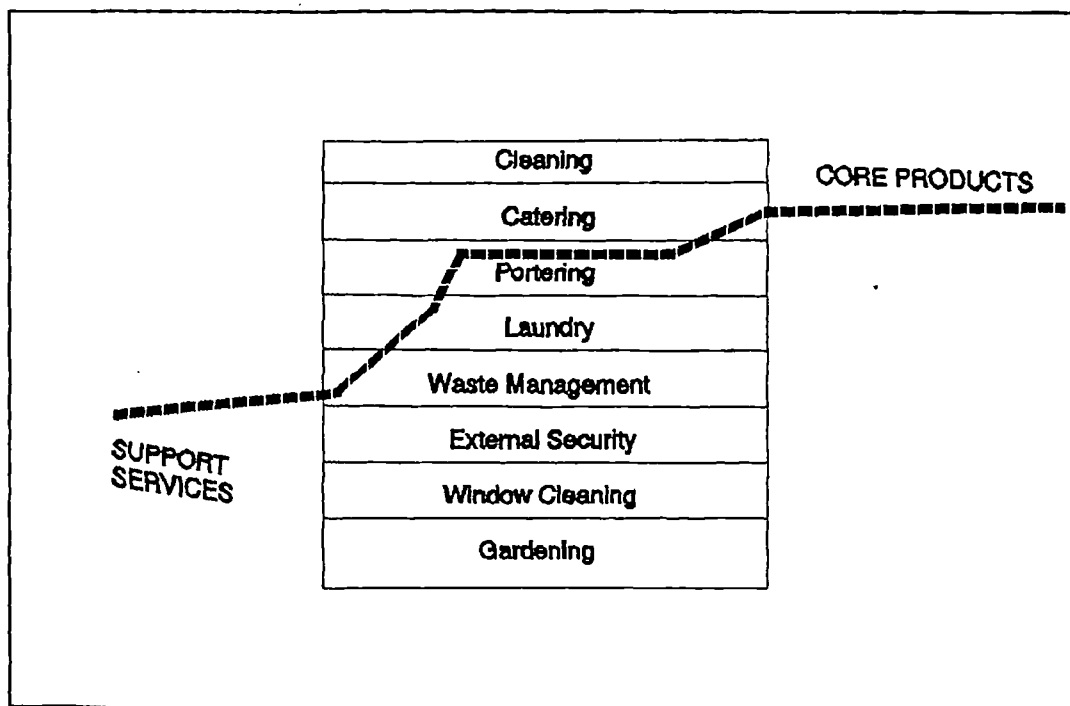


Fig. 9.9: Positioning HS as Part Core Product, Part Support Service

This model re-orders the elements or components of HS as previously displayed in Fig. 9.6 (which was used to demonstrate the exposure of patients to the staff performing each component part of HS). The revised model (Fig. 9.9) ranks the HS components according to this researcher's analysis of importance to core business.

The interface line is based on a subjective assessment of the divide between support service and core products (this latter term will be explained below), rather than using the straight line shown on the continuum model at Fig. 9.7. The detail of the exact extent to which any component is shown as being part core product or part support service, is not the important factor.

From the evidence obtained, PCSO were likely to consider gardening, window cleaning and external security as wholly support services; i.e. using the crude definition of core

business in Chapter Three, they were not part of the 'raison d'etre' for the organisation's existence.

The picture becomes less clear with waste management, because the suitable treatment of the clinical waste formed a part of the 'production line' process.

Similarly with the Laundry and Linen service, the production line relied on sterile gowns and sheets, etc., so part of this service relates to the core business.

Portering, as part of its role, was responsible for conveying patients (units of production) to and from the operating theatres. How much was this supporting, as opposed to performing, core business?

According to the evidence from the hospitals, not only couldn't the hospitals function without catering and cleaning services, but these were the two services to which patients related most closely, and had pre-determined expectations about.

Where the interface line actually divides the components of HS would have to be based on more specific data gathering. The *important* finding of this analysis is that it does *divide* the bundle, managerially determined as HS. This becomes one reason why PCSO found it difficult to differentiate between what was core, and what was support service.

## (ii) *Core Products*

As mentioned above, the difficulty encountered with the analysis of PCS evidence regarding core business, prompted a further investigation of the principles behind core business recognition. It was found, by relating to components or sub-assemblies of end products, as suggested by Prahalad and Hamel (1991), and thereby thinking in terms of more than one core *product*, a clearer perspective could be achieved. Applying this concept to PCSO, health care

becomes the end product. One of the components "that actually contributes to the value of the end product" (Prahalad and Hamel (1991) p.9) - i.e. a core product - is catering. A similar argument can be extended to cleaning, in the specific manner of the housekeeping, as understood in PCSO; i.e. HS, as an entity, may not be easily seen as a core product, but some of its *components* do equate to core products of PCSO.

In turn, this analysis, which was subsequently accepted by DoPF as "an enlightening proposition", questions the generalisation that FM equates to the co-ordination of non-core services.

#### Summary of the Reasons for the Solutions Adopted

The research identified two categories of variable influences which 'drove' PCSO's decision-making about how to resource Hotel Services. Collectively these factors became 'the reasons for the solutions adopted', and a model showing contracting-out decision-making was developed.

Because this research is focused on the advantages and disadvantages of contracting-out, the factors which equate to overriding (primary) advantages and disadvantages of contracting-out are classified as the first category of Driving Factors. Category Two influences are any other variables which affect an organisation's decision-making regarding contracting-out, and include the organisation's cultural attitude and the scale of operation.

Recognising the limitations of seeing business in black and white terms, divided between core and non-core, helped to find a solution to analysing these findings. By superseding the monolithic approach of core business with one which accepted the concept of core competencies and core *products*, enabled a barrier to analysis to be

overcome, by envisaging parts of HS to be seen as core products and parts as support services.

## 9.9 TEST AGAINST THE HYPOTHESIS

Hypothesis: 'The potential advantages to a User organisation of contracting-out discrete aspects or bundles of FM Services are likely to outweigh the potential disadvantages.'

The data and findings can be divided into two categories to test against the hypothesis, viz:-

- \* as a bundle;
- \* as elements of the Unit of Analysis (HS).

The *management* of Hotel Services (HS) represents one 'bundle' and was contracted-out. The *operational* elements of HS were not contracted-out as a bundle.

The Analysis shows that the contracting-out of HS management had not been successful and, within the period of this study, a decision had been made to terminate the arrangement; i.e. the disadvantages of contracting-out outweighed any advantage. This part of the findings does not, therefore, support the hypothesis.

The fact that the operational elements of HS had not been contracted-out as a *bundle*, was due to the perceived disadvantages of contracting-out exceeding the potential advantages. Again, the findings do not support the hypothesis.

Two operational elements of HS, namely, catering and cleaning, were not contracted-out as a national policy, because of the disadvantages involved, again challenging the hypothesis.

Other operational elements of HS were contracted-out, on a piece-meal basis, demonstrating that, in particular circumstances, advantages of contracting-out outweighed the disadvantages, and thereby support the Hypothesis in its reference to discrete aspects.

The overall analysis of the case study is that the findings *do not* support the Hypothesis. Neither does the analysis support the obvious alternative to this proposition; i.e. for Hotel Services in the PCSO, the potential disadvantages of contracting-out either aspects or bundles of services generally outweigh the advantages.

The *challenge* to the Hypothesis is that it is too generalised. The Hypothesis divides the services into either bundles or individual aspects; which is a proposition supported by this study's findings, as being necessary in order to analyse accurately the mechanics of the situation. However, the proposition does not convey the need to examine each bundle or aspect *individually*. On the basis of evidence from the PCS, there may be advantages of contracting-out some FM services and not others within the one organisation.

Further, what constitutes an advantage or disadvantage is not only shown by the PCS to be a variable, but it can be varied as a result of the influence of other factors generated by the organisation, which can themselves be variables. This suggests that different Users, generating different influences, will have the capacity to assess advantages and disadvantages differently.

#### 9.10 TEST AGAINST THE RESEARCH REVIEW

##### Comparison with Potential Advantages and Disadvantages

Tables 9.6(a) and 9.6(b) below, schedule respectively, the

advantages and disadvantages of contracting-out, which were identified by the evidence collected for this case study; and compare those findings with the findings of the Research Review, by means of cross-referencing.

(Note: It was an important part of the methodology adopted that the *scheduling* should be completed before the comparisons were made.

Table 9.6 (a): Pilot Case Study: Research Review  
Comparison of Advantages of  
Contracting-out

| ADVANTAGES OF<br>CONTRACTING-OUT                                                                                                   | CROSS REFERENCE .TO<br>RESEARCH REVIEW                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Primary</b>                                                                                                                     |                                                                                                                                                                     |
| * The contractor is responsible for staff training                                                                                 | No.6: Specialist knowledge/<br>Statutory knowledge                                                                                                                  |
| * Where a process is concerned, the contractor is responsible for skills and plant, and takes the risk and 'hassle' of the process | (No.15: Optimal equipment<br>configuration<br>(No.7: Overcomes specialist<br>equipment shortage<br>(No.9: Reduced management<br>burden<br>(No.14: User risk reduced |
| * Provides a range of support service skills                                                                                       | No.7: Overcomes skills<br>shortage                                                                                                                                  |
| <b>Spin-off</b>                                                                                                                    |                                                                                                                                                                     |
| * Provides cover for staff absenteeism                                                                                             | No.5: Increased flexibility                                                                                                                                         |
| * By removing processes off-site, space can be more efficiently utilised                                                           | No.4: Improved operational<br>efficiencies                                                                                                                          |
| * Contracting-out piece-meal services on a local basis was cost-effective                                                          | No.8: Value for money                                                                                                                                               |
| * Contractor was responsible for managing delivery of the service                                                                  | (No.14: User risk reduced<br>(No.9: Reduced management<br>burden                                                                                                    |

Table 9.6(b): Pilot Case Study: Research Review -  
Comparison of Disadvantages of  
Contracting-out

| DISADVANTAGES OF<br>CONTRACTING-OUT                                                                                                                                  | CROSS REFERENCE TO<br>RESEARCH REVIEW                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Primary</b>                                                                                                                                                       |                                                                                                                                         |
| * Contracting-out of management nationally did not achieve added-value                                                                                               | No.1: Not always cost effective<br>No.20: Hidden costs<br>No.10: Lose in-house capability                                               |
| * The balance of in-house staff to contract workers would be forced out of equilibrium by contracting-out the main elements of HS. affecting PCSO's efficiency       | No.6: Personnel problems<br>Loyalty to User<br>No.10: May jeopardise User's organisation                                                |
| * A national policy of contracting-out operational services would necessitate a large number of contracts creating management problems due to the scale of operation | (No.2: Lack of control of suppliers<br>(No.8: New (different) management problems<br>(No.5: Supplier market (insufficiently competent   |
| * Contract staff were not imbued with the culture of a caring quality service                                                                                        | (No.14: Contrary to the culture of the User's organisation<br>(No.6: Personnel problem - loyalty to User                                |
| * PCSO believed that patients expected to deal with in-house staff                                                                                                   | No.14: Contrary to the culture of the User's organisation                                                                               |
| <b>Spin-off</b>                                                                                                                                                      |                                                                                                                                         |
| * Service levels and standards could be manipulated to remain in budget                                                                                              | No.1: Not always cost effective<br>No.3: Lack of control of supplier<br>No.21: Lack of independent advice by supplier                   |
| * Cost benefits of bulk purchasing were not fully passed on, making externally sourced purchasing a more expensive option                                            | No.1: Claimed savings = forecasted hopes<br>No.20: Hidden costs<br>No.15: Ignores in-house solution<br>: In-house resource satisfactory |
| * Suppliers did not work to improve operational service levels                                                                                                       | No.15: Suppliers' commitment                                                                                                            |
| * Determining contracts nationally eroded the policy of increasing local management autonomy                                                                         | No.9: Worse strategic focus                                                                                                             |
| * The flexibility to cope with the workload pattern was better when resourced in-house                                                                               | No.3: Lack of control of supplier<br>No.25: Lack of flexibility                                                                         |



A comparison of the two tables confirms the evidence that PCSO found it advantageous to contract-out some HS, but such services were operational in nature, (i.e. excluded management); were locally, as opposed to nationally, organised; and *tended* to relate to services which were not essential to the ongoing core business.

For advantages, the highest comparable Research Review finding was ranked sixth. The suggestion that the power of drivers may be related to the Research Review ranking will be considered at the cross-case analysis stage; and is supported by the comparison of disadvantages from this study with the Research Review, which yielded comparative categories 1, 2, 5 and 6 + 6 for four of the five primary disadvantages.

The weight of the evidence was in favour of the disadvantages of contracting-out, and this may be reflected in the greater frequency of correspondingly high ranked references from the Research Review.

## STAGE V : CONCLUSIONS OF PILOT CASE STUDY

The adaptation of the Pilot Case Study into a longitudinal study, or *Principal* Case Study, is warranted by the extra detail it enabled the investigation to uncover. The anticipated problem of dealing with a dynamic situation materialised, but the flexibility built into the 'protocol', as a *modus operandi* for dealing with such a problem, worked successfully.

The fact that new data was accepted throughout the project, up to and including month 33, enabled a more detailed examination of the manner in which decision-making

processes were implemented. The findings are, as a result, considered to be significantly more robust.

The use of case study as a research strategy is justified by the experience of the Pilot Case Study, because only by persistent and detailed investigation and questioning was sufficiently accurate data made available for analysis. A less focused examination, for example, by questionnaire, would have, in all probability, yielded different results. Amongst them, for example, that HS was contracted-out as an entity (the first evidence collected by this researcher); and that HS was non-essential, and part of non-core business.

Further, it is considered that the analytical approach enabled reasons for User decisions to be postulated by this researcher which, by being subsequently verified by the PCSO, adds both rigour and originality to the conclusions.

Analysis of the evidence disclosed that even for a recognised *bundle* of FM services, such as HS, (i.e. HS was an organisational unit within PCSO), there was a great complexity of interrelating issues concerning contracting-out. A simple 'either/or' statement regarding contracting-out could not be made. Instead this study identified a series of variable influences affecting the contracting-out decision-making, and suggests that:

- (i) the variables include the relative advantages and disadvantages of contracting-out, noting that such advantages/disadvantages may be perceived differently by other Users;
- (ii) other variables may have a greater influence over contracting-out decision-making than these relative advantages/ disadvantages;
- (iii) the variables may affect the *component* parts of a bundle of services differently (even, as in the case of HS, where the bundle was a recognised management entity);

- (iv) the *management* of facilities services and the delivery of the services, i.e. operational services, may have to be considered separately.

In the case of the PCS these factors led to a situation where some elements of Hotel Services were exclusively resourced by in-house means, and other were variously resourced in-house or contracted-out.

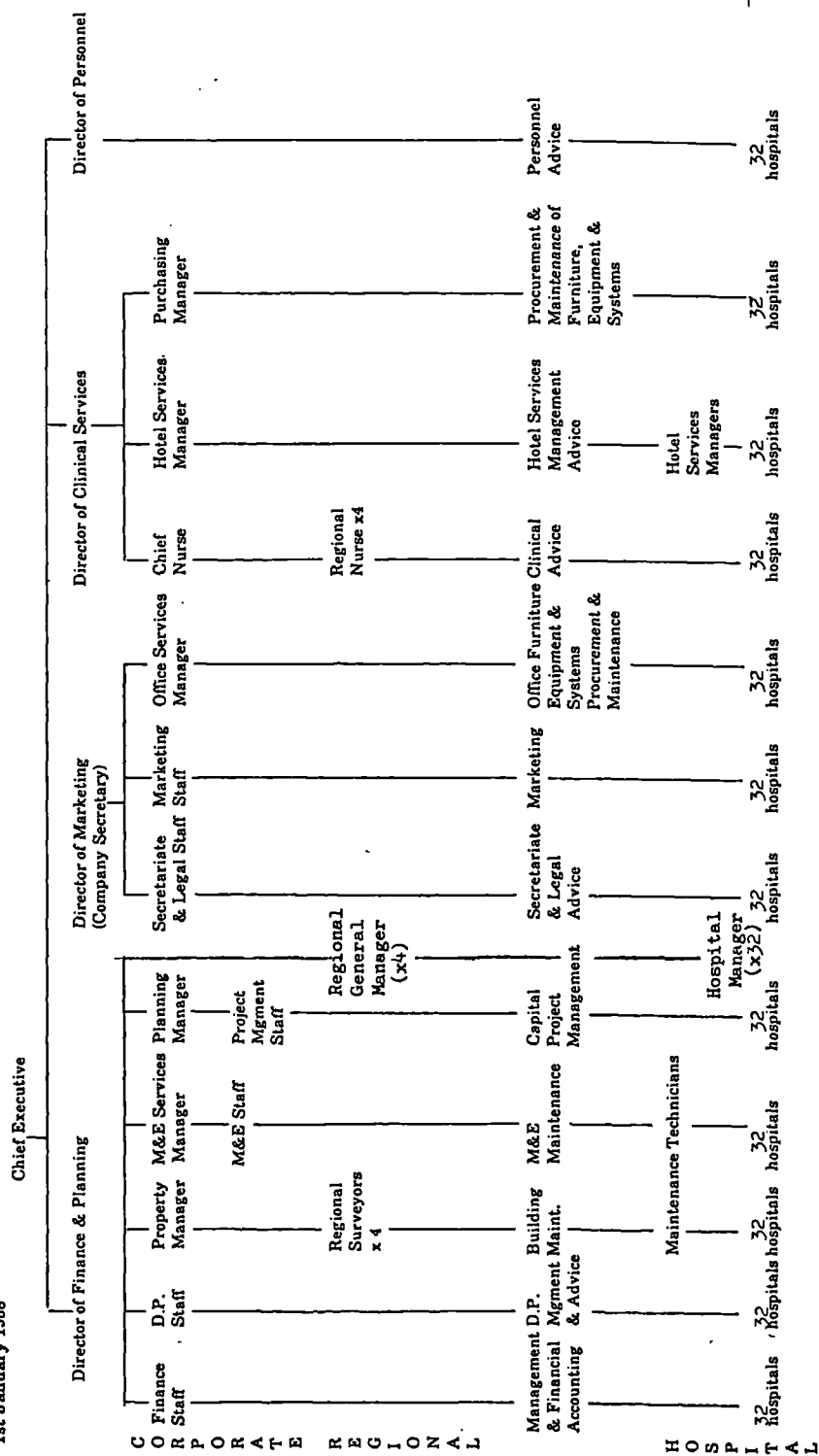
In general, the *major* elements were all resourced in-house, a finding which challenges the Hypothesis. The analytical process, however, credits the Hypothesis for providing the necessary stimulus for such detailed examination.

The analysis of findings further proposed that a simple split between core and non-core business, with the latter equating to FM services, may be too simplistic a model. Such a crude categorisation may prove to be a barrier to understanding the relationship between FM generally (and contracting-out in particular) and the User's organisation.

## CHAPTER NINE

### ANNEX ONE

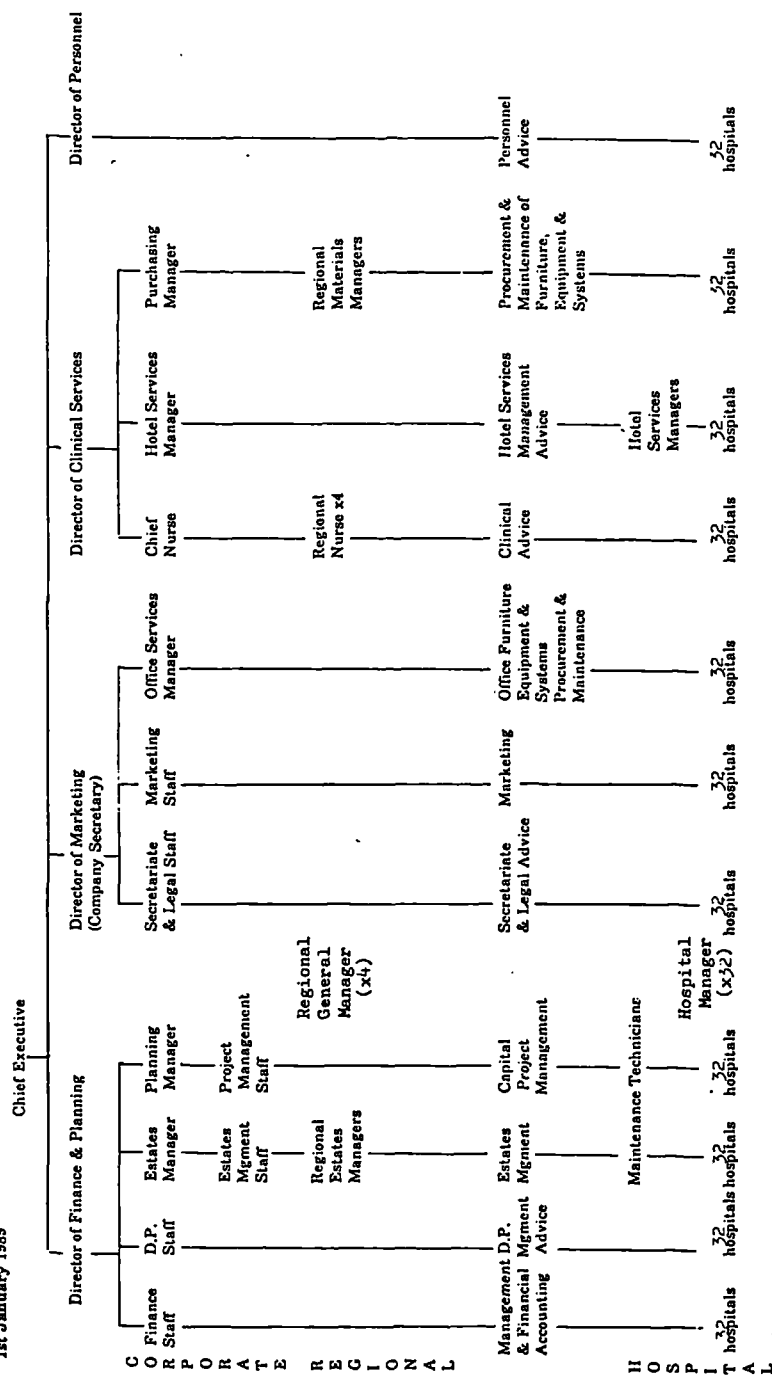
- \* Organisational Chart 1988
- \* Organisational Chart 1989
- \* Organisational Chart 1992
- \* Organisational Chart 1993
- \* FM Structure (Professional) 1990/91
- \* FM Organisational Structure 1990
- \* FM Organisational Structure 1991
- \* PCSO Organisational Structure 1993
- \* Manpower Control Report August 1993
- \* PCSO Staff Ratios July 1993
- \* PCSO Manpower Control Report Overall Summary  
August 1993



1) Only Clinical and Building Maintenance was represented at Regional level

2) Excluding Clinical and Building Maintenance, the Regional General Manager was "bypassed" by all Corporate Service Managers

33) The services which are today deemed to be Facilities Management were spread across three directorates and six Corporate Managers

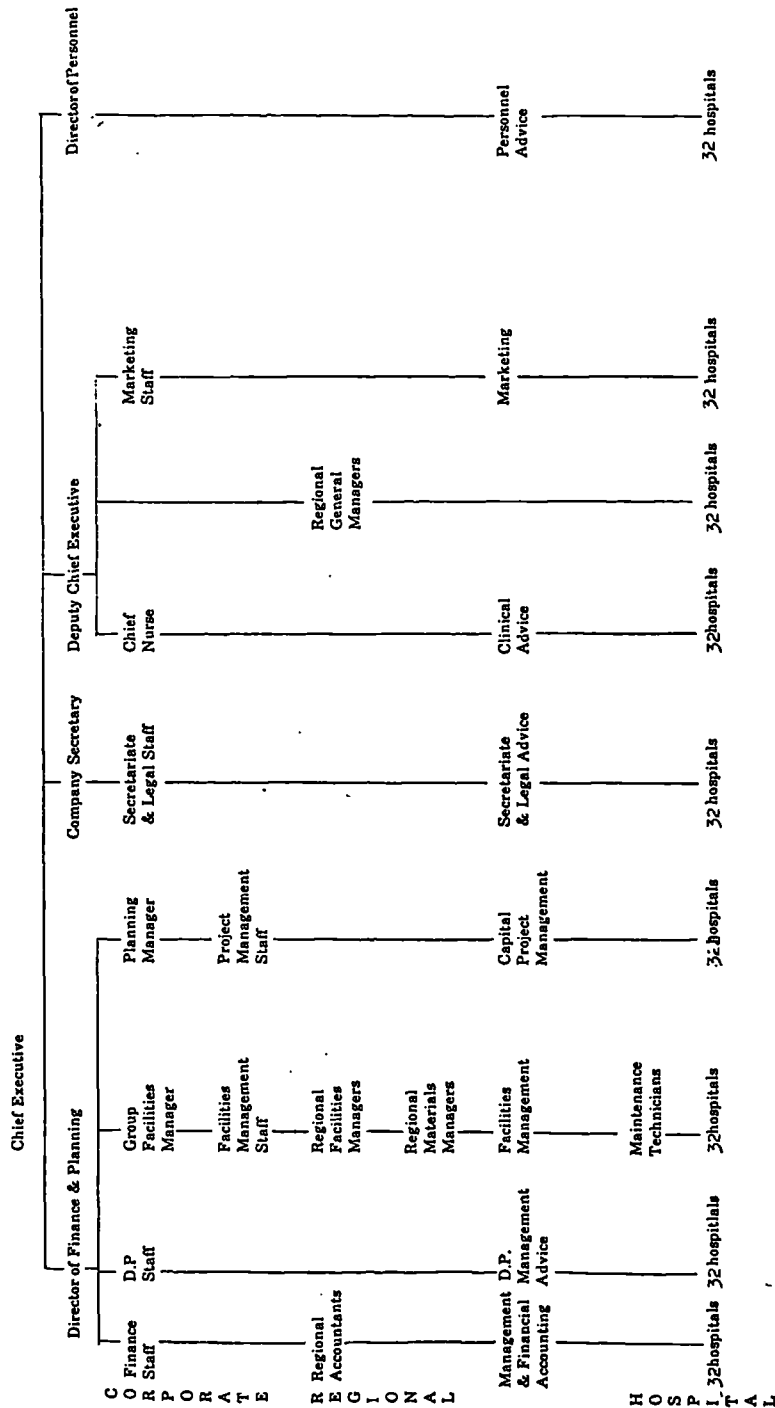


1) Only Clinical, Materials and Building and M&E Maintenance as Estates Management was represented at Regional level

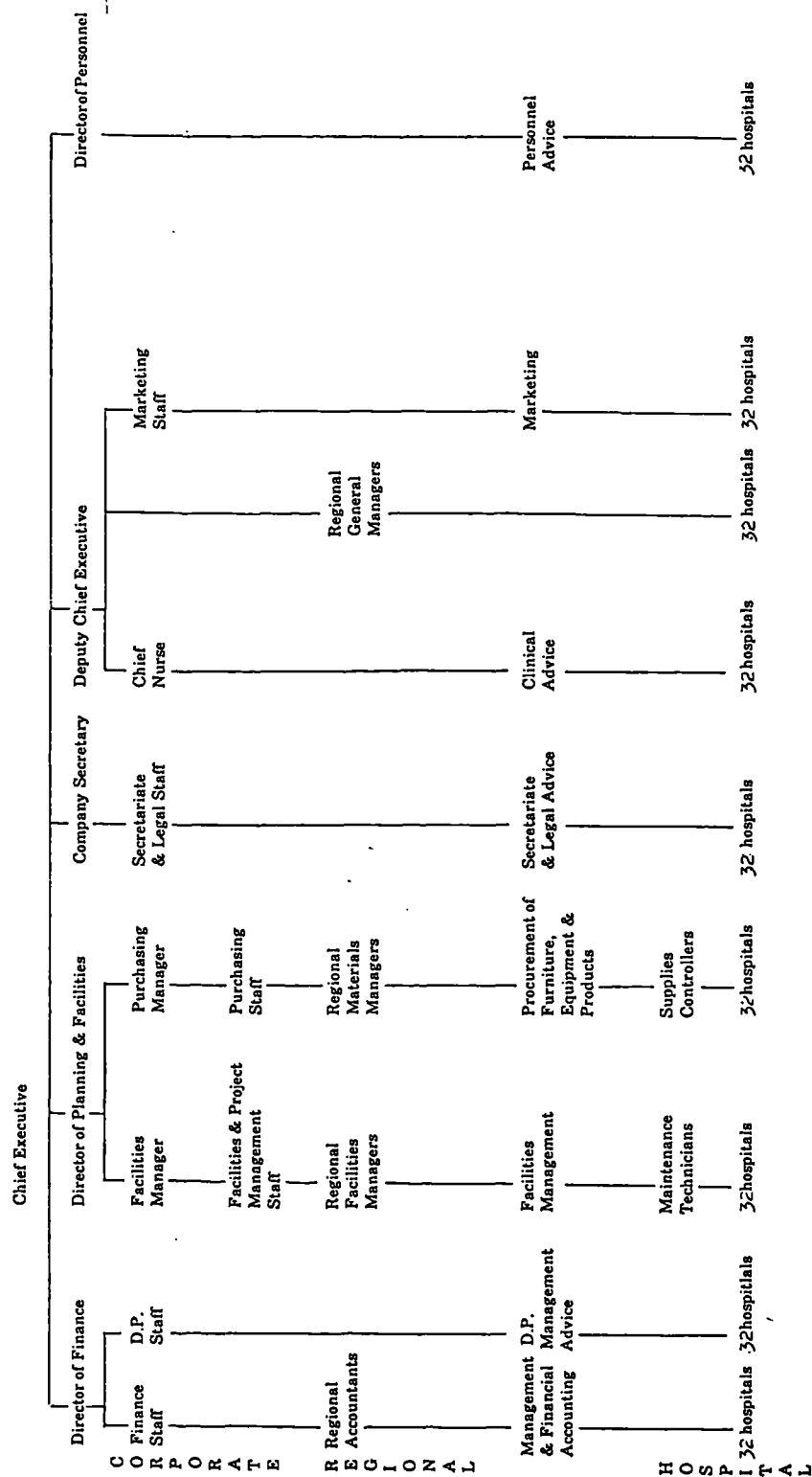
2) Excluding Clinical and Estates Management, the Regional General Manager was still "bypassed" by all Corporate Service Managers

3) The services which are today deemed to be Facilities Management were still spread across three directorates and five Corporate Managers

**1st January 1992 (Following phased transfer of responsibilities)**



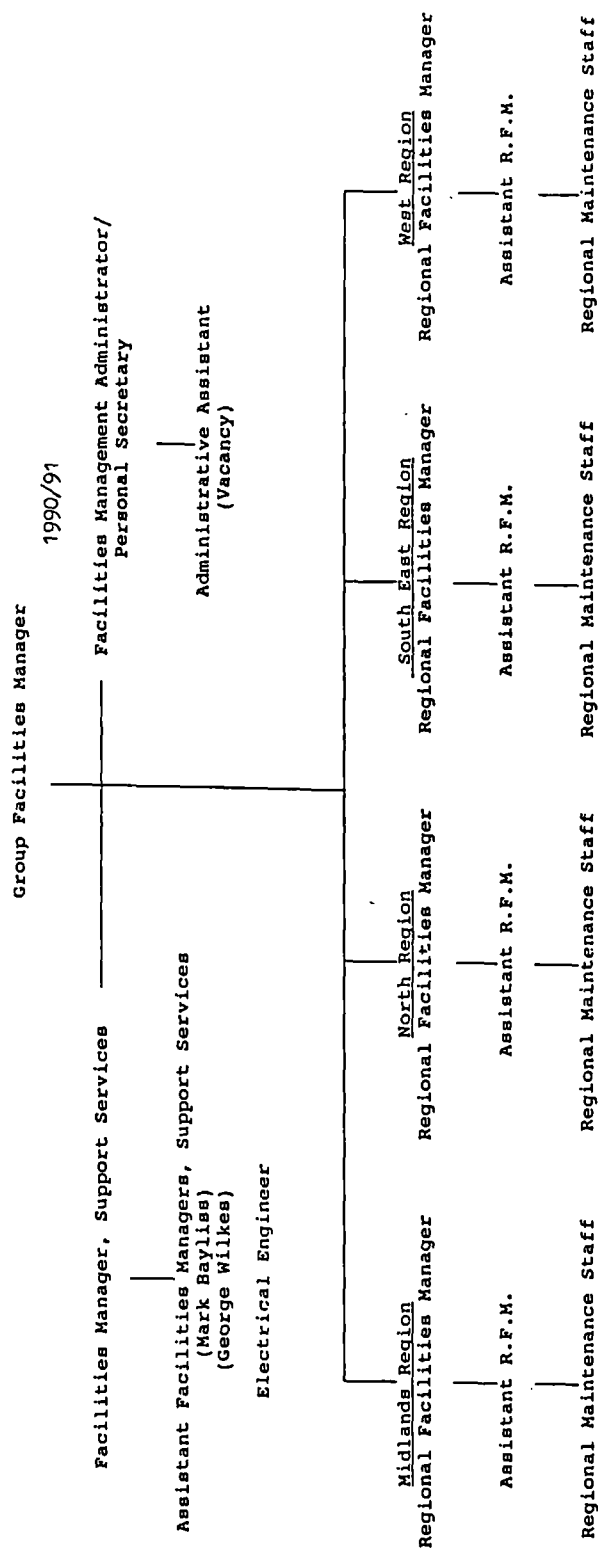
1) The services which are today deemed to be Facilities Management are accountable to one Director, but two Corporate Managers and are not fully represented at regional level



1) The services which are today deemed to be Facilities Management are accountable to one Director and are fully represented at regional level

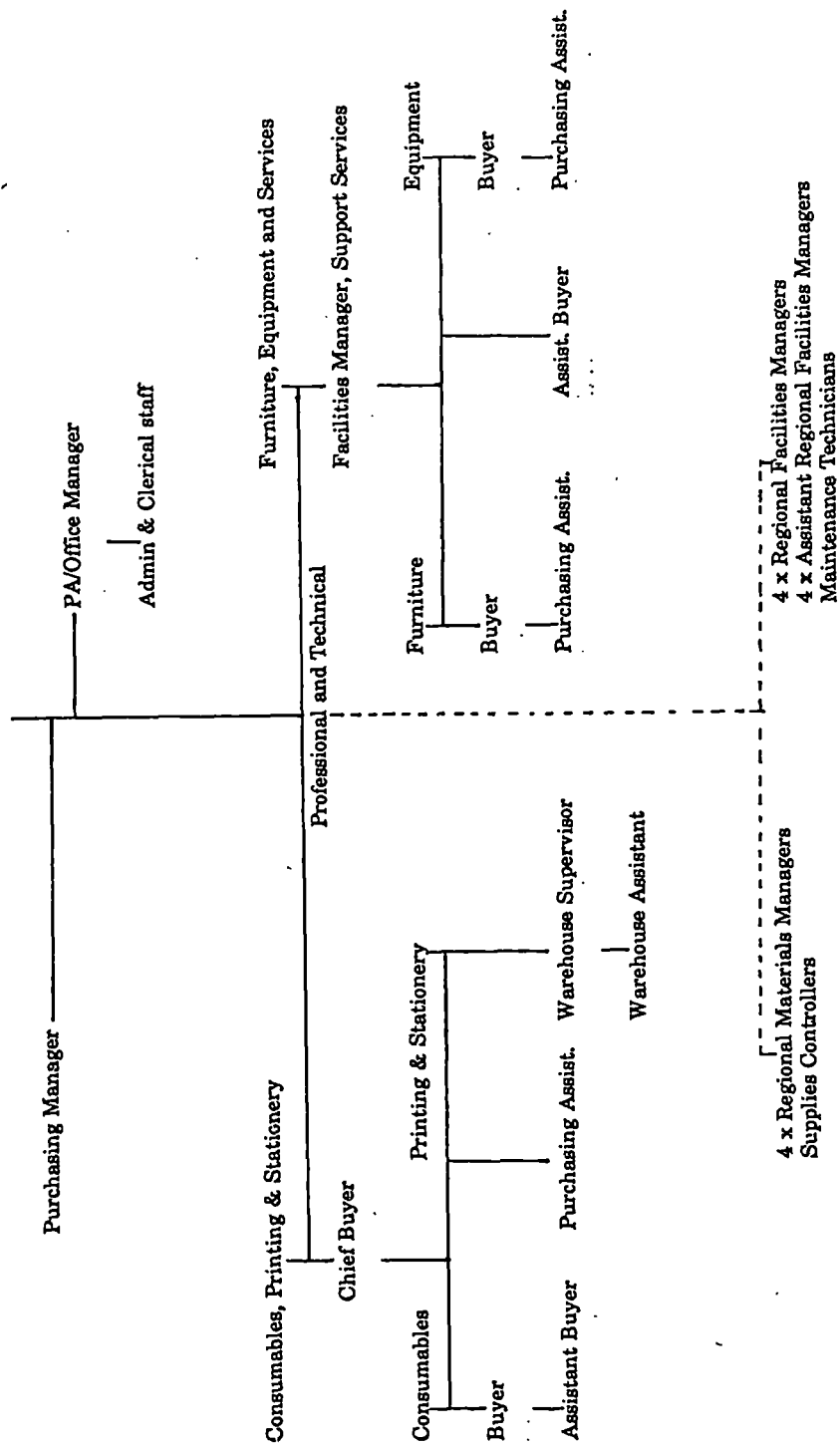


FACILITIES MANAGEMENT STRUCTURE (PROFESSIONAL)



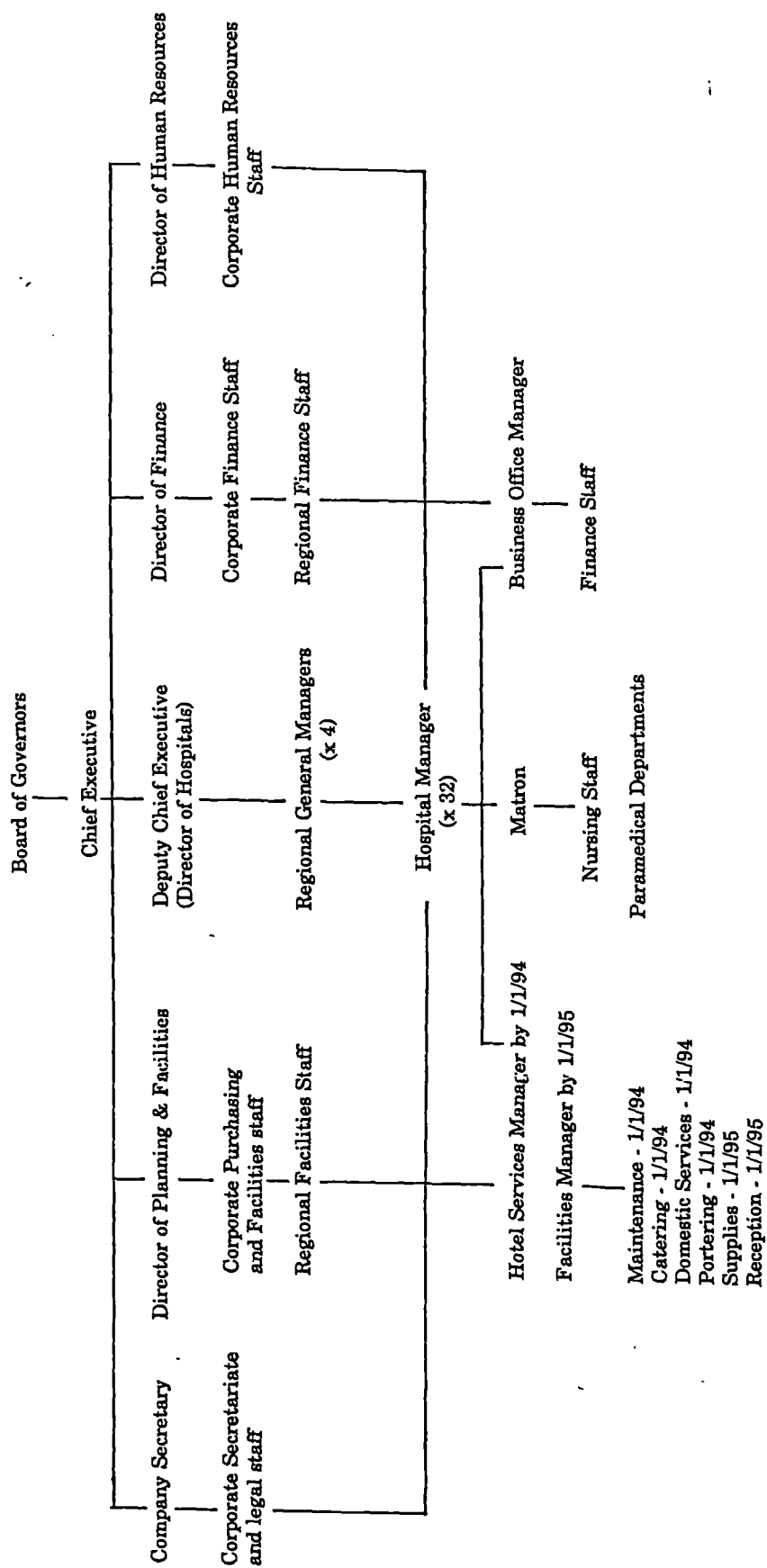
## FM ORGANISATIONAL STRUCTURE (1990)

**Group Facilities Manager**





Organisational Structure  
(1993)



P.C.-8.0.

## MANPOWER CONTROL REPORT - AUGUST 93 - CORPORATE OFFICE

| CORPORATE AND<br>CENTRAL DEPTS          | DEPARTMENT TOTALS<br>Staff in Post<br>(WTE) |        |        |        |        |        |        |        |       |     |     |     | Current<br>Month<br>Budget | Variance |
|-----------------------------------------|---------------------------------------------|--------|--------|--------|--------|--------|--------|--------|-------|-----|-----|-----|----------------------------|----------|
|                                         | Jan                                         | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep   | Oct | Nov | Dec |                            |          |
|                                         |                                             |        |        |        |        |        |        |        |       |     |     |     |                            |          |
| Chief Executive                         | 2.00                                        | 2.00   | 2.00   | 2.00   | 2.00   | 2.00   | 2.00   | 2.00   | 2.00  |     |     |     | 2.00                       |          |
| Human Resources Department              | 6.86                                        | 6.86   | 6.86   | 6.86   | 6.86   | 6.86   | 7.86   | 7.86   | 7.86  |     |     |     | 7.86                       |          |
| Total Chief Executive                   | 8.86                                        | 8.86   | 8.86   | 8.86   | 8.86   | 8.86   | 9.86   | 9.86   | 9.86  |     |     |     | 9.86                       |          |
| Deputy Chief Executive                  | 2.00                                        | 2.00   | 2.00   | 2.00   | 2.00   | 2.00   | 2.00   | 2.00   | 2.00  |     |     |     | 2.00                       |          |
| Marketing and Research                  | 3.00                                        | 3.00   | 4.00   | 4.00   | 4.00   | 4.00   | 4.00   | 4.00   | 4.00  |     |     |     | 4.00                       |          |
| Health Screening (H/Scr)                | 5.00                                        | 5.00   | 5.00   | 5.00   | 5.00   | 5.00   | 5.00   | 5.00   | 5.00  |     |     |     | 5.00                       | 1.00     |
| Clinical Services                       | 4.00                                        | 4.00   | 4.00   | 4.00   | 4.00   | 3.00   | 3.00   | 3.00   | 3.00  |     |     |     | 4.00                       |          |
| Technical Services                      | 1.71                                        | 1.71   | 1.71   | 1.71   | 1.71   | 1.71   | 1.71   | 1.71   | 1.71  |     |     |     | 1.71                       |          |
| Group Corporate Development             | 0.00                                        | 0.00   | 0.00   | 1.00   | 1.00   | 1.00   | 1.00   | 2.00   | 2.00  |     |     |     | 2.00                       |          |
| Wolverhampton Training Unit             | 5.35                                        | 5.35   | 5.35   | 5.35   | 5.35   | 5.35   | 5.35   | 5.35   | 5.35  |     |     |     | 5.78                       | 0.43     |
| Total Deputy Chief Executive            | 21.06                                       | 21.06  | 22.06  | 23.06  | 22.06  | 22.06  | 23.06  | 23.06  | 23.06 |     |     |     | 24.49                      | 1.43     |
| Director of Planning and Facilities     | 2.00                                        | 2.00   | 2.00   | 2.00   | 2.00   | 2.00   | 2.00   | 2.00   | 2.00  |     |     |     | 2.00                       |          |
| Facilities Management                   | 7.00                                        | 6.00   | 6.00   | 6.00   | 6.00   | 6.00   | 6.00   | 6.00   | 6.00  |     |     |     | 7.00                       | 1.00     |
| Purchasing Management                   | 9.60                                        | 8.60   | 8.60   | 8.60   | 8.60   | 6.60   | 6.60   | 6.60   | 7.60  |     |     |     | 9.80                       | 2.20     |
| Total Director of Planning & Facilities | 18.60                                       | 16.60  | 16.60  | 16.60  | 16.60  | 14.60  | 14.60  | 14.60  | 15.60 |     |     |     | 18.80                      | 3.20     |
| Director of Finance                     | 2.00                                        | 2.00   | 2.00   | 2.00   | 3.00   | 3.00   | 3.00   | 3.00   | 3.00  |     |     |     | 2.00                       | -1.00    |
| Financial Planning and Analysis         | 8.60                                        | 8.60   | 8.60   | 8.60   | 8.60   | 7.60   | 7.60   | 7.60   | 7.60  |     |     |     | 8.60                       | 1.00     |
| Management Accounts                     | 3.00                                        | 3.00   | 4.00   | 5.00   | 6.00   | 5.00   | 5.00   | 5.00   | 5.00  |     |     |     | 6.00                       | 1.00     |
| Financial Accounts                      | 5.40                                        | 5.40   | 5.40   | 5.40   | 6.40   | 5.40   | 5.40   | 5.40   | 5.40  |     |     |     | 6.40                       | 1.00     |
| Fundraising                             | 4.00                                        | 4.00   | 4.00   | 3.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00  |     |     |     | 5.75                       | 5.75     |
| Information Technology                  | 9.00                                        | 9.00   | 10.00  | 10.00  | 11.00  | 11.00  | 11.00  | 10.00  | 10.00 |     |     |     | 11.00                      | 1.00     |
| Total Director of Finance               | 32.00                                       | 32.00  | 34.00  | 34.00  | 35.00  | 32.00  | 32.00  | 31.00  | 31.00 |     |     |     | 39.75                      | 8.75     |
| Company Secretary                       | 8.00                                        | 8.00   | 8.00   | 7.00   | 7.00   | 8.00   | 8.00   | 8.00   | 8.00  |     |     |     | 8.00                       |          |
| Office Administration                   | 6.00                                        | 6.00   | 6.00   | 8.00   | 6.00   | 6.00   | 6.00   | 6.00   | 6.00  |     |     |     | 6.00                       |          |
| Catering                                | 4.00                                        | 4.00   | 4.00   | 4.00   | 4.00   | 4.00   | 4.00   | 4.00   | 4.00  |     |     |     | 4.00                       |          |
| Total Company Secretary                 | 18.00                                       | 18.00  | 18.00  | 17.00  | 17.00  | 18.00  | 18.00  | 18.00  | 18.00 |     |     |     | 18.00                      |          |
| Corporate Office Temporary Staff        | 1.00                                        | 1.00   | 1.00   | 1.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00  |     |     |     | 1.00                       | 1.00     |
| Regional Offices                        |                                             |        |        |        |        |        |        |        |       |     |     |     |                            |          |
| Midland                                 | 9.01                                        | 9.01   | 9.01   | 9.01   | 9.01   | 9.01   | 9.01   | 8.01   |       |     |     |     | 8.51                       | 0.50     |
| North                                   | 12.21                                       | 12.21  | 12.21  | 12.21  | 12.21  | 12.21  | 12.21  | 11.21  |       |     |     |     | 12.71                      | 1.50     |
| South East                              | 8.86                                        | 8.86   | 8.86   | 8.86   | 8.86   | 7.86   | 7.86   | 7.86   | 6.86  |     |     |     | 8.86                       | 2.00     |
| West                                    | 11.71                                       | 11.71  | 11.71  | 11.71  | 11.71  | 11.71  | 11.71  | 10.71  |       |     |     |     | 11.71                      | 1.00     |
| Total Regional Offices                  | 41.79                                       | 41.79  | 41.79  | 41.79  | 41.79  | 40.79  | 40.79  | 36.79  |       |     |     |     | 41.79                      | 5.00     |
| Total Corporate Office & Central Depts  | 141.31                                      | 139.31 | 142.31 | 142.31 | 139.31 | 137.31 | 138.31 | 134.31 |       |     |     |     | 153.69                     | 19.38    |

P.C.S.O.  
STAFF RATIOS - JULY 1993

| ALL REGIONS                |  | Ratio of Staff to Patient Days<br>(staff per 10,000 patient days) |         |         |         |         |         |         |         |        |      |      |      |
|----------------------------|--|-------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|--------|------|------|------|
| STAFF GROUP                |  | Jan                                                               | Feb     | Mar*    | Apr     | May     | Jun*    | Jul     | Aug     | Sept * | Oct  | Nov  | Dec* |
| Hospital Mgt               |  | 21,536                                                            | 20,842  | 19,990  | 18,625  | 19,035  | 18,700  | 19,300  | 17,125  |        |      |      |      |
| Nursing - Wards            |  | 29.48                                                             | 31.87   | 31.45   | 32.28   | 32.38   | 32.40   | 31.57   | 31.46   |        |      |      |      |
| Theatre                    |  | 421.93                                                            | 454.13  | 467.00  | 441.98  | 443.65  | 442.70  | 450.50  | 431.42  |        |      |      |      |
| Other                      |  | 188.25                                                            | 174.73  | 181.08  | 178.14  | 178.95  | 176.15  | 177.49  | 174.08  |        |      |      |      |
| Total Nursing              |  | 37.33                                                             | 40.76   | 40.75   | 43.31   | 43.08   | 44.39   | 46.41   | 48.65   |        |      |      |      |
| Clerical - Business Office |  | 627.52                                                            | 669.62  | 688.83  | 663.43  | 665.68  | 663.24  | 674.40  | 654.15  | 0.00   | 0.00 | 0.00 | 0.00 |
| Receptionists              |  | 74.17                                                             | 80.38   | 83.73   | 82.18   | 82.86   | 84.35   | 84.49   | 85.85   |        |      |      |      |
| Stores/Supplies            |  | 59.08                                                             | 62.88   | 65.89   | 64.63   | 65.37   | 65.34   | 65.18   | 68.19   |        |      |      |      |
| Consulting Rooms           |  | 25.03                                                             | 26.63   | 27.51   | 26.21   | 25.86   | 26.09   | 27.04   | 26.62   |        |      |      |      |
| X-Ray                      |  | 20.58                                                             | 21.13   | 22.28   | 23.08   | 23.57   | 25.28   | 26.09   | 24.35   |        |      |      |      |
| Other                      |  | 14.01                                                             | 14.73   | 16.25   | 15.27   | 15.37   | 15.27   | 14.42   | 15.47   |        |      |      |      |
| Total Clerical             |  | 29.65                                                             | 33.16   | 33.38   | 32.77   | 34.35   | 33.17   | 35.43   | 34.44   |        |      |      |      |
| Technical - Theatre        |  | 222.53                                                            | 238.91  | 249.04  | 244.14  | 247.37  | 249.51  | 252.66  | 254.93  | 0.00   | 0.00 | 0.00 | 0.00 |
| X-Ray                      |  | 30.48                                                             | 30.19   | 30.16   | 31.82   | 31.75   | 31.40   | 31.63   | 32.92   |        |      |      |      |
| Pathology                  |  | 28.05                                                             | 29.94   | 33.44   | 30.94   | 30.52   | 31.64   | 31.44   | 31.12   |        |      |      |      |
| Pharmacy                   |  | 8.53                                                              | 7.38    | 8.18    | 7.61    | 7.00    | 7.64    | 7.73    | 8.32    |        |      |      |      |
| Physiotherapy              |  | 3.99                                                              | 5.41    | 3.99    | 4.28    | 4.94    | 5.06    | 4.53    | 4.67    |        |      |      |      |
| Maintenance                |  | 14.21                                                             | 15.75   | 17.21   | 17.45   | 17.89   | 17.08   | 17.02   | 16.92   |        |      |      |      |
| Other                      |  | 35.02                                                             | 35.40   | 36.66   | 36.96   | 35.39   | 34.31   | 34.91   | 35.00   |        |      |      |      |
| Total Technical            |  | 0.98                                                              | 1.05    | 1.43    | 1.50    | 1.47    | 1.71    | 1.68    | 1.11    |        |      |      |      |
| Hotel Services - Household |  | 119.26                                                            | 125.12  | 131.07  | 130.56  | 128.96  | 128.85  | 128.94  | 130.06  | 0.00   | 0.00 | 0.00 | 0.00 |
| Catering                   |  | 207.16                                                            | 223.05  | 231.35  | 222.12  | 222.71  | 223.87  | 230.10  | 227.84  |        |      |      |      |
| Other                      |  | 129.69                                                            | 137.10  | 144.01  | 144.63  | 140.53  | 144.38  | 146.29  | 144.48  |        |      |      |      |
| Total Hotel Services       |  | 0.00                                                              | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |        |      |      |      |
| RMOs                       |  | 336.85                                                            | 360.15  | 375.36  | 368.75  | 363.24  | 368.24  | 376.39  | 372.32  | 0.00   | 0.00 | 0.00 | 0.00 |
| TOTAL (HOSPITALS)          |  | 29.39                                                             | 30.71   | 32.02   | 32.02   | 32.02   | 32.02   | 32.02   | 32.02   |        |      |      |      |
|                            |  | 1385.03                                                           | 1456.38 | 1507.76 | 1469.16 | 1469.63 | 1474.26 | 1495.97 | 1474.93 | 0.00   | 0.00 | 0.00 | 0.00 |

\* Adjusted figure - 5 week period.

P.C.S.O.

MANPOWER CONTROL REPORT - AUGUST 1993  
OVERALL SUMMARY

| STAFF GROUP                    | Worked Hours as Whole Time Equivalents (WTE) |         |         |         |         |         |         |         |     |     |     |     | Current Month Budget | Variance    |
|--------------------------------|----------------------------------------------|---------|---------|---------|---------|---------|---------|---------|-----|-----|-----|-----|----------------------|-------------|
|                                | Jan                                          | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep | Oct | Nov | Dec |                      |             |
| Hospital Mgt                   | 63.48                                        | 66.42   | 62.87   | 64.52   | 64.72   | 64.77   | 63.10   | 62.89   |     |     |     |     | 69.14                | 7.16 8.25   |
| Nursing - Wards                | 908.67                                       | 946.50  | 933.54  | 883.52  | 886.95  | 884.96  | 900.54  | 862.41  |     |     |     |     | 873.94               | 12.71 11.53 |
| Theatre                        | 382.35                                       | 364.17  | 361.98  | 358.10  | 357.72  | 352.12  | 354.80  | 347.98  |     |     |     |     | 378.42               | 11.23 30.44 |
| Other                          | 80.40                                        | 84.95   | 81.46   | 86.57   | 86.12   | 88.74   | 92.78   | 97.26   |     |     |     |     | 94.18                | 2.94 -3.08  |
| Total Nursing                  | 1351.42                                      | 1395.62 | 1376.98 | 1326.19 | 1330.69 | 1325.82 | 1348.12 | 1307.65 |     |     |     |     | 1346.54              | 12.08 38.89 |
| Clinical - Business Office     | 159.74                                       | 167.52  | 167.37  | 164.27  | 165.63  | 168.61  | 168.89  | 171.62  |     |     |     |     | 175.57               | 5.49 3.95   |
| Receptionists                  | 127.24                                       | 131.05  | 131.71  | 129.20  | 130.67  | 130.82  | 130.30  | 136.32  |     |     |     |     | 117.03               | 3.66 -19.29 |
| Stores/Supplies                | 53.90                                        | 55.50   | 55.00   | 52.39   | 51.89   | 52.16   | 54.06   | 53.21   |     |     |     |     | 55.83                | 1.74 2.62   |
| Consulting Rooms               | 44.32                                        | 44.04   | 44.53   | 46.14   | 47.12   | 50.54   | 52.16   | 48.68   |     |     |     |     | 57.79                | 1.81 9.11   |
| X-Ray                          | 30.18                                        | 30.70   | 32.49   | 30.52   | 30.72   | 30.53   | 28.83   | 30.92   |     |     |     |     | 37.73                | 1.18 8.81   |
| Other                          | 83.86                                        | 89.12   | 68.73   | 65.51   | 68.66   | 66.31   | 70.83   | 68.85   |     |     |     |     | 67.06                | 2.10 -1.79  |
| Total Clinical                 | 479.24                                       | 497.93  | 497.83  | 488.03  | 494.49  | 498.77  | 505.07  | 509.60  |     |     |     |     | 510.61               | 15.76 1.01  |
| Technical - Theatre            | 65.64                                        | 62.93   | 60.29   | 63.60   | 63.47   | 62.77   | 63.22   | 65.81   |     |     |     |     | 70.59                | 2.71 4.78   |
| X-Ray                          | 60.40                                        | 62.40   | 66.84   | 61.84   | 61.00   | 63.24   | 62.84   | 62.20   |     |     |     |     | 59.29                | 1.87 -2.91  |
| Pathology                      | 14.07                                        | 15.38   | 16.36   | 15.21   | 14.00   | 15.28   | 15.46   | 16.64   |     |     |     |     | 17.57                | 0.55 0.93   |
| Pharmacy                       | 8.60                                         | 11.27   | 7.97    | 8.56    | 9.87    | 10.12   | 9.06    | 9.34    |     |     |     |     | 14.32                | 0.47 4.98   |
| Physiotherapy                  | 30.60                                        | 32.83   | 34.40   | 34.89   | 35.77   | 34.15   | 33.03   | 33.82   |     |     |     |     | 35.67                | 1.02 1.95   |
| Maintenance                    | 75.42                                        | 73.78   | 73.28   | 73.88   | 70.75   | 68.59   | 69.79   | 69.96   |     |     |     |     | 70.31                | 2.70 0.35   |
| Other                          | 2.11                                         | 2.19    | 2.86    | 3.00    | 2.93    | 3.42    | 3.35    | 2.21    |     |     |     |     | 2.73                 | 0.07 0.52   |
| Total Technical                | 256.84                                       | 260.78  | 262.00  | 260.98  | 257.79  | 257.57  | 256.75  | 259.98  |     |     |     |     | 270.48               | 2.15 10.50  |
| Hotel Services - Household     | 446.14                                       | 464.89  | 462.47  | 444.02  | 445.19  | 447.51  | 459.96  | 455.46  |     |     |     |     | 479.97               | 15.00 24.51 |
| Catering                       | 279.31                                       | 285.74  | 287.87  | 289.12  | 280.92  | 288.61  | 292.44  | 288.81  |     |     |     |     | 299.27               | 7.55 10.46  |
| Other                          | 0.00                                         | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |     |     |     |     | 0.00                 | 0.00        |
| Total Hotel Services           | 725.45                                       | 750.63  | 750.34  | 733.14  | 726.11  | 736.12  | 752.40  | 744.27  |     |     |     |     | 779.24               | 24.35 34.97 |
| RMOs                           | 63.29                                        | 64.00   | 64.00   | 64.00   | 64.00   | 64.00   | 64.00   | 64.00   |     |     |     |     | 64.00                | 2 0.00      |
| TOTAL (Hospitals)              | 2939.72                                      | 3035.38 | 3014.02 | 2936.86 | 2937.80 | 2947.05 | 2989.44 | 2948.39 |     |     |     |     | 3040.01              | 0.91 91.62  |
| TOTAL (Corporate Office)       | 88.17                                        | 86.17   | 89.17   | 89.17   | 88.17   | 85.17   | 87.17   | 88.17   |     |     |     |     | 99.12                | 10.95       |
| TOTAL (Regional Offices)       | 41.79                                        | 41.79   | 41.79   | 41.79   | 41.79   | 40.79   | 40.79   | 36.79   |     |     |     |     | 41.79                | 5.00        |
| TOTAL (Health Screening)       | 5.00                                         | 5.00    | 5.00    | 5.00    | 5.00    | 5.00    | 5.00    | 4.00    |     |     |     |     | 5.00                 | 1.00        |
| TOTAL (Healthcare Inc. Rediff) | 47.56                                        | 45.63   | 46.19   | 45.37   | 44.52   | 48.49   | 45.23   | 48.51   |     |     |     |     | 48.49                | -0.02       |
| TOTAL (Wolverhampton T.U.)     | 5.35                                         | 5.35    | 5.35    | 5.35    | 5.35    | 5.35    | 5.35    | 5.35    |     |     |     |     | 5.78                 | 0.43        |
| TOTAL (Corporate Office Temp)  | 1.00                                         | 1.00    | 1.00    | 1.00    | 0.00    | 0.00    | 0.00    | 0.00    |     |     |     |     | 1.00                 | 1.00        |

## CHAPTER TEN

### CASE STUDY TWO :

#### Maintenance of Clinical Sterilizers (or Autoclaves) in a Private Hospital Group

#### PREAMBLE

##### Protocol Requirements

The protocol for case study data collection and analysis was developed in Chapter Seven, (Section 7.2) above; the working document being replicated at Appendix V.

The model developed at Fig: 10.1 below summarises the requirements of the protocol and acts as a 'route map', describing the arrangement and marshalling of this study.

To safeguard and respect the confidentiality under which the data was made available, the identity of the organisation which housed the Unit of Analysis will not be specified in written form. Because the unit of analysis for Case Study Two (CS2) is contained *within* the same organisation as for the PCS, the case study organisation will be referred to herein as 'PCSO' (standing for Pilot Case Study Organisation). By employing this tactic of anonymity, the description of the study and the findings do not have to be disguised. Consequently there is no devaluing of the main points.

This study describes the manner by which PCSO resourced the maintenance of its 'autoclaves'.



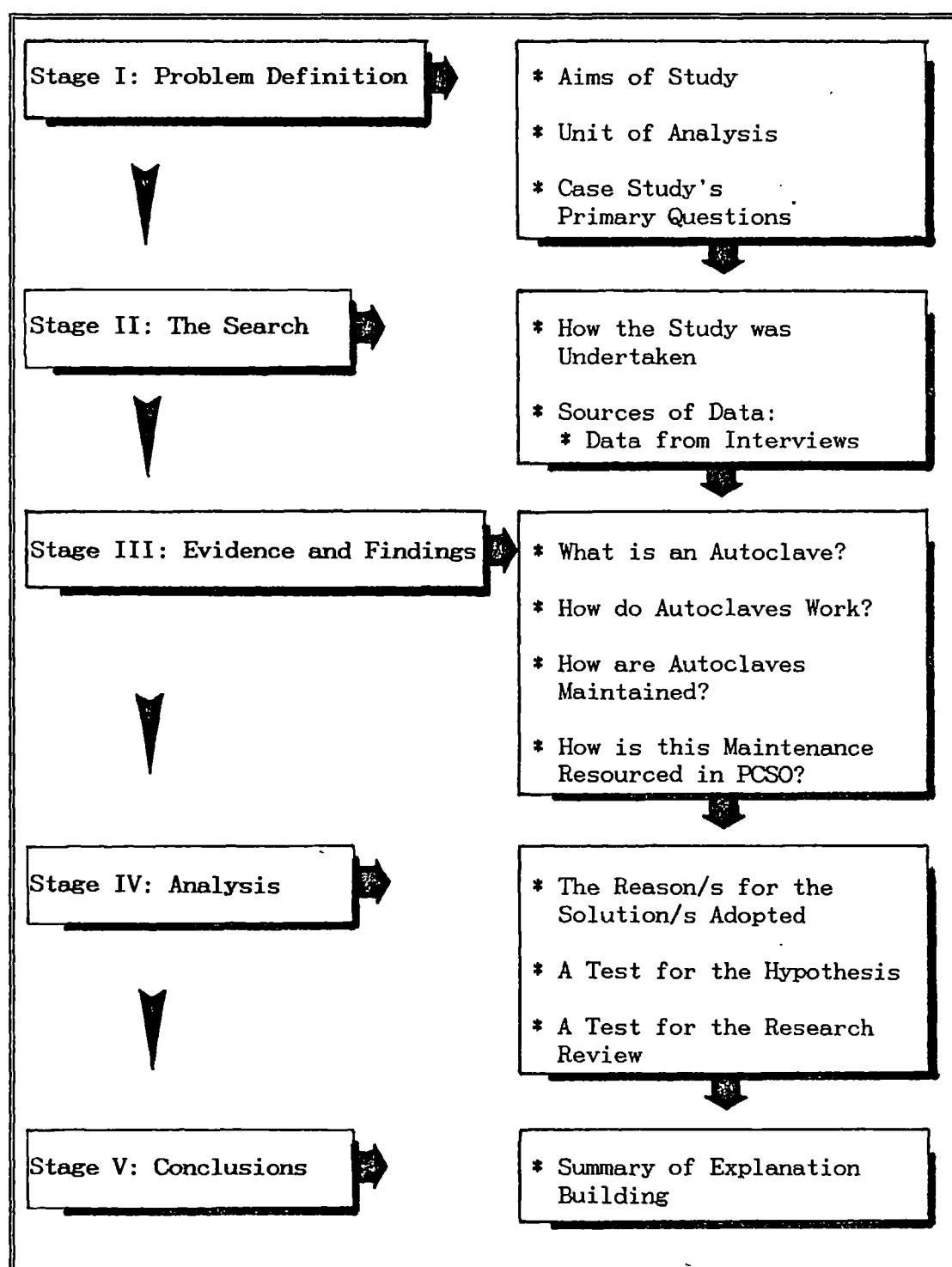


Fig. 10.1: Case Study Two Route Map

## STAGE I : PROBLEM DEFINITION

### 10.1 INTRODUCTION: PURPOSE OF CASE STUDY TWO (CS2)

The purpose of the second case study is to consider why an organisation should prefer to either contract-out or resource in-house the maintenance of an asset, which is directly associated with a perceived core product of the business.

### 10.2 UNIT OF ANALYSIS

#### 10.2.1 Factors Governing the Choice of the Organisation for Case Study Two (PCSO)

The initial findings of the Pilot Case Study (PCS) pointed to the importance of identifying core and non-core business.

Within the same PCSO a type of plant or machinery was sought that was directly involved in core business, because it was considered that the *maintenance* of such equipment would provide interesting data for a case study, and would assist understanding, following cross-case analysis, of whether findings were generalisable between facilities management functions, which ranged variously from being general support services to being essential to supporting a core product.

The PCSO was chosen for this exercise because of:

- \* access to data;
- \* the broad utilisation of FM covering the maintenance of a range of plant and equipment which, as for the PCS itself, provided this researcher with an

unfamiliar occupier-use and, hence, the expectation of fewer pre-conceived ideas.

#### 10.2.2 Description of Case Study Organisation Two (i.e. PCSO)

For a description of PCSO, refer to 9.2.2 of the Pilot Case Study (Chapter Nine).

#### 10.2.3 The Unit of Analysis : Case Study Two (CS2)

Following the strategy of focusing on non-typical examples, in the expectation of permitting the analysis of findings to be undertaken with a minimum of pre-conceived ideas, a unit of analysis was sought, which both met the criteria laid down in Section 10.2.1, and was unfamiliar to this researcher.

During the early focal review discussions with the Principal Informant, these choice criteria were not discussed. The Principal Informant (the Group Facilities Manager), however, did make repeated references to the maintenance of 'autoclaves', within his function. This was both an unknown term and, apparently, an item of equipment that was central to the support of the clinical process.

The manner in which 'autoclaves' were maintained, i.e. either by directly employed staff or by contracted staff, became the unit of analysis for CS2.

#### 10.2.4 Period of Study

Research was undertaken during the period January 1991 - November 1993.

### 10.3 THE AIM OF CASE STUDY TWO

The aim was to establish the way in which the maintenance of autoclaves was undertaken in PCSO, and from that data to draw conclusions as to the advantages and disadvantages of contracting-out an FM service.

Following the pattern of the Pilot Case Study (PCS), the findings would be analysed with a view to determining:-

- (a) their generalisability to FM services in other organisations;
- (b) their generalisability to other FM services within PCSO;
- (c) whether they supported the findings of the Research Review;
- (d) whether they supported the hypothesis of this research.

The discipline of the study is to set down, in orderly form, sufficient detail of CS2 in order for the process to be replicable. To achieve this aim this study seeks, by following the Research Project Plan, to:-

- \* outline the PCSO;
- \* record the parameters of the unit of analysis;
- \* record the field procedures adopted;
- \* record the sources of data used;
- \* record the evidence collected.

The purpose of the study was to enable an indepth examination to be undertaken of the unit of analysis and the organisational factors governing or restricting it.

#### 10.4 THE QUESTIONS

The preliminary remarks made in the first two paragraphs of Section 9.4 of PCS (Chapter Nine) apply equally to this case study, and will not be repeated here.

The *primary* questions for Case Study Two were designed progressively to build-up:-

- \* an understanding of the unit of analysis;
- \* to identify as findings, key determining factors for reasons governing the way the unit of analysis (autoclave maintenance) was organised.

The following figure (Fig. 10.2) describes the line of questioning.

Note: for reasons which will become clear, 'autoclaves' are from hereon referred to as 'clinical sterilizers' (CS) unless a specific meaning is to be communicated.

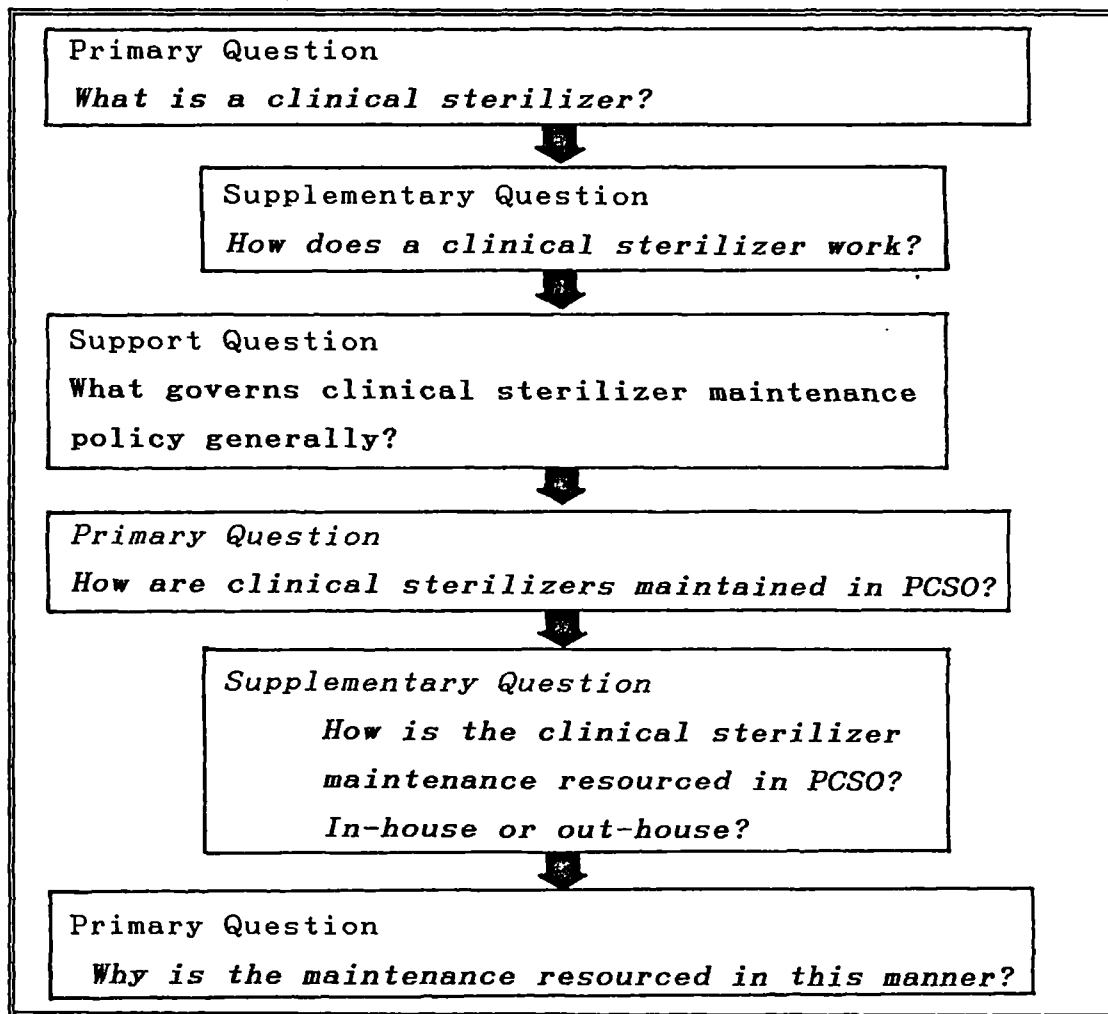


Fig. 10.2 : Line of Questioning

## STAGE II : THE SEARCH

This section records the sources from which, and by which, evidence/data was gathered, and describes the manner in which the study was undertaken; linking the field work with the 'protocol', refined by the PCS experience, and laid down in the Research Project Plan.

## 10.5 HOW THE STUDY WAS UNDERTAKEN

The system of data collection for this case study follows the model demonstrated in Figs. 9.3(a) and 3(b) in Section 5 of the PCS (Chapter Nine).

The *WHAT* question proved not so simple to answer. The machines in question at first appeared to be shrouded in mystique, not helped by the fact that they were located in sterile areas and therefore inaccessible.

The reason for the surface mystique became clearer after some questioning. The machines needed extremely careful and rigorous maintenance. To find out 'why' led to the country's centre of excellence for maintenance training for clinical sterilizers - the NHS Training Centre, a part of the Hospital Estate Management and Engineering Centre at Eastwood Park.

The *HOW* question was answered by interviewing the principal informant, and other key staff as scheduled below.

The answer to the *WHY* question was initially sought by interview with the Group F.Mgr. The fact that the answer was not clear-cut (which would have been the anticipated result at the outset; i.e. the expectation was that the maintenance would be either carried out in-house or it would be carried out by contract staff, but not a mixture), required input into the findings from various sources including: the Training Manager (Engineering & Estates) at Eastwood Park; Health Technical Memorandum 10; Health Technical Memorandum 2010; Estmancode; two clinical sterilizer maintenance contractors, a NHS Regional Sterilizer Engineer.

## 10.6 SOURCES OF DATA

### 10.6.1 Indepth Interviews

#### *Principal Informant*

The Director of Planning and Facilities (pre-January 1993 - The Group Facilities Manager) of PCSO was the principal informant. The total number of meetings held with DoPF are recorded at PCS (Section 9.6.1). Of these, two meetings dealt specifically with Case Study Two, and various matters relevant to Case Study Two were raised at other meetings, for example, for verification.

#### *Training Manager, Engineering and Estates (TMEE)*

At Eastwood Park, one indepth interview, which was tape-recorded, was conducted with the Training Manager (Engineering and Estates), Geoff Dillow, (subsequently referred to as TMEE). In addition to his responsibilities for training, he was a member of the working party responsible for drafting and updating the technical memorandum (HTM2010) controlling the maintenance of these appliances.

#### *Assistant Facilities Manager (Engineering), PCSO*

The AFME prior to regionalisation had been in charge of Clinical Sterilizers (CS's) on a national basis for PCSO. Subsequent to regionalisation, he became Facilities Manager in charge of the S.E. Region, having, amongst other things, specific responsibilities for CS's.

#### *Contractor: Autoclave Control Engineering Ltd. (ACE)*

In order to balance the data being collected, an interview was conducted with the Managing Director of a nationally based company specialising in sterilizer maintenance.

#### *Contractor: Goldcrest Engineering*

To seek convergence, an interview was held with the Managing Director of an outsourced buy-out of the engineering department of an Area Health Authority.



*Hospital Manager, PCSO (HM)*

The question of CS maintenance formed part of the separate interview held with the HM at PCSO's Location No. 2 (a provincial hospital site).

*The Regional Sterilizer Engineer, Oxford Regional Health Authority*

The RSE of ORHA was interviewed in order to obtain data which would be both independent of the private health care sector view and would balance any bias of data from the contractors.

#### 10.6.2 Data Collected by Observation

Because of the inaccessibility of these machines, being located in sterile areas, a visit was made to Eastwood Park's training workshop, where, together with TMEE, sixteen machines of various types were examined. The data collected there also included the views of lecturers and assessors, who were undertaking the testing of engineers in training.

#### 10.6.3 Documentary Evidence

The principal documents researched for Case Study Two were:

- \* *Health Technical Memorandum 2010, Management Policy, Sterilization* (part in draft form)
- \* *Health Technical Memorandum 10, Sterilizers*

Other references are noted in the text.

#### 10.6.4 Informal Discussions

In addition to the detailed and structured interviews, notes were made of informal discussions held with the informants listed above, including telephone calls and face-to-face conversations. Many of these discussions were to clarify specific points, or to seek additional information - for example, with TMEE, one further meeting was held and three subsequent 'phone calls made; plus, copies of specific technical documents were sought.

## STAGE III : EVIDENCE AND FINDINGS

### INTRODUCTION

In essence, as described above, this research was designed to be straightforward and revolved around the questions:-

- \* Is the maintenance of 'autoclaves' at PCSO carried out by in-house staff or by contract staff?
- \* Why?

The earliest findings indicated that this was to be a much more involved research problem. The initial answer to the first question was 'both', i.e. in three regions out of four the 'maintenance' of 'autoclaves' was carried out by directly-employed staff.

However, it was the difficulty experienced in gaining an understanding of what an autoclave's function was which led to a more detailed investigation of the unit of analysis, which in turn brought a realisation of the hidden complexities that were likely to affect the findings.

These findings, therefore, start with the results of the enquiry into what is an 'autoclave'.

Primary Question: *What is a clinical sterilizer?*

The data from Eastwood Park showed that, broadly, there are two categories of sterilizers, viz:-

- \* clinical sterilizers
- \* laboratory sterilizers

The term 'autoclaves' is widely used as a generic name for these machines. However, the new industry standard 'Health Technical Memorandum 2010' (HTM 2010) uses this term specifically as an alternative to the term 'laboratory sterilizer'. (Note: HTM 2010, at the time of writing-up

these findings, is still in draft form, but has been circulated to the industry and has been adopted as best practice)

#### FINDING

Clinical sterilizers are 'designed to process medical devices, medicinal products and other materials used in the clinical care of patients. (HTM2010).

The technical memorandum goes on to note that the operation of clinical sterilizers should be 'kept strictly separate' from laboratory sterilizers.

Clinical sterilizers are the machines responsible for sterilizing everything from gowns to scalpels, which demonstrates their fundamental importance to the business of running a hospital.

It became clear that because of the complexity of the sterilizing process, knowledge of how clinical sterilizers worked had to be researched in order to fully answer this *WHAT* question, and to understand the factors governing maintenance policy.

Laboratory sterilizers (autoclaves) are "designed to process goods and materials that are not to be used in the clinical care of patients" (Sec. 2.39 HTM2010, emphasis added); i.e. they are for the sterilization of apparatus and materials to be used in hospital laboratories only, and not for medicinal devices or products to be used directly on patients. By the strict definition, as above, autoclaves turned out *not* to be the Unit of Analysis.

To underscore the importance of ensuring the sterilizing process worked correctly, the TMEE and HTM2010 directed attention to the Sir Cecil Clothier Report (1972), which

investigated an incident at the Plymouth General Hospital in 1971 in which five patients died because dextrose solution, administered intravenously, became contaminated. The overall conclusion of the enquiry was that:-

"The fundamental cause of this disaster is to be found in human failings ... ranging from simple carelessness to poor management of men and plant. The Committee heard of no imminent technological advance in the field of production of intravenous fluids which will eliminate the need for skilful men devoted to their work ... Too many people believe that sterilization of fluids is easily achieved with simple plant operated by men of little skill under a minimum of supervision ... Public safety in this as in many other technological fields depends ultimately on untiring vigilance ...";

i.e. it was how the sterilizer was maintained (in this case ill-maintained) and the management of sterilizer use which was of prime importance. Put another way, maintenance is of paramount importance, and fail-safe procedures are required to ensure contamination does not occur.

The next part of this Findings section seeks to provide answers to the following supplementary questions:-

- \* How does a clinical sterilizer work?
- \* What controls the maintenance policy?
- \* How are clinical sterilizers maintained?

Supplementary Question:

*How does a clinical sterilizer work?*

PCSO's clinical sterilizers were all located in the central sterile areas of operating theatres. Access was therefore difficult. Further, the machines in-situ look not unlike large commercial washing machines; consequently simply observing them did not assist an understanding of the essential workings, and hence maintenance need.

This researcher discovered that the NHS Training Centre had a range of clinical sterilizers located in a training laboratory. At this establishment the workings of the machines were readily visible.

The relevance of gaining an insight into the workings of these machines was justified, because it reinforced an appreciation of the need for the most rigorous form of planned preventative maintenance.

The following is a brief summary of this aspect of the findings.

This researcher was shown four types of sterilizer, classified according to the method of sterilizing, viz:-

#### 1. High Temperature Steam (HTS Sterilizers)

This is by far the most common sterilant and works on the following basis:-

"High temperature steam inactivates pathogens by a combination of moisture and heat; water molecules combine with proteins and genetic material, which are then susceptible to thermal disruption". (HTM2010 Sec. 2.8)

Wet steam from the hospital's central supply is introduced into the pressure vessel at high temperature (normally 134°C). Different temperatures and holding times are used for different materials. The reason for the predominant use of high temperature steam is that the attainment of sterilization conditions can be ascertained by accurate measurement of temperature and time (i.e. no microbiological test is necessary).

There are non-permanently plumbed-in machines, which rely on steam generated from internal reservoirs, but according to TMEE these represent a very small fraction of the total number of CS's in the U.K.

The machines have to perform various tasks. For porous loads, (i.e. not only towels, dressings, gowns and the like, but also all medical and surgical equipment wrapped in fabric or paper. Note: the reason to sterilize instruments in wrapping is that on removal from the clinical sterilizer the instruments are not directly exposed to the air, and thereby remain sterile), an air removal system is essential, i.e. to suck air from the pressure chamber (and hence from the voids in the porous material/wrapping). HTM2010 states that "The correct functioning of the air detector is crucial to the performance of the sterilizer", (Sec. 2.13). HTM10 states that a fault "would indicate falsely that all air had been removed from the chamber" (Sec. 10.27)

Clinical sterilizers for fluids in sealed containers have to incorporate safety devices preventing the opening of the pressure vessel door until the temperature (and hence pressure) in the containers has dropped to a safe level. For example, at 121°C glass containers can build up an internal pressure of 4 bar which, if exposed to ambient air contact, would cause an explosion. TMEE noted that serious injuries had resulted in this manner where thermal door locks have failed. One such tragedy occurred at another private hospital during the course of this study.

(PCSO have 'laboratory' sterilizers located in laboratories which are run in joint venture partnership companies. For the sake of completeness, these machines operate on HTS principles, but the maintenance is the responsibility of those separate companies, hence their exclusion from this study).

## 2. Hot Air (Dry Heat Sterilizers)

Dry heat sterilizers are used for materials which would be damaged by exposure to wet steam, for example, ophthalmic instruments and powders.

To ensure efficacy, the chamber has to be pressurised, to repel external contaminants, and a fan has to be incorporated to circulate the heat around the contents. Very careful monitoring of both functions is necessary over the normally long holding time of eight hours (compared with High Temperature Steam 30 minutes). Even with careful maintenance and use, clinical sterilizers relying on dry heat are not efficient, primarily because of circulation problems and the time-lag of transferring heat from the air to the material.

### 3. Low Temperature Steam and Formaldehyde LTS&F Sterilizer)

This process is used for heat sensitive goods and combines wet steam at 71-80°C and formaldehyde gas. Normally the machines have to operate at sub-atmospheric pressures in order to first disinfect the load by exposure to steam. The toxic gas is then introduced to sterilize chemically.

Being a toxic gas, great maintenance care is required to ensure the steam and gas, together with waste products, are properly contained.

### 4. Ethylene Oxide (E.O. Sterilizer)

'E.O.' sterilizers are utilised for products which cannot stand either the 71°C min. temperature or wet steam of the LTS&F system.

Because it is a flammable and explosive gas, which is also toxic, the operating requirements and resultant maintenance systems are rigorous.

Having gained an insight into what constituted clinical sterilizers and their operating principles, the critical importance of adopting an efficient maintenance policy was evident and can be summarised as:

**FINDING**

1. The absolute need exists to perform the sterilization process perfectly, at each and every occasion.
2. The potential for problems exists when dealing with mediums including:
  - \* High temperatures
  - \* Steam
  - \* Toxic gases
  - \* A mixture of positive and negative atmospheric pressures.

This led to the next problem tackled:-

Supplementary Question:

*What controls the maintenance policy?*

The data collected can be examined from the point of view of external influences and internal influences. The primary external influences are statutory controls, regulations and standards.

***Statutory Controls***

This subsection will look first at the statutory controls disclosed by this study which might impact on the maintenance policy for clinical sterilizers, and hence the decision whether to contract-out or not.

At the time of the Clothier Report there were few specific statutory controls over the practice of sterilization. HTM10 from 1980 contained few references, whilst HTM2010



looks mainly to the future to identify statutes that will refer specifically to sterilization, viz:-

1. E.C. Directive: The Active Implantable Medical Devices Directive, implemented in U.K. from 6th January 1993 as the Active Implantable Devices Regulations, 1992.
2. E.C. Draft Directive: The Medical Devices Directive, expected to be adopted in 1995.
3. E.C. Draft Directive: The In-Vitro Diagnostic Medical Devices Directive (expected in 1996).

By virtue of the 1992 Regulations (as above), medical devices (any instrument, apparatus, appliance, material or article) must be sterilized "by an appropriate, validated method" (para. 8.4 Annex 1). To gain validation, the sterilization process must conform to the European Standard. Although these were still being drafted, for certain maintenance tasks, skill accreditation had to be achieved. At the time of the study Eastwood Park was the only U.K. accredited centre for training and testing.

This need for advanced training and testing methods, which places stringent standards on both the test centre, together with its staff and equipment, and the engineers seeking certification, imposes not only a quality control measure in the system, but also a bottle-neck in the supply of suitably qualified personnel - Eastwood Park's output of accredited engineers approximates at 150 per annum.

### **Regulations**

In addition to specific statutory reference to the sterilization process, the following regulations impact on the use and maintenance of clinical sterilizers. The burden for ensuring compliance can be predicted to be a driver in the decision-making process being researched.

1. The Health and Safety at Work Act, 1974  
and  
The Management of Health and Safety at Work  
Regulations, 1992

The combination of the Act and the '92 Regulations (enabling an E.C. Directive), places an onerous responsibility on employers to safeguard, as far as practical, the health, safety and welfare of employees.

For the purposes of the Act and Regulations, the Eastwood Park Training Centre and HTM2010 noted the following hazards connected with the process of clinical sterilization:-

- a. The hazard of scalding from escaping steam
- b. The high temperature (up to 200°C) at which sterilizers are operated
- c. The stored energy hazards associated with the operation of pressure vessels contained within all steam and some EO sterilizers
- d. The stored energy hazards associated with the pressured containers in which the EO gas is transported
- e. The explosive hazards associated with the sterilization of fluids in sealed glass bottles
- f. The toxic properties of formaldehyde gas used in LTS&F sterilizers
- g. The toxic and explosive properties of ethylene oxide gas used in EO sterilizers
- h. The infection hazard associated with the micro-biological pathogens that may be handled by personnel using certain laboratory sterilizers
- i. The hazard of infection to patients and staff by the inadvertent release of an unsterile load due to the failure of a sterilization and quality control process
- j. The hazards associated with the handling of heavy and hot loads while loading and unloading sterilizers

The Regulation specifically requires employers to adopt a systematic assessment of the impact of such hazards on employees.

2. Workplace (Health and Safety and Welfare) Regulations, 1992

This Regulation concentrates on the physical requirements of a safe workplace. TMEE considers this places a responsibility to scrutinise maintenance procedures for clinical sterilizers.

3. Provision and Use of Work Equipment Regulations, 1992

A more focused regulation as far as equipment and, hence, clinical sterilizers are concerned. The general thrust being that equipment should not give rise to health and safety risks.

Other pertinent Regulations include:

4. Control of Substances Hazardous to Health Regulation, 1988

e.g. Formaldehyde and Ethylene Oxide.

5. Reporting of Injuries, Diseases and Dangerous Occurrences Regulations, 1985

e.g. from accidents with pressure vessels or poisoning by ethylene oxide.

6. Manual Handling Operations Regulations, 1992

HTM2010 requires "Risks associated with maintenance and overhauling should be assessed".

7. Medicines (Standard Provision for Licences and Certificates) Amendment Regulations, 1992

Requires the maintenance of clinical sterilizers.

8. Consumer Protection Act, 1987

Makes it a *criminal* offence to supply unsafe goods.

9. Electromagnetic Compatibility Regulations, 1992

It is an offence for apparatus (including clinical sterilizers) to emit electromagnetic disturbance.

10. Active Implantable Medical Devices Regulations, 1992

Requires stringent precautions to ensure sterilization.

In addition to Statutes and Regulations, there are relevant Standards to consider. In the main, the British Standard (BS3970: Part 1: 1990) specifies general requirements for the manufacture of clinical sterilizers. From a maintenance aspect, the responsibility is to ensure that replacement parts comply, and that workmanship does not infringe the original Standard.

The European Standards, as enshrined by CEN and CENELEC go further than British Standards, by specifying requirements for maintenance and operation.

GENERALLY

FINDING

Combined, the specific Statutes, the Regulations and the general enabling Acts, and the British and European Standards impose an *onerous* burden on both employers and employees to ensure the safe and proper working of such potentially hazardous equipment as clinical sterilizers and such processes as sterilization.

These are the principal *external* drivers of maintenance policy direction.

The *internal* driving factors, relating specifically to Case Study Two, are described as 'Findings' below.

Having established the need for stringent maintenance, the next question to consider was: *How* were clinical sterilizers maintained in PCSO?

Primary Question:

*How are clinical sterilizers maintained in PCSO?*

In order to seek compliance with the mass of requirements detailed in the foregoing, HTM10 and HTM2010 provide voluminous detail of how to maintain sterilizers and what tests are required. And in addition, there are, of course, the individual manufacturers' own requirements.

The data showed that maintenance patterns and cycles could be divided into two associated aspects, viz:-

- \* Testing
- \* Maintenance

(i) Testing

Testing is carried out both at regular intervals and at various levels. Some of the tests, at the most detailed level, *require* particular specialism, whilst other tests were routinely carried out by users (i.e. medical staff).

This researcher started by questioning the importance of testing, anticipating it was part of a rigorous quality control. The interviews, supported by Part 4 of HTM2010 (amended 20.12.92), made it clear why testing was an integral part of *both* the maintenance and the operating of clinical sterilizers, i.e. tests were an essential part of the sterilizing process.

The previous sub-section's findings made clear the need for extreme vigilance. It became evident that quality control had to both precede the sterilizing event and continue during the process. HTM2010 emphasised that sterilization *cannot* be verified *retrospectively* by inspection or testing of the product (2.1 Part 4) - post-sterilizing testing

would itself cause contamination and defeat the object of the exercise.

The Regional Sterilizer Engineer interviewed used an analogy between lifts and clinical sterilizers. Lifts are designed to failsafe and subsequent malfunction becomes a gross inconvenience; sterilizers fail *unsafe* with life-threatening consequences. The importance of maintenance and testing" is to solve problems before they occur".

The preceding tests comprise validation of equipment. The monitoring tests are taken routinely during the process.

Section 2.3 of Part 4 HTM2010 sets down the three principles, viz:-

- a. All clinical sterilizers are subject to a carefully planned programme of tests to monitor their performance.
- b. All clinical sterilizers are subject to a programme of planned maintenance (PM) under the control of the Engineering Manager (or an organization contracted by the Executive Manager) irrespective of whether or not a planned preventative maintenance scheme is being operated on the premises generally.
- c. Expertise on all aspects of the testing of clinical sterilizers should be available at two levels; these are operated by the 'Authorized Person' and the 'Test Person'.

Testing is thereby carried out at 'user' level and at 'specialist' level. The users, in this particular sense, equate to core-competencies, i.e. those fulfilling core product tasks, in this case clinical staff. As such, clinical staff will not be subject to the in-house -v- out-house FM resource decision-making process.

It was therefore important to investigate the levels of testing required by specialists (in parallel with the levels of maintenance required); i.e.

Support Question:

*What personnel are required to fulfil which tasks?*

First it was necessary to identify the personnel involved. The following groups were identified following the indepth interviews and observations:-

1. *Authorised Persons*

A term used in HTM2010 to describe a specialist appointed to provide impartial auditing or validation, re-validation and yearly tests; to review and witness validation documentation; and to advise generally on sterilizers/sterilization, e.g. programmes of tests and maintenance and operational procedures.

2. *Sterilizer Engineer* (known in HTM2010 as a Test Person)

Again, a specialist in relevant engineering and microbiological sciences who carries out validation (and re-validation) tests and periodic tests.

3. *Maintenance Engineers* (known in HTM2010 as Maintenance Persons)

A specialist fitter/electrician with a City and Guilds 2295 qualification, who carries out maintenance tasks and may also qualify to do *some* of the Test Person's tasks for daily and weekly tests.

4. *'Users'*

Note: Clinical staff can be categorised under this one heading, employing the term 'user' as per the *specific* meaning attributed to it in HTM2010 and *not* as per the meaning used throughout this thesis, namely, a person responsible for the management of the clinical sterilizer. For example, the Sterile Services Department Manager or Theatre Sister, or other clinical staff including:-

- \* Operators : self-explanatory
- \* Qualified person : quality controller for medicinal products .
- \* Microbiologist : monitoring infection control

By identifying the personnel involved, an indication of the levels of tests became apparent. Further questioning of the TMEE led to the following schedule, which was then independently verified by DoPF:-

#### Three Levels of Tests:

- \* Installation checks
- \* Validation/re-validation tests
- \* Periodic tests

The *installation checks* were carried out by the manufacturer/supplying contractor to the satisfaction of the Authorised Person. The tests included:-

- \* Vacuum leak test
- \* Verification of calibration of sterilizer instruments
- \* Automatic control tests

Generally these checks and tests satisfy that the correctly specified equipment had been installed in a correct and proper working manner.

The *Validation Tests* followed the installation procedure, but were carried out by the Sterilizer Engineer (SE). The following schedule is a typical list of commissioning tests the SE would undertake:-

1. Steam non-condensable gas test
2. Steam superheat test
3. Steam dryness test
4. Vacuum leak test
5. Vacuum leak test (temperature and pressure sensors connected)
6. Automatic control test
7. + Verification of calibration of sterilizer instruments



8. Chamber wall temperature test
9. Air detector performance test for a small load
10. Air detector performance test for a full load

(Source: TMEE)

HTM2010 defines validation as:-

"a documented procedure for obtaining, recording, and interpreting the results needed to show that a process will consistently yield a product complying with pre-determined specifications".

(2.14 Part 4)

Revalidation is required following a major overhaul or similar.

*Periodic Tests* were carried out daily, weekly, quarterly, six monthly and yearly. The user carried out the daily tests - primarily a steam penetration test, and the SE conducted the others (remembering that the Maintenance Person can be an acting Test Person (or SE) for the purposes of weekly tests).

From these findings, it is apparent that it was the regular testing which was of import for this research, i.e. the *Periodic Tests*.

To assess the impact of these tests on staffing requirements, some understanding of the length of each testing task was required. But this also needs to be tied in with the second aspect of relevant cycles, i.e. maintenance cycles.

#### (ii) Maintenance

The industry standard for maintenance of clinical sterilizers is set by the NHS. As with other standards, the private health sector have to meet those standards as a minimum in order to rebut potentially terminal claims for negligence.

The NHS policy was set by the Report of the Joint Committee of the Central and Scottish Health Service Councils and Central Sterile Supply Departments, 1967.

Para. 12 emphasised the vital importance of maintenance, and this was reinforced by later amendment, HM(67)13(4) para. 6, which referred specifically to "the need for proper *planned* maintenance".

The current standards are laid down in 'Health Technical Memorandum 10 - Sterilizers' (the relevant section of the superseding HTM2010 is still in early draft form (as at November 1993) ) and Estmancode.

HTM10 requires that (in addition to tests):-

"all sterilizers are subjected to a programme of planned preventative maintenance (PPM) ..."  
(para. 10.5b)

The maintenance requirement can be broadly divided into 'User' tasks and 'Specialist' tasks, with the caveat that:-

"it is most important that staff at all levels whose duties include responsibilities for the maintenance of sterilizers have sound general knowledge of the principles, designs and functions of sterilizers ... must be thoroughly instructed and familiar with these types and models of machines with which they are directly concerned (and) ... should have ... knowledge of ... microbiology (para. 10.15 HTM10).

User maintenance tasks, i.e. those carried out by clinical staff, can be discounted for the purposes of these findings (because, as with User tests, they are part and parcel of the core business production process).

The PPM maintenance regime followed by PCSO, as observed, is described in Fig. 10.3, noting that the tests are carried out as part and parcel of the PPM. The figure proposes three levels of maintenance and testing, determined by the level of skill competence required; viz:-

- \* Level One equates to User tasks.

The specialist tasks are divided into:-

- \* Level Two: Those tasks requiring Maintenance Engineers (Maintenance Persons);
- \* Level Three: Those tasks requiring Sterilizer Engineers (Test Persons).

## FINDINGS

From the data collected the findings can be summarised as follows:-

### FINDING

There is an *extraordinary* requirement to ensure the proper working of clinical sterilizers, because:-

- (a) of the absolute need for certain materials to be completely sterile;
- (b) retrospective quality control testing cannot be adopted - failures only come to light as a result of ensuing infection.

### FINDING

'Maintenance' of clinical sterilizers in PCSO is a generic term meaning 'testing and maintenance'.

| Frequency of Task# | Type of Task          | Direct Responsibility          | Indirect Responsibility          | Length of PPM Task (excl. breakdowns)       | Level |
|--------------------|-----------------------|--------------------------------|----------------------------------|---------------------------------------------|-------|
| Daily              | Routine<br>See Note 1 | User<br>Maintenance Engineer   | Maintenance Engineer<br>problems | Varies, required frequently but irregularly | 1     |
| Weekly             | Routine<br>See Note 2 | Maintenance Engineer (Part SE) | Sterilizer Engineer<br>problems  | 2-4 hours per machine                       | 2     |
| 3rd Month          | Cyclical              | Sterilizer Engineer            | Manufacturer<br>problems         | 3 days per pair                             | 3     |
| 6th Month          | Cyclical              | Sterilizer Engineer            | Manufacturer<br>problems         | 3 days per pair                             | 3     |
| 9th Month          | Cyclical              | Sterilizer Engineer            | Manufacturer<br>problems         | 3 days per pair                             | 3     |
| Annually           | Cyclical              | Sterilizer Engineer            | Manufacturer<br>problems         | 4 days per pair                             | 3     |

Fig. 10.3: Clinical Sterilizer Maintenance and Testing Regime

\* including Testing and Maintenance

Note 1: Routine daily maintenance included: daily chamber cleaning, daily or 'per use' cleaning of discharge line grating filters, daily door seal cleaning and inspection, etc. (HTM10 para. 10.9(a)(b)(c)(d)(e)).

Note 2: Routine weekly PPM tasks included: oils checks, door seal checks, in accordance with PM(73) Health & Safety checks for door mechanisms of pressure vessels, general operating maintenance of all controls, calibration of gauges, pressure checks, etc. (Source: Hospital Engineering Centre Staff)

**FINDING**

'Maintenance' is carried out at three levels by the following staff:-

Level 1 : By users and maintenance engineers

Level 2 : By maintenance engineers (ME's) and by SE's

Level 3 : By sterilizer engineers (SE's) only

**FINDING**

When PCSO refer to 'autoclave maintenance', they are specifically meaning the planned preventative maintenance of clinical sterilizers; and *tend* to mean maintenance carried out at Level 3 by sterilizer engineers.

This is seen as a *distinct* role; whereas maintenance at Level 2 is seen as a *part* role of a maintenance engineer.

**FINDING**

Level 1 PPM is a core business process which places it outside the parameters of this research (although, as discussed in Chapter Three, Section 3.3.5, core business processes do not *necessarily* have to be carried out by directly-employed core staff).

**FINDING**

Level 2 PPM is carried out *throughout* PCSO by directly-employed staff.

The maintenance engineers (ME's) in PCSO were multi-skilled. Approximately 20% of their time related to clinical sterilizers. They were also trained for PME

testing; Corgi; Coshh; medical gases systems; plus the building services systems; i.e. part clinical support, part Estates Services (see Chapter 12).

**FINDING**

Level 3 PPM is carried out by directly-employed sterilizer engineers in 3 of the 4 regions

Put another way, CS's in 24 of the 32 hospitals were *wholly* maintained by PCSO staff.

**FINDING SUMMARY**

All the maintenance engineers were resourced in-house. The sterilizer engineers were resourced in-house in three regions and out-house in one region.

**FINDING**

Other health care operators variously contract-out Level 3 maintenance, or resource it in-house (Sources: ACE; TMEE; AFM(E) ).

**STAGE IV : ANALYSIS****10.7 THE REASONS FOR THE SOLUTIONS ADOPTED**

The findings demonstrate, within one organisation, advantages *and* disadvantages for both the alternatives of resourcing, i.e. in-house and contracting-out.

The findings emphasise the extreme responsibilities involved in the maintenance process required for clinical sterilizers, but these do not necessarily preclude contracting-out the tasks.

The following merits of resourcing CS maintenance in-house and advantages of contracting-out the responsibility were identified by staff as pertinent to PCSO.

#### Summary of Advantages of Resourcing Clinical Sterilizer Maintenance In-house

##### 1. *Flexibility (1)*

It was essential for staff involved in the CS maintenance process to be flexible to work around the operating theatre schedule for each hospital. The operating theatre was at the heart of PCSO's core business and disruption to the schedule was not acceptable.

It was consequently necessary for the sterilizer engineers to work unsociable hours on a regular basis, to complete PPM tasks. A typical involvement would be to travel from base to the hospital concerned, start work at 1900 hours (i.e. after theatre hours), finish at 0200 hours, stay over and repeat the process twice more. Alternatively, weekends, bank holidays, etc. were utilised. (Note: the maintenance, although typically taking 3 days per pair of clinical sterilizers, could be carried out in a phased way, with the sterilizer returned to operational use in between).

##### 2. *Flexibility (2)*

Secondly, there was greater flexibility with in-house staff to attend to the intermittent tasks of witnessing factory bench tests, installation tests and commissioning.

### 3. *Flexibility (3)*

Level 2 maintenance predominantly required the input of a maintenance engineer, qualified to City and Guilds 2295. By employing these engineers in-house, they were enabled to acquire a bespoke range of skills. This multi-skill flexibility provided the following attributes for Level 2 clinical sterilizer maintenance:-

- \* full-time working at appropriate skill level;
- \* understanding of the needs of the core business;
- \* minimum delay response-time to provide 'first aid' maintenance to clinical sterilizers;
- \* knowledge of the machines involved.

### 4. *Control*

In order to exercise full control over the maintenance scheduling, staff were better controlled if directly-employed. (Source: DoPF)

### 5. *Familiarity*

Because of the range of conditions clinical sterilizers operated over, and the ever increasing need for sophisticated LED monitoring and recording, the machines were found to be not only complex but sensitive (perhaps a euphemism for unreliable). A knowledge of the history of individual machines was considered advantageous, for example:

Source: DoPF - "very, very sensitive beasts"

: TMEE - "unlike other medical equipment, these machines are very sensitive"

: RSE - "sterilizers have personalities - four 'identical' machines in a row will consistently behave differently".

### 6. *Speed of Response*

Analysis of the data would question the importance of speed of response at Level 3. Each location had the following 'safety nets' covering failure of a CS:

- \* The before and during-operation tests safeguard malfunction.



- \* Each machine undergoes careful PPM. The unreliability of the machines is recognised as being - partly due to the permitted range of malfunctions being so small; - partly because of inherent sensitivity.
- \* Each location has resident ME's to provide a first aid maintenance/repair service.
- \* Each location has two machines.

A failure, requiring the input of an SE in one of the three regions where CS maintenance was resourced internally, would have a response lag equivalent to travel time, which could be the several hours needed to travel from, say, Hereford to Plymouth.

PCSO therefore display a preference for in-house, partly based on the difference between a supplier's contractual maximum response time of 24 hours, and the in-house SE's possible response time of potentially several hours.

#### Summary Advantages of Contracting-out

Contracting-out, even of these sensitive and highly onerous tasks, was successfully achieved, for example:

- \* By PCSO in their own South East Region.
- \* By smaller hospital groups/one-off hospitals, dental and doctors' practices, where the demand for maintenance of a smaller number of clinical sterilizers than PCSO was an important factor.
- \* Some NHS hospitals, e.g. those in the Wessex Area Health Authority.

The following were the advantages of contracting-out for PCSO, derived from analysis of the data.

(i) *Cost*

Contracting-out had proven to be cheaper in PCSO's South East Region because:-

- (a) Highly trained Sterilizer Engineers were only employed for the hours required to do the tasks they were trained for. An apparent argument in favour of contracting-out Level 3 is that, for an organisation the size of each PCSO *Region*, the specific workload for a Test Person (SE) only equates to 110 days per annum. The analysis is as follows: 16 clinical sterilizers per region, each of the 8 pairs requiring 13 days' work per year, i.e. 104 days. In an average year there would also be an average replacement of 1 - 2 machines per year per region (national replacements totalled 8 in 1992 and 4 in 1991). Replacements thus required 1 - 2 new commissions per year - an average of 6 days' work per year for the SE's per region. Total: approx. 110 days per year per SE.

Assuming a typical working year of 220 days, allowing for national holidays, weekends, annual leave, illness allowance, and making allowance for time in lieu of working unsociable hours, there is still a considerable proportion of the working year when the Sterilizer Engineers must be tasked to do work other than those relating to their specialist rates, in order to remain productive, (i.e. highly specialist workers undertake relatively menial tasks as fill-in work). This has a cost impact.

- (b) Specialist equipment: Increasingly the necessary testing equipment is becoming more sophisticated and expensive. The latest requirement for pressure test equipment requires an instrument costing £5.5K. (Source: ACE) The need to triplicate on a regional basis (3 regions resource in-house) is a significant cost for a relatively small number of machines (16 per region).

(c) Spares and stock: have to be held on a regional basis. The triplication has a cost impact.

(d) As a charity, PCSO does not have to pay VAT on labour or parts supplied by a contractor.

(ii) *Efficiency (1)*

Because of the wide geographical spread of regions, (S.W. Region, for example, extends from Hereford to Plymouth to Bournemouth), travel time is considerable. National or regional contractors, with more clients, task their SE's to work smaller geographical areas, based on acceptable travel-to-work distances.

(iii) *Efficiency (2)*

Where PCSO's in-house regional sterilizer engineers require cover due to sickness, etc., travel times from other regions can be considered wasted hours; (Note: vans = mobile workshops and have to be taken to all jobs, e.g. emergency cover of Scotland and North England from Midlands or S.W. region (or vice versa) involves disproportionately high travel times compared to on-job working hours). Contractors would take this problem over.

(iv) *Staff Replacement/Shortage*

It had proved difficult (impossible in the South East Region) for PCSO to recruit Sterilizer Engineers. Factors influencing this problem include a general shortage of relevant skills; the greater attraction of working for either a single larger hospital (rather than a dispersed group) or for a specialist contractor; both of which would inherently have a workload in a smaller commutable area, plus full-time skilled working. SE's tended to be attracted to specialist contractors, rather than organisations such as PCSO, where they would only deploy their skills part of the time.

Source: ACE - "there are very, very few good sterilizer engineers"

DoPF & AFM(E) - "have been unable to recruit a suitably qualified engineer to S.E. Region".

TMEE - "New regulations require validation which only one training centre is currently able to comply with". Output is likely to be no more than 150 engineers p.a.

(v) *Expertise*

A high level of expertise is required for SE's. Specialist contractors have this as their core business. This enables them to keep up-to-date with increasing standards, particularly those being generated by the E.C., which continually call for greater specialism in skills and equipment.

(vi) *Devolved Responsibility*

By the contract to supply an SE in the South East region, PCSO shifted some of the risk from the User to the contractor, to comply with the multifarious standards. However, on further analysis of the evidence, it was clear that, at a corporate level, PCSO did not perceive this to be an advantage - in fact they would prefer to remain in full control of the risk.

The findings include the fact that the 'maintenance' of CS's comprise three distinct levels of task; two of which are relevant to FM, viz Level 2 - carried out by maintenance engineers and SE's, and Level 3 - carried out only by SE's.

The 'protocol' for this case study, amended by a feedback loop from Case Study Five, recognised the categories of *primary* and *spin-off* for both the advantages and the disadvantages of contracting-out. *Primary* equate to action 'drivers' and have more influence on the action taken than spin-offs and override contrary spin-offs.

The reasons PCSO preferred to resource CS maintenance in-house can be summarised by the following 'overriding' reasons:

1. Operating theatre schedules were at the very centre of PCSO's core business. There was a corporate policy that disruption of the Operating Theatre Schedule, (for example, either by failure of a CS or for the need to carry out maintenance work), must be avoided, within reasonable cost restraints. PCSO considered they controlled this situation better with directly-employed staff.
2. Clinical sterilizers were "very, very sensitive beasts" (DoPF). There was a perceived need for maintenance staff to gain a knowledge of the individual quirks of the various machines.

Level 2 maintenance was resourced in-house throughout PCSO. The drivers for this decision, based on the data collected and resultant findings, are analysed as follows:

1. Hospitals have a high engineering content and *require* resident maintenance engineers. In small hospitals (as per PCSO's individual locations) a range of engineering tasks had to be incorporated in the average workload of 1.5 - 2.0 ME's per location (working shifts). The range of skills required included those necessary to undertake some Level 1 maintenance and some Level 2 maintenance (including 'First Aid') of clinical sterilizers.

The length of time, per day and per week, cumulatively amounted to approximately 20% of an ME's time - which, *prima facie*, appears attractive to contracting-out. However, the ME's required input was not closely programmable, being determined by operating theatre schedules.

**FINDING**

The ME's Level 1 and 2 maintenance input was required on a frequent but irregular (or intermittent) basis; making it difficult to contract-out successfully.

The remainder of the unassociated tasks of a 'resident' maintenance engineer required similar levels of skill to those required for CS maintenance (Levels 1 and 2), enabling PCSO to incorporate these tasks/responsibilities into one job description. This leads on to the second and inter-related driver.

2. The second driver is that the market-place does not supply the commodity required by PCSO to meet its ME needs, (i.e. a bespoke-mix, multi-skilled maintenance engineer).

This specific mix of skills was not available from an external supply source in the body of one single engineer, i.e. it was a bespoke package. The 'resident' maintenance engineer therefore was resourced from an in-house supply.

**FINDING**

PCSO's ME's possessed a discrete or bespoke range of skills, which was not replicated in the supplier marketplace.

A third driving factor was one of size, linked with geographic dispersion of the organisation, i.e. factors which govern the quantum of the task. PCSO locations were too widespread to permit job-sharing (at Level 2) between locations. Smaller health care organisations would not have the requirement for a resident engineer; (PCSO's hospitals average 36 beds; Location 2 happened to be the

smallest with 23 beds - hospitals smaller than this would not be viable. Therefore, 'smaller' health organisations constitute clinics, G.P. practices, dentists, etc., etc.). Larger organisations would employ either directly, or by contract, specialist engineers for more specific groups of tasks, e.g. mechanical and electrical services maintenance, rather than PCSO's bespoke packaging into one maintenance engineer.

#### FINDING

The overall analysis for Level 2 CS maintenance in PCSO would be that the *advantages* of resourcing *in-house* outweighed the advantages of contracting-out.

The analysis process was aided by the realisation, drawn from the findings, that to categorise a factor as a disadvantage of contracting-out, did not necessarily mean it was synonymous with an advantage of *in-house* resourcing, or vice versa.

To consider this further, a hypothetical example is used viz: if the potentially slow response-time of a contractor is deemed to be a disadvantage of contracting-out, it does *not* mean an in-house response-time is *necessarily* better, and therefore an advantage of *in-house* resourcing.

This argument underscores the need to consider not only the pros. and cons. of contracting-out, but also the inter-linked pros. and cons. of in-house resourcing. This leads to the proposal of applying a matrix of views, when starting to analyse factors, as a way of filtering the evidence, viz:-

|                        |                                     |                                  |
|------------------------|-------------------------------------|----------------------------------|
| <i>Primary Level</i>   | Disadvantages<br>of contracting-out | Advantages<br>of contracting-out |
| -----                  |                                     |                                  |
| <i>Secondary Level</i> | Advantages<br>of in-house           | Disadvantages<br>of in-house     |

i.e. the study recognised that analytical focus may be assisted by using the additional terminology of advantages and disadvantages of *in-house* resourcing of FM services. This grouping is referred to in the matrix as 'Secondary Level', for the purposes of this project *only*. This is solely to differentiate it from the primary focus of this research, i.e. contracting-out.

In the following, *seeking advantages and disadvantages of in-house* resourcing is used as a method of focusing:-

#### FINDING

One conclusion to be drawn from the findings and analysis is that PCSO had a marked *preference* to resource clinical sterilizer maintenance in-house. This may be more clearly expressed as: the advantages of *in-house* resourcing *outweighed* the advantages of *contracting-out*, rather than the disadvantages of contracting-out outweighed the advantages of contracting-out.

Level 3 CS maintenance provides an especially interesting finding; i.e. a case of action 'drivers' pulling in both directions, with the result that three regions resource it in-house, whilst one region resources Level 3 maintenance externally. The drivers for these decisions are analysed as follows:



1. An SE is not required on a location basis. An appropriate work strength could be calculated at two, possibly three, SE's nationally, on the basis that the *national* requirement equates to approximately 440 relevant skill days working p.a. What argues against this manning level is the geographic dispersion involved, with its consequential requirement for travel and overnight stays, and away-from-home working.

PCSO has therefore decided on one, non-fully committed, SE per region where, to achieve the 110 days' work, a high proportion of unsociable hours have to be worked in order to comply with the Operating Schedules. DoPF considered this justified the over-manning levels.

2. *Unlike* Level 2 maintenance, there is a competent external supply market for this skill available, as demonstrated by the South East Region.

3. Further, the data shows that to contract-out is a more cost-effective solution.

4. The factors which override points 2 and 3, and the potential disadvantages associated with over-employment, have to do with the control of, and level of, service required. As opposed to a single large DGH, PCSO had a high operating theatres:beds ratio, which made it a complex task to schedule the PPM of clinical sterilizers. PCSO considered it highly preferable to have full control over this situation, and hence the resultant need for flexibility from the sterilizer engineers. This control was, in their assessment, best achieved by direct-employment.

5. Because of PCSO's geographic dispersion, there were no back-ups for the two CS's to each operating theatre; i.e. materials requiring sterilisation could not, in the event of a breakdown, be sent to another location. According to comparative data collected, larger single hospitals, with

albeit few operating theatres, would have a greater critical mass of clinical sterilizers located in a Central Sterile Support Department.

At an average capital cost of £35,000 per machine (Source: TMEE), plus factors such as cost of installing, limited space availability in sterile areas and associated space costs, etc.; together with the fact that (except for small machines designed to cope with minimal loads for specific purposes), clinical sterilizers used by PCSO were not portable, it was not practical for PCSO to accommodate standby machines. For PCSO such a back-up would equate to a capital commitment, for the machines alone, substantially in excess of £1 million.

#### FINDING

Consequently, the driving reason for *not* contracting-out Level 3 maintenance was:-

- \* To achieve the desired degree of control of staff involved in the maintaining of equipment, which was both central to the core business of the organisation and which required the most meticulous of maintenance standards, required the staff to be directly employed.

The reason Level 3 maintenance was contracted-out in the South East Region was *not* cost-efficiency - to PCSO this was a spin-off advantage of contracting-out. DoPF's evidence was clear. If an SE could be recruited to the staff, PCSO would do so - overriding the AFME's view that contracting-out was more efficient.

# FINDING

The driving reason for contracting-out Level 3 maintenance in the South East Region was the inability to recruit a suitably qualified SE because of the shortcomings of PCSO as a potential employer; (e.g. insufficient work at the relevant skill level; travel to work distances, etc.).

## Summary of Driving Factors

The analysis of the findings identified the following two driving factors, which determined that PCSO would not contract-out CS maintenance:-

1. The size and geographic dispersion of PCSO's business.
2. PCSO chose to pay a premium to resource clinical sterilizer maintenance in-house because of the added *flexibility* derived; permitting *control* over the process to ensure the primary production-line (the operating theatre) was not disrupted and was given the best support possible to maintain equipment which failed unsafe.

A third driving factor provided opposing influences for Level 2 maintenance and Level 3 maintenance:

3. Availability of qualified staff influenced the extent of contracting-out. Although there was difference of opinion within PCSO, it was clear that if suitable staff could be recruited at Level 3, this process would be undertaken exclusively in-house, as well as Level 2 maintenance. I.e. for Level 3 a lack of internal supply existed, whilst for Level 2 a lack of external supply existed, namely, the alternatives of the *bespoke* mix of engineering skills required for the PCSO's full-time post of ME; or alternatively, external supplier's inability to resource the part-time daily - but intermittent - responsibilities of a clinical maintenance technician.

## 10.8 TEST AGAINST THE HYPOTHESIS

Hypothesis: 'The potential advantages to a User organisation of contracting-out discrete aspects or bundles of FM Services are likely to outweigh the potential disadvantages.'

What was being studied in this 'case' was whether the maintenance of clinical sterilizers was resourced in-house or externally. The findings show that all Level 2 maintenance and 75% of Level 3 maintenance were resourced in-house.

For this Unit of Analysis, the findings do *not* support the hypothesis. Advantages of contracting-out were identified but, except in the case of Level 3 maintenance in the South East Region, these were overridden by disadvantages and other influences. Further, in the one case where contracting-out did occur, the driving factor was a disadvantage of in-house resourcing rather than an advantage of contracting-out, i.e. contracting-out became 'Hobson's' choice.

## 10.9 TEST AGAINST THE RESEARCH REVIEW

Comparison with Potential Advantages and Disadvantages  
Tables 10.1(a) and 10.1(b) schedule, respectively, the advantages and disadvantages of contracting-out, identified by the evidence collected for this case study; and compare these findings with the findings of the Research Review, by means of cross-referencing. (Note: It was an important part of the methodology adopted that the *scheduling* should be completed *before* the comparisons were made).

Table 10.1(a): Case Study Two: Research Review  
Comparison of Advantages of Contracting-Out

| ADVANTAGES OF<br>CONTRACTING-OUT                                                                                 | CROSS REFERENCE TO<br>RESEARCH REVIEW                                                           |
|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Primary</b>                                                                                                   |                                                                                                 |
| * Overcomes skill shortage due to inability to retain/recruit in-house staff (at Level 3)                        | No. 7: Overcomes skills shortage/Specialist equipment shortage                                  |
| <b>Spin-off Advantages</b>                                                                                       |                                                                                                 |
| * More cost-effective                                                                                            | No. 1: Reduced costs                                                                            |
| * More efficient deployment of skilled resource:                                                                 | No. 4: Improved operational efficiency                                                          |
| · obviates demoralisation of SE due to under-utilisation of skill                                                |                                                                                                 |
| · reduces unsociable hours/ periods away from home because contractors resource on a smaller travel-to-work area |                                                                                                 |
| · provides more efficient cover for staff absenteeism                                                            |                                                                                                 |
| * Provides specialist equipment                                                                                  | No. 7: Overcomes skills shortage/specialist equipment shortage                                  |
| * Spares and replacement stock control becomes contractor's overhead and responsibility                          | No. 4: Improved productivity<br>No. 1: Economies of scale<br>No. 8: Added-value/Value for money |

Table 10.1(b): Case Study Two: Research Review  
Comparison of Disadvantages of  
Contracting-Out

| DISADVANTAGES OF<br>CONTRACTING-OUT                                                                         | CROSS REFERENCE TO<br>RESEARCH REVIEW                                                                       |
|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Primary</b>                                                                                              |                                                                                                             |
| * Lack of control over contract staff maintaining 'production line' equipment which fails unsafe (Level 3): | No. 3: Lack of control of suppliers<br>No.25: Lack of flexibility                                           |
| · Reduces flexibility to assess national priorities and deploy resources accordingly                        |                                                                                                             |
| · Contract staff less likely to respect operating theatre schedule                                          |                                                                                                             |
| · FM Dept have less control over training                                                                   |                                                                                                             |
| * Lack of external supply for suitably qualified bespoke mix of multi-skills at technician (ME) level       | No.5: Supplier market insufficiently competent<br>No.15: Supplier's availability                            |
| * Contract staff (Level 2 in particular) would be less familiar with User's equipment                       | No.21: Learning curve for supplier<br>No.15: Supplier's continuity<br>No.15: In-house solution satisfactory |
| <b>Spin-off Disadvantages</b>                                                                               |                                                                                                             |
| * Contractors cannot guarantee response time under 24 hours                                                 | No.21: Slower response times to problems                                                                    |
| * Transfers much of risk (responsibility) to third party                                                    | No.14: User risk reduced                                                                                    |

There is generally a close correlation between the case study findings and the Research Review categories.

The evidence determines that the main advantage of contracting-out relates to Research Review category No. 7. This supports the question, raised in Chapter Eight, of whether the importance of categories are accurately reflected by the Research Review, and if they are, is there consistency in the result; i.e. does the higher the ranking of primary advantages/disadvantages equate to greater influence on decision-driving? In this instance, No. 7 ranking is only sufficient to encourage a small element of contracting-out. In fact, it is questioned whether this advantage equates to a decision driver, except as previously described as a Hobson's choice decision-maker - i.e. no alternative. If the User had perceived cost-saving of contracting-out to be of prime importance (equating to a No. 1 ranking), would this have led to greater contracting-out? To summarise the point: Advantages of contracting-out, which were deemed 'powerful' by the Research Review but which were only seen as of secondary (or *spin-off*) importance by PCSO, e.g. cost effectiveness and operational efficiency, were not 'powerful' enough to drive decision-making.

The factors which governed much of PCSO's decision-making related more to the importance of core business requirements, and the advantages of in-house resourcing, rather than the direct merits or shortcomings of contracting-out.

There is one contradiction of the Research Review as a result of the analysis of this case study's findings. A disadvantage of contracting-out equates to a Research Review category that had only previously been an advantage - viz: the transfer of risk. In this instance the User perceived this as equating to lack of control of the situation; i.e. not the advantageous transference of risk, but the disadvantageous transferring of responsibility.

## STAGE V: CONCLUSIONS OF CASE STUDY TWO

The analysis concludes that there was a cultural preference in PCSO not to contract-out tasks of such importance to core business as clinical sterilizer maintenance. A policy existed to retain in-house control of operations which were complex and high risk.

The only *driving* factor which dictated that contracting-out was implemented, could only be portrayed as a *negative* one; i.e. it was due to the *inability* to fulfil the chosen aim of securing an in-house resourced skill. This driving factor itself was due to the influence of 'scale of operation'. PCSO had to accept the only alternative, when faced by the inability to recruit a staff member - i.e. to contract-out; thereby an *advantage* of contracting-out may be the ability to overcome a skills shortage, but this was not the *driving factor* dictating contracting-out. In this case, contracting-out happened not because it was advantageous, but because it was an expedient to overcome a shortcoming of in-house resourcing. This illustrates that 'advantages of contracting-out' are not necessarily synonymous to 'disadvantages of in-house resourcing', and vice versa; but result in the same end effect.

There were advantages and disadvantages for both alternatives, but it was the User's *interpretation* of these factors that decided which were primary, and which were spin-off. A good example was the matter of cost-efficiency. In the South East Region, the evidence showed contracting-out Level 3 CS maintenance to be more cost-efficient, but this was *not* the reason for the event, nor was it a factor which PCSO management applied to their decision-making elsewhere. I.e. greater cost-efficiency became a spin-off advantage of contracting-out - but alternatively there was negative cost-efficiency as a spin-off to resourcing Level 3 CS maintenance in-house. In



neither case did cost efficiency (positive or negative) drive the relevant decision-making.

Other factors described positive advantages of contracting-out, including cost efficiency, but these were not dominant enough to drive the decision in their favour.

Case Study Two demonstrated support of the following statements:-

- (i) Resourcing suitably qualified *multi-skilled* staff to meet a bespoke criteria is best achieved in-house (e.g. Level 2: Maintenance Engineer); i.e. it is concluded that a disadvantage of contracting-out is the shortcoming or inability of resourcing bespoke *multi-skilled* staffing requirements.
- (ii) Conversely: contracting-out is a more cost effective method of resourcing a *single* specialist skill requirement, where full-time input is not involved.
- (iii) Factors which influenced the decision-making included:
  - \* The onerousness of task involved
  - \* Culture of the Organisation
  - \* The relationship of the task to core business
  - \* Skill requirement - availability
  - \* Equipment requirement
  - \* Size of task - critical mass
  - \* Location/dispersity, i.e. scale of operation

## CHAPTER ELEVEN

### CASE STUDY THREE:

Estates Surveying Services in a Public Sector Organisation

#### PREAMBLE

##### Protocol Requirements

The Protocol for case study data collection and analysis was developed in Chapter Seven (Section 7.2) above; the working document being replicated at Appendix V.

The model developed at Fig. 11.1 below summarises the requirements of the Protocol and acts as a 'route map', describing the arrangement and marshalling of this study.

To safeguard and respect the confidentiality under which the data was made available, the identity of Case Study Organisation Three will not be specified in written form, but will be referred to as 'CS03'. By employing this tactic, the description of the study and the findings do not have to be disguised. Consequently there is no devaluing of the main points.

This study describes research into the advantages and disadvantages of a User providing an in-house resourced estate management service within its FM department.

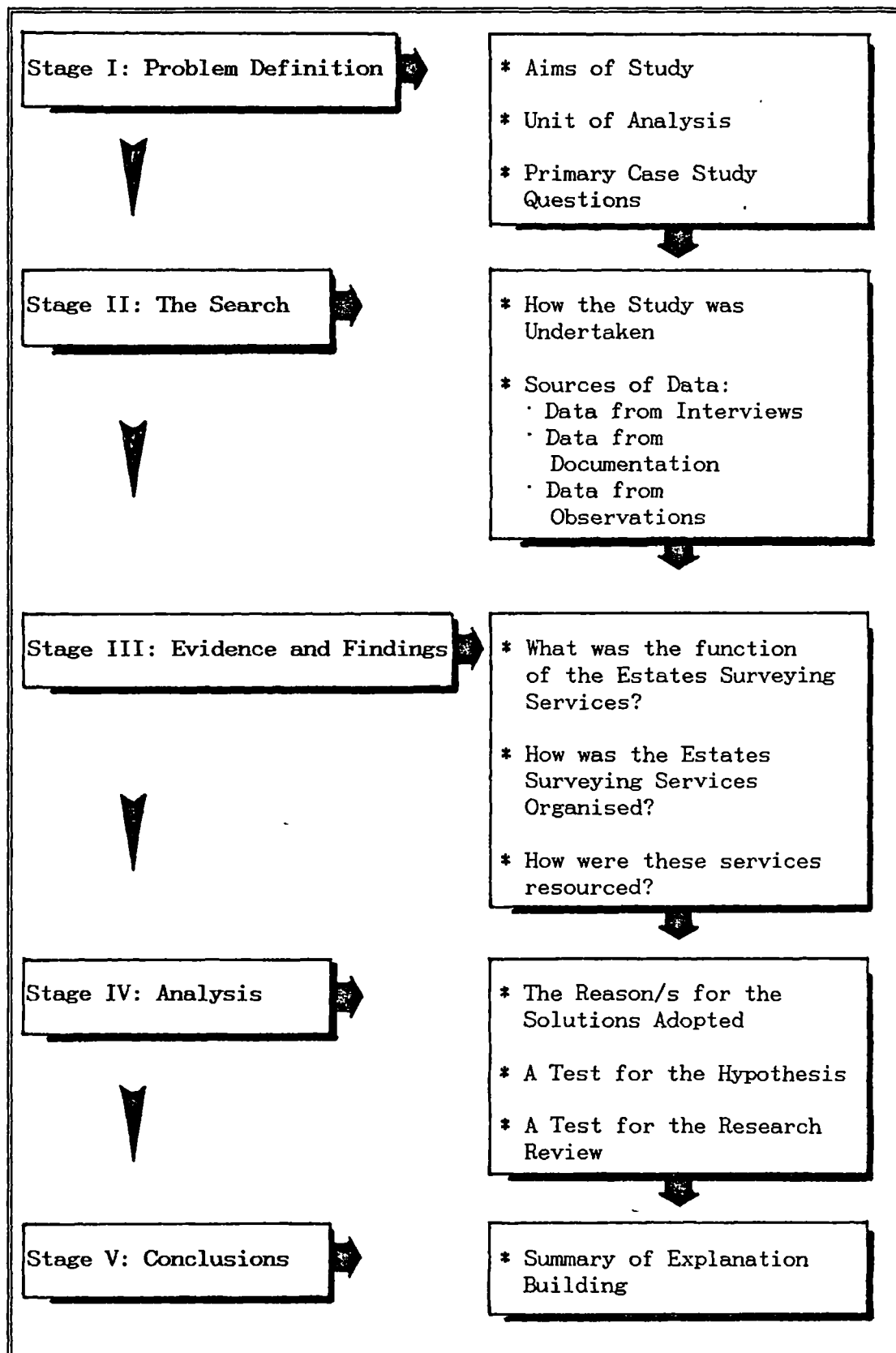


Fig. 11.1: Case Study Three: Route Map

## STAGE I : PROBLEM DEFINITION

### 11.1 INTRODUCTION: PURPOSE OF CASE STUDY THREE

The purpose of this study is to consider the advantages and disadvantages of contracting-out an element of an FM service, which was perceived by some sectors of the User organisation to be close to the core business, but to others to be a support service, which provided no added value.

### 11.2 UNIT OF ANALYSIS

#### 11.2.1 Factors Governing the Choice of the Organisation for Case Study Three

As an alternative to concentrating on private sector User organisations, the choice of CS3 provided an opportunity to examine a substantial occupier of property in the public sector.

#### 11.2.2 Description of Case Study Organisation Three

CSO3 was a collection of central government functions and departments, which shared a jointly resourced FM service department, that primarily provided FM services relating to property.

#### 11.2.3 The Unit of Analysis

CSO3, as a consortium of stand-alone departments, devolved responsibility for FM services - prior to April 1991 - to a single FM department. From April of that year individual Departments were required to 'market test' FM services, i.e. seek competitive tenders. In each market testing case

the in-house FM department became one of a number of tenderers.

The important point for this study is *not* the principle of market testing, but why CS03 should provide Estates Surveying advice as an in-house resourced function of the FM Department. The function in question was known as Estate Surveying Services (ESS) and this became the Unit of Analysis for CS3.

The FM Department, at the commencement of this study, was responsible for the management of the property requirements of these government departments and employed approximately 13,000 staff.

The organisation was variously based at an headquarters complex in South London, with a core of approximately 150 staff, and in nine regions, each with a regional head office.

The FM Department were directly responsible for their own property requirements (i.e. as a User in their own right), as well as being managing agents looking after the property needs of their clients in the public sector.

The FM Department provided the following *services*:

- (i) Design and Project Management
- (ii) Management of Building Maintenance Works
- (iii) The provision of labour (skilled, semi-skilled and manual to carry out maintenance tasks, i.e. operational services)
- (iv) Consultancy services relating to building maintenance
- (v) Estates Surveying Services.

The Estates Surveying function was chosen as the unit of analysis for the following reasons:-

- \* It would provide a comparable study for Case Study Four (literal replication).

- \* There was a disparity of view regarding the value of the service, which was similar in attitude to that of the pilot case study (PCS) to Hotel Services.
- \* Background data would be made available, but *in confidence*, as a result of an unrelated consultancy investigation, for which this researcher was a team member, and which was to examine the overall efficiency of the FM organisation.

#### 11.2.4 Period of Study

Research was primarily undertaken during the first six months of 1991, although the case study organisation was kept under review until the end of 1991, in order to monitor whether subsequent developments materially affected the findings.

### 11.3 THE AIM OF CASE STUDY THREE

The aim of the study was first to establish the way in which Estates Surveying Services (ESS) was resourced and, second, the reasons behind the decision to resource in this manner.

From this data, the purpose of the study was to identify the advantages and disadvantages of contracting-out.

Following the pattern of the PCS, the findings would be analysed to determine whether they:-

- (a) were generalisable to FM services in other case studies;
- (b) supported the findings of the Research Review;
- (c) supported the hypothesis of this research project.

The discipline of the study is to set down, in orderly form, sufficient detail of the case study in order for the

process to be replicable. To achieve this aim this study seeks, by following the Research Project Plan, to:-

- \* outline the CS03;
- \* record the parameters of the unit of analysis;
- \* record the field procedures adopted;
- \* record the sources of data used;
- \* record the evidence collected.

The purpose of the study was to enable an indepth examination to be undertaken of the unit of analysis, and the organisational factors governing or restricting it.

#### 11.4 THE QUESTIONS

The preliminary remarks made in the first two paragraphs of 9.4 of the PCS (Chapter Nine) apply equally to this case study, and will not be repeated here.

The *primary* questions for CS3 were designed progressively to build-up:-

- \* an understanding of the unit of analysis;
- \* to identify as findings, key determining factors for reasons governing the way the unit of analysis (Estates Surveying Services) was organised.

The following figure (Fig. 11.2) describes the line of questioning adopted:-

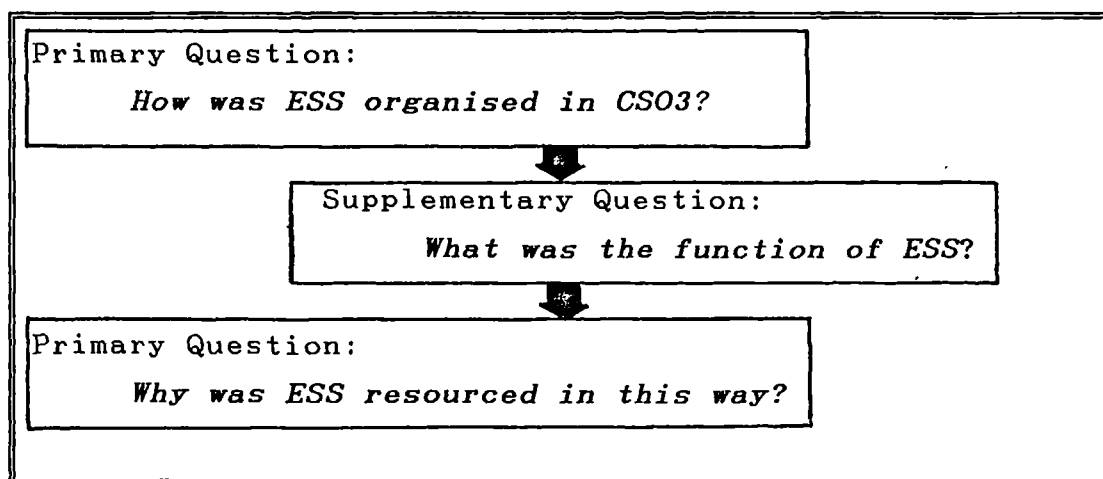


Fig. 11.2: Line of Questioning

## STAGE II: THE SEARCH

This section records the sources from which, and by which, evidence/data was gathered; and describes the manner in which the study was undertaken, linking the fieldwork with the 'protocol' refined by the PCS experience, and laid down in the Research Project Plan.

### 11.5 HOW THE STUDY WAS UNDERTAKEN

The system of data collection for this case study follows the model demonstrated in Figs. 9.3(a) and 9.3(b) of Chapter Nine, the Pilot Case Study.

The answer to the research questions was sought by:

- \* interviewing senior staff at H.Q. and in five regions;
- \* convergence was sought by carrying out informal discussions with staff, and observing the working methods whilst in their offices;



- \* examining and evaluating the contents of relevant documents, made available by the FM Department.

The collected evidence was then analysed and findings made.

From the findings conclusions were drawn, relevant to this particular case study; these were recorded for further analysis and comparison with the conclusions of the related studies.

## 11.6 SOURCES OF DATA

### 11.6.1 Indepth Interviews

The study was undertaken by interviewing key staff in five of the FM Department's nine regions, and at H.Q., viz:-

#### North-West Region

Managing Director

Operations Director

Finance Director

Senior Manager in charge of Design

Commercial and Strategic Planning Director

Operational staff were interviewed at 2 local offices

#### Eastern Region

Managing Director

Operations Director

Operations Manager (South)

Operational staff at 1 local office

- \* Group Manager

- \* 2 Works Officers

#### South-West Region

Operations Director

Finance Director

Operational staff at local offices:

- \* 2 Works Officers

Southern Region

Operations Director

London Region

Operations Director

Headquarters Staff

Head of Agency and Property Management

- \* Finance Director
- \* Managing Director (Southern)
- \* Managing Directors of two sister companies

#### 11.6.2 Informal Interviews

Informal interviews/discussions were carried out with a range of staff in order to gain an understanding of the background to the issues. Staff included senior managers in CS3's two 'sister' companies providing other specialist services, and in other departments of CSO3.

#### 11.6.3 Observations

All the relevant interviews were carried out at premises of CSO3. The time spent in their offices was used to observe and record working practices. These observations were then used to compare with the evidence from other sources.

#### 11.6.4 Documentation

The following documents were found to be of particular relevance to the study.

- \* FM Department's brochures covering:
  - \* Services
  - \* Planned maintenance and engineering services
  - \* Building management

- \* Supply and Services Agreement between the FM Department and Client dated 1.4.90.
- \* Business development plans for all nine regions of the FM Department.
- \* A confidential study of comparable privatisations dated 1.3.91 covering:
  - \* The Crown suppliers
  - \* Royal Ordnance
  - \* New Town Development Corporations
  - \* The Skills Training Agency
  - \* National Freight Company
- \* Property Management Instruction
- \* Corporate Brochures covering Specialist Services (a sister company) - a series of fourteen documents.
- \* Facilities Management Services: CS03 N.W. dated 1991

### STAGE III: EVIDENCE AND FINDINGS

The order in which the evidence is presented, commences with establishing the ESS role.

Supplementary Question:

*What was the function of the Unit of Analysis (ESS)?*

To answer this question, the activities and structure of ESS were examined in five locations. The income generation of ESS equated to 3.4% of the FM Department's total turnover for the year 1990/91; 90% of which related to office buildings.

On the basis of turnover the business undertaken by ESS for the same period was as follows:-

|                              |     |
|------------------------------|-----|
| * Estate Management          | 56% |
| * Lease Reviews and Renewals | 27% |
| * Hirings and Acquisitions   | 11% |
| * Sales and Lease Surrenders | 4%  |
| * Valuations                 | 2%  |

The services supported the FM Department's own operation, and provided estates surveying services to CSO3 (primarily) and also to other public sector organisations - the latter were treated as out-house clients.

The following hypothetical example was found contained in a confidential report, and aimed to clarify the synergy between ESS and the overall FM Department business:-

"3.1 Under this hypothetical example, the firm is instructed to acquire a property. A property search is implemented resulting in identification of a suitable property which is subsequently acquired, thereby generating a fee. The process may involve the development of a property rather than simply acquisition; in which case opportunities arise to offer a development management service or advising upon a development agreement. These activities all generate fees. Equally, it may be that funding is required for the development project; again, a fee generator.

3.12 Once acquired, the building is taken into management for which an annual fee is payable. Regular maintenance will need to be arranged and if the property is occupied on a leasehold basis, rent reviews and lease renewals will occur at regular intervals. As part of a property portfolio, the building will require regular valuation and appraisal; during which opportunities to enhance value through refurbishment may be identified. All of these activities provide fee earning opportunities.

3.13 Finally, as part of the regular appraisal process, the property may become surplus to the client's requirements or no longer fit within the owner's property investment strategy. The building will therefore be sold with the associated agency fees. To bring the cycle full circle, the proceeds generated are then available to re-investment.

3.14 This simple hypothetical example demonstrates the range of fees that can be generated from a single initial instructions. Although the cycle has traditionally begun with the development of the property, in today's competitive market it is possible to enter the cycle at virtually any point. In my experience, the multiplier of the initial fee that can be generated by exploiting linkages will normally range from a factor of between 5 and 10.

3.15 The example illustrates how the linkages operate both within the Estates Surveying area of activity and the spin-offs that can be achieved for related activities." (Wells, W. (1991) )

Figures from the N.W. Region show this synergy ratio to approximate to 1:3 in 1989/90. Provisional figures for 1990/91 indicated a higher ratio of 1:8; i.e. a multiplier of eight times ESS fee in terms of overall income generated for the FM Department.

#### FINDING

Within the FM Department there was a strong view that ESS was a vital component of the business; in particular it provided the basis for retaining many contacts and subsequently generating a disproportionately large element of total turnover.

Primary Question: *How was the Estates Function Organised?*

The overall picture that emerged was as follows. Estates services employed 210 fee earners and 160 support staff (admin. and clerical); i.e. 2.8% of the entire workforce of the FM Department, and were represented in a total of 21 offices.

The number of ESS staff in individual regional offices varied from 3 - 60.

The total ESS income for the financial year 1990/901 was £14.3m.

The data collected could be divided into two categories, viz:-

- \* Data collected from CS03's H.Q. staff and their documents.
- \* Data collected from regional management and regional operational staff of the FM Department.

(i) The H.Q. Data

The FM Department, which was organised as profit centre within CS03, fulfilled five inter-related functions:-

- \* Maintenance Consultancy
- \* Maintenance Works Management
- \* Directly Employed Labour Services
- \* Design and Project Management
- \* Estates Surveying Services

57% of staff could be classified as management (including clerical and administration), 43% as operational in a management:operational split, see the continuum at Fig. 11.3, which develops the model devised at Fig. 9.5 in the Pilot Case Study.

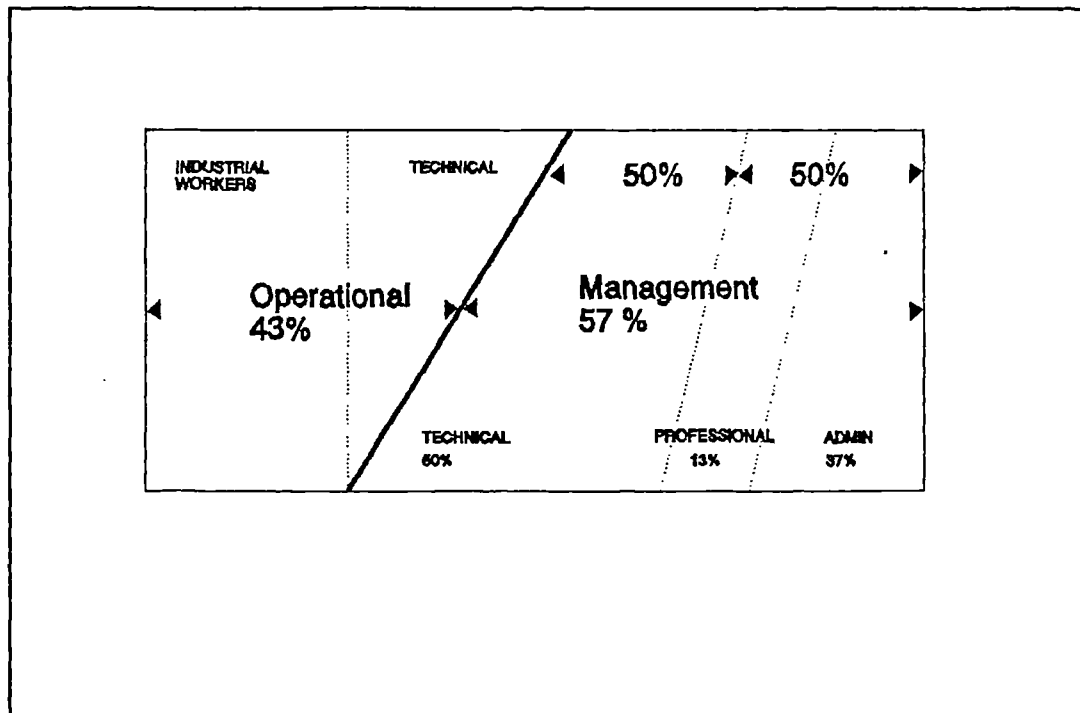


Fig. 11.3: FM Department, Management:Operational Continuum

50% of the management staff could be classified as 'technical';

37% were administrators (including strategic and tactical management);

13% were professional.

Within ESS all staff could be attributed to the management category, with approximately 34% of staff classified as administrators, 35% professional and 31% technical (i.e. technical professional, not technical operational).

The central view expressed during interview was summed up in a confidential document evaluating the future options for ESS (dated 13.12.90), prepared by management consultants, viz:-

"Our study of (the FM Department) identified two core business - Design and Project Management; and Maintenance Services. Since our work did not reveal any strong synergies between ESS and

either of these core businesses, we concluded that the ESS function could be regarded, for the most part, as a separate business ... but did not represent a viable stand-alone business."

A view was also sought from a client's perspective. Interviews with two senior staff of one of the main Government Departments of CSO3 were carried out at a time when a decision had been made to use an alternative supplier for ESS services.

The reason for the decision was the dissatisfaction with the service provided, which was solely attributed by the client to the supplier's lack of experience in the commercial marketplace; i.e. because ESS were restricting themselves to public sector work, they did not have the necessary current market intelligence. Market intelligence was taken to include knowledge of: space available; range of current rentals; range of current yields; deals recently completed; etc.

#### (ii) The Regional FM Department View

Without exception, the data collected from the regions supported the view that Estates Surveying was part of the core business of the FM Department and should not be contracted-out.

The M.D. of the N.W. Region stated: "the interaction and synergy of our four main businesses - Estates, Design, Directly Employed Labour and Maintenance, is the foundation of our success". He went on to say that he could not see the sanity of destroying a successful business by outsourcing one key element of it. In an internal report on the Positioning (of the FM Department) in the Market Place (March 1990), he had written that:-

"Of the five basic services offered in the menu, (Estates Surveying) is a core service totally dependent on the Chartered Estates (sic)



Surveyors' skills in negotiating leases, rents, rates and dilapidation issues."

From financial information in that Region, Estates Surveying generated 8% of total income for the year 1989/90, but estimates showed that it was responsible for generating a further 17% of income subsequently earned by the other functions.

For the year 1990/91 these ratios had varied; only 4% of income was attributable to Estates (exactly reflecting the national average figure), but a further 26% was attributable to work generated by that function.

The Business Plan for the S.E. Region recorded Estates Surveying as providing 3% of total income (1989/90) but noted that it:

"is interactive with other aspects of (the FM Department's) operations and can be a valuable asset and worthwhile introduction to other areas of work."

The conclusion drawn was that ESS should remain resourced in-house in order to provide "a fully comprehensive property management service".

In the Eastern Region, the *potential* for ESS was more of an issue than the existing situation. During 1990/91 only 1.6% of income had been generated by E.S. - due to "shortage of staff". This left hanging the question: could the core business of FM survive either without ESS at all, or with a contracted-out ESS?

In Scotland, ESS work totalled 4.78% for the year 1991/92 and staffing levels were 4.69% of the total FM Department deployment. There was a perceived need to increase the closeness of the working relationship between the ESS staff

and other functions generally, and with maintenance operations in particular.

The Southern Region described ESS "as a small but vital part" of the FM Department, recognising that whilst it only represented 2% of the income it generated a very significant amount of work for other functions and considered it "a vital part of the (FM Department's) ability to provide a one-stop service to clients ..." (Regional Business Plan 14.9.90).

The main conclusion, drawn from the data collected in the S.W. Region, was that the majority of the FM Department dealt with building construction and engineering issues. ESS was a small niche business which dealt with property, and as such, employed an entirely differently qualified group of professionals.

### Summary

CS03's senior management's attitude was to compare the function of ESS with the perceived core business of FM Department, namely, building maintenance and property management. They concluded that the ESS function was a separate entity and, because the size of ESS did not reach a judged critical mass for viability of a stand-alone department, proposed the function should be 'outsourced', i.e. disposed of as a going concern.

This was largely as a result of the management consultants advising the strategic decision-makers of CS03 that ESS was not part of the core business of FM, and that it should, consequently, be disposed of and the service in future resourced out-house.

**FINDING**

Senior management of CS03 did not consider ESS to be part of the core business of the FM Department.

Without exception, the tactical and operational managers of the FM Department argued strongly that ESS was:-

- \* part of FM's core business (i.e. a core product);
- \* contributed to the gross income;
- \* was responsible for generating up to 25% of total income.

The strategic management team did not express the view that if it were a support service, it could either be retained or contracted-out.

**FINDING**

The management of the FM Department considered it imperative to keep ESS in-house because of the multiplier effect on turnover.

The FM Department was organised as a profit centre despite being a support service to CS03. It was by this method that performance measures were set and tested, using private sector comparisons as bench-marks; for example, the fee earnings per head were compared with the levels of earnings variously encountered in private sector firms of FM suppliers (contractors) including building contractors, general practice firms of Chartered Surveyors, etc.

A loss of under 3% of staff in the FM Department would impact by up to 25% on overall turnover; i.e. without ESS, the remaining 97% of staff could be expected to turn over approximately 21.5% less than *their* current trading level. It was considered, by FM Department management, that this

would commence an accelerating downward spiral in efficiency:turnover ratios.

## STAGE IV: ANALYSIS

### 11.7 THE REASONS FOR THE SOLUTIONS ADOPTED

The study of ESS (a bundle of services within the FM Department) took advantage of information generated by the internal debate concerning its future. The pros. and cons. of retaining an 'in-house' estates surveying service or contracting-out, were clearly put; with effectively CS03's senior management proposing the advantages of contracting-out, and the FM Department management emphasising the disadvantages.

By the end of the study period it became apparent that ESS was to be retained as part of the FM Department.

CS03's senior management, at *strategic* level, accepted the argument that if the FM Department were to contract-out ESS (whether the existing ESS was outsourced or wound-up being immaterial), CS03 were likely to receive a *better* service; but the viability of the FM Department would be put in jeopardy.

There was no evidence that the senior management's advisers could envisage ESS as a 'core product' of the FM Department.

Conversely, the FM Department's management determined that, by outsourcing ESS, they would lose the synergy and business generating attributes. Reducing the workforce by 3% (approx.), would result in a direct reduction in

turnover averaging 3.4%, but the multiplier knock-on effect would reduce turnover by 20-25%.

#### FINDINGS

- \* ESS was an essential part of the FM service.'
- \* The FM Department's future viability would be jeopardised without ESS.
- \* ESS, as existing, could not be established as a stand-alone business.

Note: During the verification period of the study, an in-principle decision was made by CS03 to outsource the *whole* FM Department. However, the method of resourcing the FM Department was not the unit of analysis for this study. Further, there was no guarantee that the in-principle decision to outsource it would be implemented. Therefore, the only finding that could be made from this particular evidence was:-

#### FINDING

From the User's point of view, the FM Department (*en masse*) *did not have to be* in-house.

In the absence of further research, which would constitute a separate study, there was no data from which to analyse why this in-principle decision was made, except that it can be reasonably assumed such reasons extended well beyond the pros. and cons. of retaining ESS within the FM Department.

The possibility of continuing the study to investigate whether this development would affect the findings was considered. The decision *not* to prolong the study was arrived at chiefly because CS03 made it clear that data

would not be made available, due to the highly sensitive procedures necessary to successfully manage the sale, which was likely to involve a significant number of redundancies.

However, at the conclusion stage of this study, prepared in 1993, evidence in the public domain was that the sale of the FM Department, as several going concerns based on old regional businesses, had been completed. The study has not been re-opened to ascertain whether ESS exist in all or some of the new business, *but* the fact that the in-principle decision did proceed supports the finding that, "from the User's point of view the FM Department did not have to be in-house".

A further study would also be required in order to assess whether the outsourcing has been successful, *but* for the purposes of CS3, the fact that the FM Department was strategically *outsourcable* from the User's point of view, supports the view that the advantages of contracting-out outweighed the disadvantages.

The analysis of this evidence (with the benefit of knowledge of the decision to outsource the FM Department). is that these were arguments for ESS to remain part of the FM Department, but *not*, per se, part of an in-house department.

#### FINDING

- (i) The FM Department's core business of property management and building maintenance *required* ESS skills in rent reviews, acquisition and disposals, valuations, etc. to remain viable.
- (ii) CSO3's core business did *not* require the FM Department to be resourced in-house.

These ESS skills could be resourced from an out-house means but this would lose the one-stop-shop approach. Most CSO3 operational departments (as opposed to senior management) expected their FM Department to be able to deal with these estate management matters.

When market testing commenced, the competitors to FM Department were required to submit tenders inclusive of estate management functions.

The analysis also shows the following:-

|                |
|----------------|
| <p>FINDING</p> |
|----------------|

|                                                  |
|--------------------------------------------------|
| <p>ESS as a function had notable weaknesses.</p> |
|--------------------------------------------------|

A synthesis of the shortcomings of ESS, listed by the reports and mentioned at interview, is as follows:-

- \* The agency side of ESS was not sufficiently active in the private sector office market-place to operate efficiently.
- \* In some regional offices, e.g. Eastern Region, the size of the ESS establishment strength was below that required to comprise a critical mass of skills.
- \* National skill levels vary; e.g. S.E. and Scotland were considered below par in Landlord and Tenant expertise, whereas Eastern Region lacked management experience.
- \* Some skills were generally lacking, with arbitrations, expert witness, development and investment skills being cited.

The Wells Report (1991) drew the following overall conclusions:-

"(ESS) has a number of areas of strength, but lacks the general breadth of experience necessary to compete as a stand-alone business and is deficient in a number of key areas of Chartered Surveying experience."

#### Driving Factors

The analysis of the evidence identifies one driving factor which determined that CS03 would not contract-out ESS:

- (i) If ESS were contracted-out, the resultant impact on the remaining FM Department would severely affect its viability, and hence generate a cost-impact on CS03.

Opposing driving factors, which influenced CS03 to consider contracting-out but which were discounted, were:

- (i) The provision of a more efficient ES Service;
- (ii) CS03 and Government doctrine in favour of contracting-out.

The following finding summarises the analysis:

#### FINDING

It was strategically necessary to retain ESS within the FM Department.

It was not strategically essential to retain the FM Department within CS03.



## 11.8 TEST AGAINST THE HYPOTHESIS

*Hypothesis:* 'The potential advantages to a User organisation of contracting-out discrete aspects or bundles of FM Services are likely to outweigh the potential disadvantages.'

This case studied the way in which CS03 resourced their estates surveying services. The findings show that ESS was in-house resourced and was likely to remain so for as long as the FM Department itself remained an in-house entity.

This *challenges* the hypothesis, because it shows that for the User organisation, the disadvantages of contracting-out this particular 'bundle' of FM services, known as ESS, outweighed the advantages of so doing.

The finding that it was not strategically essential to retain the FM Department within CS03 neither supports nor contradicts the hypothesis - because the hypothesis specifically does *not* relate to the complete package of FM services; (i.e. total facilities management); it relates to 'aspects or bundles'. This does suggest that the hypothesis should be recognised as limited in scope, in that it covers only one scenario. A subsequent proposition to test in future research could be:

"The advantages to some User organisations of contracting-out total facilities management services are likely to outweigh the potential disadvantages of only contracting-out selected aspects or bundles".

## 11.9 TEST AGAINST THE RESEARCH REVIEW

### Comparison with Potential Advantages and Disadvantages

Tables 11.1(a) and (b) below schedule, respectively, the advantages and disadvantages of contracting-out, which were identified by the evidence collected for this case study, and compare these findings with the findings of the Research Review by means of cross referencing. It was an important part of the methodology adopted that the scheduling should be completed *before* comparisons were made.

Table 11.1(a): Case Study Three: Research Review  
Comparisons of Advantages of Contracting-Out

| ADVANTAGES OF<br>CONTRACTING-OUT                                                                                                           | CROSS REFERENCE TO<br>RESEARCH REVIEW                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| <b>Primary Advantages</b>                                                                                                                  |                                                                               |
| * Would obtain a better breadth/<br>more complete range of estates<br>surveying skills, nationally<br>and locally:                         | No.7: Overcome skills<br>shortage<br>No.4: Improved<br>operational efficiency |
| · overcome in-house shortage of<br>skills due to both shortage<br>of staff in some regions and<br>due to personnel's lack of<br>expertise. |                                                                               |
| * Would obtain a better range of<br>experience, nationally and<br>locally:                                                                 | No.6: Specialist<br>knowledge current<br>statutory knowledge                  |
| · overcome lack of market<br>intelligence.                                                                                                 |                                                                               |
| <b>Spin-off Advantages</b>                                                                                                                 |                                                                               |
| * Would also allow FM Department<br>to concentrate on <i>its</i> core<br>business.                                                         | Nil                                                                           |

Table 11.1(b): Case Study Three: Research Review  
Comparison of Disadvantages of  
Contracting-out

| DISADVANTAGES OF<br>CONTRACTING-OUT                        | CROSS REFERENCE TO<br>RESEARCH REVIEW                                           |
|------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>Primary Disadvantages</b>                               |                                                                                 |
| * Would significantly affect<br>turnover of FM Department: | No.1: Not always cost<br>effective                                              |
| · 3% staff loss could impact<br>25% on turnover            | No.20: Hidden costs                                                             |
| * Would subsequently affect<br>viability of FM Department  | (No.10: Lose in-house<br>(expertise or<br>(capability<br>(No.10: Strategic risk |
| <b>Spin-off Disadvantages</b>                              |                                                                                 |
| * Would lose one-stop-shop<br>approach                     | No.15: Ignores in-house<br>solution                                             |

The Advantages comparison raises the following points:

1. The evidence shows that the primary advantages were sufficient drivers to persuade parts of the CS03 conglomerate to resource their estates surveying needs by contracting-out; but not to convince the whole of CS03 to do so - allowing ESS to remain in the FM Department.
2. Taken in isolation, the User perceived that by purchasing estates surveying from an external source, a better estates services would be provided; i.e. there would be operational advantages to the User.
3. Allowing the FM Department to concentrate on what CS03 perceived was that department's own core business by contracting-out ESS, is a contentious finding.

- (i) First, the FM Department's own management saw ESS as part of the core business (i.e. it was a core product of that Department).
- (ii) Second, even if the contracting-out of ESS was accepted as advantageous to the FM Department, this does not equate to assisting the main business; i.e. CSO3 would not be improving concentration on *its* core business. The perceived advantage would be to provide a better strategic focus for the FM Department. This does not directly equate to a Research Review finding. Ordinarily it would be expected such a decision would improve operational efficiency, but the evidence in this case is against such a conclusion.

The analysis strongly questions whether the User has correctly perceived an advantage.

- 4. There is no evidence that the strategic (in-principle) decision to sell the FM Department en masse, as a going concern, would overcome the ESS's shortcomings.

The Disadvantages comparison raises the following points:

- 1. The primary disadvantage is equated to reduced cost-effectiveness as far as *the User* was concerned. FM Department, being a support service, was funded by CSO3. By losing the synergy afforded by ESS to the other FM functions the subsequent cost of funding this support service would be increased. This proved sufficiently important for CSO3 to decide to retain ESS in the FM Department, and is therefore *the* driving factor.
- 2. The second primary disadvantage is, after further analysis, considered over emphasised. The comparison

with Research Review category No. 10, 'Strategic risk/Contracting-out critical segments may jeopardise User's organisation', led to the conclusion that the comparison was *not* appropriate, because there was no evidence gathered that the business of CSO3 would suffer if the FM Department became less viable as a result of contracting-out ESS. Post April 1991, CSO3 departments were not *required* to use the FM Department. It is presumed, if the latter gradually became less viable, more departments would choose to contract-out. This scenario places FM Department on a downward spiral, but does not necessarily support a suggestion that CSO3, or its component parts, would suffer; i.e. it is specifically the FM Department which might be jeopardised by contracting-out ESS, not the User.

It is proposed that Research Review Category 10 could be amended to add: "...or, lose or jeopardise in-house expertise and capability".

3. One other comparison made is noteworthy:

There was no data collected that demonstrated concerns about personnel. Strictly, the study was about *how* ESS was resourced, not what the effects would be if it were resourced *differently*. But it is a shortcoming of this study that CSO3 did not allow certain questions to be asked, because of the sensitivity of the situation. Personnel were not therefore asked about how they would feel if changes took place. They did, however, make it clear they had a resistance to change, which did not appear to equate to loyalty to the User (Research Review Category No. 6), but rather loyalty to their terms of employment, which were perceived as above the market norm.

For the same reasons, questions regarding the unions' views on the pros. and cons. of contracting-out were forbidden.

## STAGE V: CONCLUSIONS OF CASE STUDY THREE

1. The case study related specifically to the manner in which ESS was resourced. Ignoring numerous complicating factors, this was found to be by in-house personnel.
2. The User demonstrated a *preference* for contracting-out the Unit of Analysis, but was reticent to implement such a strategy, because of the likely cost impact which would result from a subsequently less effective FM Department; i.e. the action driver was a category of the disadvantages of contracting-out.
3. The advantages of resourcing ESS in-house were directly related to the ongoing performance of the FM Department. A reduction in the performance of this support department would have placed a greater financial burden on CS03.
4. Analysis of the findings identified a contradiction of the hypothesis for this project, because it was disadvantageous for the User to contract-out ESS as a specific 'bundle'.
5. CS03 demonstrated a strategic preference for outsourcing the whole FM Department.
6. A subsidiary hypothesis was put forward for further consideration, viz:-  
'The advantages to some User organisations of contracting-out total facilities management services are likely to outweigh the potential disadvantages of only contracting-out selected aspects or bundles.'
7. The comparison with the Research Review shows that:

- (i) The equivalent highest ranked advantage to be No. 6. Because advantages were overridden by disadvantages, this poses the question: is this category not important enough to be considered a 'driver'?
- (ii) The driver of "reduced cost effectiveness of a support department" was not sufficiently powerful to persuade all components of the User to act in the same way.
- (iii) A contentious User-perceived advantage of contracting-out was identified by the analytical method and exposed for further consideration.
- (iv) The analysis highlighted the need to carefully isolate:
  - (a) effects on the User Organisation;
  - (b) effects on the Unit of Analysis, or FM services where the latter did not materially affect the former.
- (v) The analysis highlighted areas where desirable evidence was absent. In this case it was due to the User barring sensitive data from the research, but this points to the Research Review comparison providing an effective check on the completeness of data gathered.

By demonstrating that the contracting-out of the specific 'bundle' of FM services, known as Estates Surveying, was ultimately disadvantageous to the User, (because this would entail the outsourcing or winding-up of the existing ESS function which would impact on the viability of the FM Department), it could be argued that CS3 provided support for the fact that the hypothesis refers to the *likelihood* of contracting-out being advantageous - not the *certainty*; i.e. by providing an example of contracting-out being



disadvantageous. It certainly reinforces the view that contracting-out is not advantageous per se.

The conclusion drawn, however, must be that the findings *challenge* the hypothesis by clearly showing evidence of contracting-out being disadvantageous.

This conclusion is complicated by the fact that the User obviously *wished* to resource this service by an external means. Contracting-out this particular bundle was too disadvantageous to implement. Subsequently the User effectively changed its approach and opted for outsourcing FM completely.

This is a case, therefore, where focusing just on the pros. and cons. of contracting-out does not provide a full understanding of the factors which influence strategic decision-making regarding the resourcing of FM services.

## CHAPTER TWELVE

### CASE STUDY FOUR:

#### Estates Services in a Private Hospital Group

##### PREAMBLE

##### Protocol Requirements

The protocol for case study data collection and analysis was developed in Chapter Seven (Section 7.2) above; the working document being replicated at Appendix V.

The model developed at Fig. 12.1 below summarises the requirements of the protocol and acts as a 'route map', describing the arrangement and marshalling of this study.

To safeguard and respect the confidentiality under which the data was made available, the identity of the Organisation to which the Unit of Analysis belonged will not be specified in written form but, being the same organisation as for the Pilot Case Study, will be referred to herein as 'PCSO'. By employing this tactic, the description of the study and the findings do not have to be disguised. Consequently there is no devaluing of the main points.

This study describes research undertaken to establish how PCSO resourced their estates services (ES) advice, and the reasons for the adopted method.

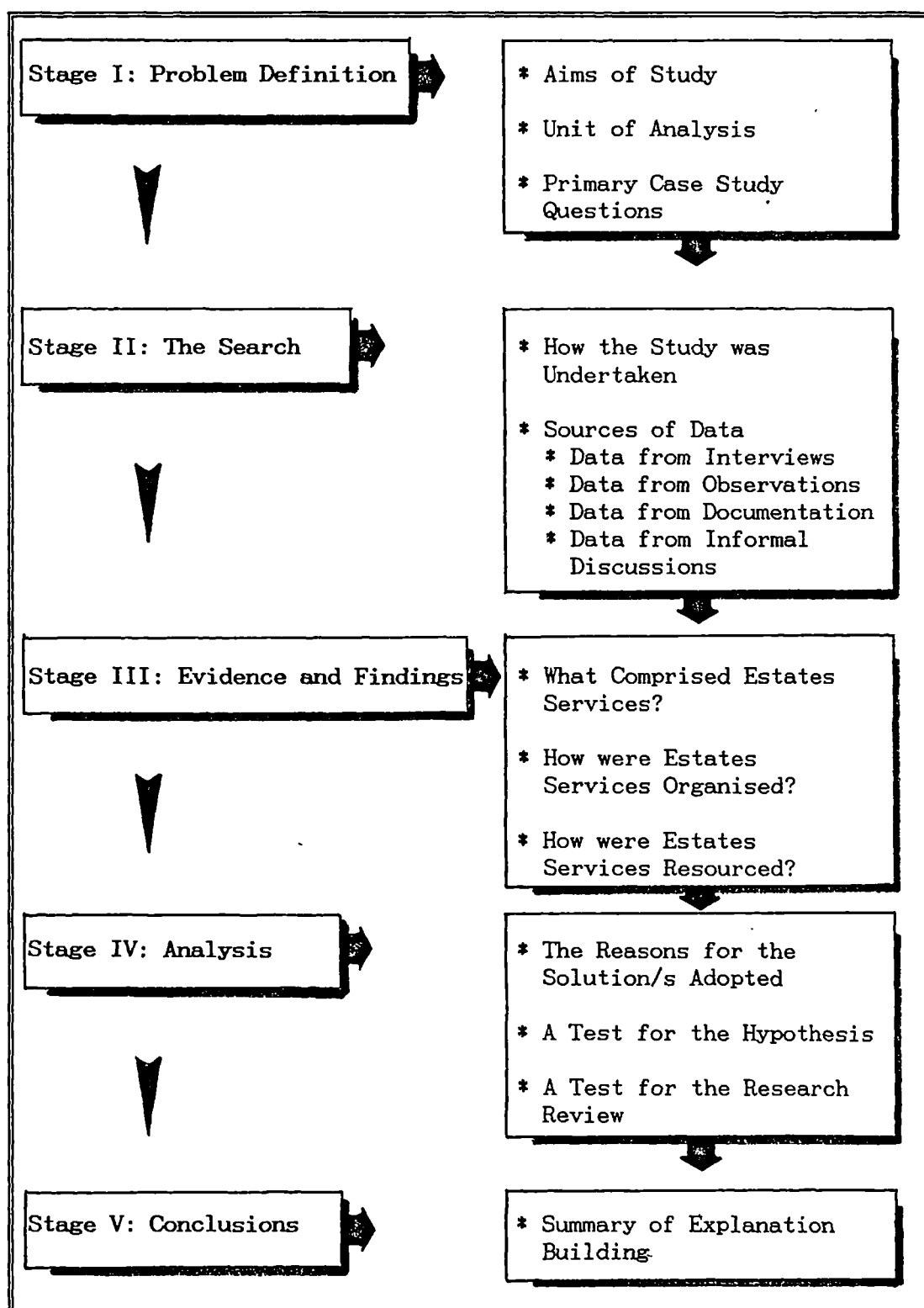


Fig. 12.1 : Case Study Four Route Map

## STAGE I : PROBLEM DEFINITION

### 12.1 INTRODUCTION: PURPOSE OF CASE STUDY FOUR (CS4)

The purpose of this study is to ascertain the method/s by which estates services were resourced within PCSO, and by subsequently analysing the findings, to establish the User's perceived advantages and/or disadvantages of contracting-out.

### 12.2 UNIT OF ANALYSIS

#### 12.2.1 Factors Governing the Choice of the Organisation for Case Study Four

Case Study Three, carried out during the first year of this project, focused on the Estate Surveying Service of a public sector organisation.

A principle of the Research Project Plan was to seek convergence of evidence and literal replication. For this reason, it was considered desirable to study the estates surveying services of another organisation, to provide the probability for more directly like-for-like comparisons.

The original PCSO was chosen for this study for the following reasons:

- (i) The original choice of PCSO, based on ready accessibility to data; a willingness to help; the relevant introduction of FM; and an alternative to office use, had been justified during the first eighteen months of the project (CS4 commenced Summer '92).

- (ii) PCSO provided a contrast to CS03 in terms of size but not in terms of geographic representation. One variable and one constant was considered a good choice.
- (iii) PCSO appeared to possess appropriate case study material for estates surveying.

#### 12.2.2 The Unit of Analysis: CS4

When the PCSO was chosen as the subject for this study, the manner in which estates surveying was undertaken, (i.e. in-house, or out-house resourced), was not clear to this researcher.

The unit of analysis was the provision of estates services, (ES), in whichever manner it was procured.

#### 12.2.3 Period of Study

The study commenced in the summer of 1992, and collection of evidence was completed by September 1993.

Note 1: It is pertinent to record that this study was undertaken after the collection of evidence of CS3 was completed, but *before* any analysis or conclusions were drawn from that study.

Note 2: The research for this study was undertaken as an entity, separate from the studies into PCSO's hotel services and clinical sterilizer maintenance (see Section 12.5 below). However, it was as a result of the ongoing involvement with PCSO because of this study (and CS2) that this researcher was aware of developments in the Hotel Services function, and which subsequently led to the continuation of the Pilot Case Study.

- (ii) PCSO provided a contrast to CS03 in terms of size but not in terms of geographic representation. One variable and one constant was considered a good choice.
- (iii) PCSO appeared to possess appropriate case study material for estates surveying.

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### 12.3 THE AIM OF CASE STUDY FOUR

The aim of the study was:-

- (i) to establish the means by which estates services were undertaken within PCSO's FM function, i.e. how it was resourced;
- (ii) to investigate the decision-drivers for this choice;
- (iii) to identify, from the evidence, advantages and/or disadvantages of contracting-out as perceived by the User;
- (iv) to analyse the findings to determine:
  - \* whether the findings supported the hypothesis of this research project;
  - \* whether the findings supported the findings of the Research Review;
  - \* the level of generalisability to other findings in the project.

The discipline of the study is to set down, in orderly form, sufficient detail of the CS4 in order for the process to be replicable. To achieve this aim the study seeks, by following the Research Project Plan, to:-

- \* outline the PCSO
- \* record the parameters of the unit of analysis
- \* record the field procedures adopted
- \* record the sources of data used.
- \* record the evidence collected

The purpose of the study was to enable an indepth examination to be undertaken of the unit of analysis, and the organisational factors governing or restricting it.

## 12.4 THE QUESTIONS

The preliminary remarks made in the first two paragraphs of Section 9.4 of the PCS (Chapter Nine) apply equally to this case study, and will not be repeated here.

The *primary* questions for CS4 were designed progressively to build-up:-

- \* an understanding of the unit of analysis;
- \* to identify as findings, key determining factors for reasons governing the way the unit of analysis, Estates Services, was organised.

The following figure (Fig. 12.2) describes the line of questioning adopted:-

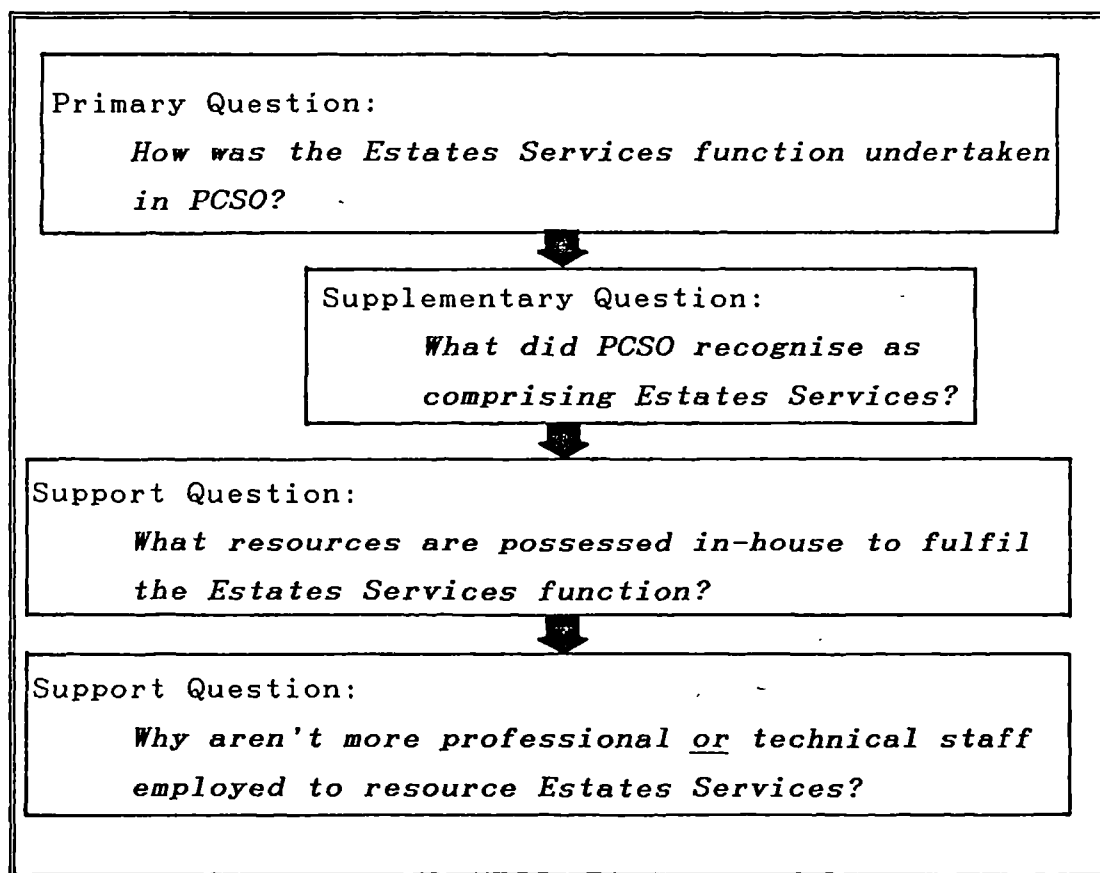


Fig. 12.2: Line of Questioning



## STAGE II: THE SEARCH

This section records the sources from which, and by which, evidence/data was gathered, and describes the manner in which the study was undertaken; linking the fieldwork with the 'protocol' refined by the PCS experience, and laid down in the Research Project Plan.

### 12.5 HOW THE STUDY WAS UNDERTAKEN

The system of data collection for this case study follows the model demonstrated in Figs. 9.3(a) and 9.3(b) of Chapter Nine, the Pilot Case Study.

The study was undertaken by interviewing staff of PCSO, and by examining documentary evidence. Further, observations were recorded when visiting four of PCSO's locations.

Following the form of other studies in this project, the collected evidence was then analysed. Interim findings were discussed with the Key Informant, as part of the validation process, before concluding the final findings.

From the findings, conclusions relevant to this particular case were drawn; these conclusions then became available for the next stage in the project, i.e. cross case analysis and generalisations.

## 12.6 SOURCES OF DATA

### 12.6.1 Indepth Interviews

The study was undertaken by interviewing staff in three locations.

*Group Facilities Manager* (Director of Planning and Facilities, post January '93) was the Key Informant. Interviews were carried out, on the subject of estates services, twice at Location 1 (HQ) and twice at this researcher's office. The questions covered the PCSO's strategy for estates services, and how this strategy was implemented. Meetings, which provided the detail of PCSO generally, are listed in Section 9.5 of the PCS (Chapter Nine).

#### *Hospital Manager (HM)*

A structured interview was undertaken with the HM of Location 2 (a provincial hospital site), to get a direct User's view of estates surveying.

#### *Hotel Services Manager (HSM)*

A structured interview was undertaken with the HSM of Location 2. The questions focused on the way in which estates services were carried out at an operational site.

### 12.6.2 Data Collected by Observation (Direct)

Evidence was collected by observation during visits to four PCSO locations, viz:

- \* Location 1 over six visits;
- \* Locations 2 and 4 (the latter being a regional head office/hospital site) during one visit to each location;
- \* Location 3 (a London hospital site) during fourteen visits over a seven day period.

Notes were made regarding the extent of the estate; the standards of maintenance for fabric, structure, services

and grounds; health and safety issues; the general condition of the working environment.

#### 12.6.3 Documentation including Archival Records

The following schedules the principal records from which specific data for this case study has been collected; general information regarding PCSO was obtained from the documentation noted at 9.6.3 of the PCS.

- \* The FM Manual for PCSO
- \* Electricity, Gas and Water Report dated May '91
- \* Organisational charts:-
  - January '88
  - January '89
  - January '90
  - January '91
  - January '92
  - January '93
- \* FM Professional Structure Chart, 1991
- \* FM Organisation Charts (3 No.) for the period 1989/92
- \* 'FM in PCSO' - Paper by Group FMgr., August '92
- \* 'Convincing the Board' - Paper by Group FMgr., 30.10.92
- \* 'Integrating Support Services' - Paper by Group FMgr., 9.12.92
- \* 'Evaluating Success of Support Services' - Paper by Group FMgr., 9.12.92
- \* FM in (PCSO) - undated

#### 12.6.4 Informal Discussions

*Telephone discussions:* four lengthy telephone calls were held with the Principal Informant to verify aspects of information collected.

*Written notes:* were kept of all meetings, 'phone calls, site observations, plus two transcribed tape recordings.

### STAGE III: EVIDENCE AND FINDINGS

#### Supplementary Question:

*What did PCSO recognise as comprising estates services (E.S.)?*

The evidence of the development of FM in PCSO is dealt with in the PCS. From the documents examined, ES (then known as 'Estates Management') came into effect in January 1989. The process had commenced in May 1988, with the appointment of a replacement Property Manager, who brought about the merger of the 'Property' and 'M&E Services' functions, and the subsequent decentralisation to regional level of the newly formed Estates Management function, with effect from 1.1.89. The manager in charge took the title, Group Estates Manager (GEM).

At this stage ES comprised responsibility for:-

- \* Land and property acquisition and disposal;
- \* Buildings and engineering maintenance and replacement programme.

A year later, the GEM became the Group Facilities Manager, and between January 1990 and August 1992 (when this study started), the FM Department became responsible for the following eleven categories:-

- 1) Land and Property Acquisition and Disposal
- 2) Planning, Design and Procurement for new and extended Hospital Facilities
- 3) Building and Engineering Maintenance and Replacement programme
- 4) Furniture and Equipment Procurement, Maintenance and Replacement programme
- 5) Utility Services Negotiations and Energy Conservation
- 6) Medical and Surgical Consumable Products Procurement and Management
- 7) Pharmaceutical Products Procurement and Management

- 8) Printed Materials and Stationery Procurement and Management
- 9) Corporate Supply and Distribution Contract Negotiations
- 10) Hotel Services Management including Catering, Laundry and Domestic Services
- 11) Waste Disposal

Because of the imposition of an FM strategy, the identity of ES became less clear over this period. The fact that the FM Department management staff took on broad responsibility across disciplines, is a result of the tactic of multi-skilling.

Comparison of the organisational charts for 1989 and 1993 show that, at management level, the changes incorporated the post-1991 merger of Planning/Project Management staff with the newly formed FM Department, and with the respective managers taking a job description of 'Facilities Managers'.

Within the FM Department, although not visibly ring-fenced, the newly appointed Group FMgr. took responsibility for the three management tiers involved in ES, viz:

|           |   |                                                  |
|-----------|---|--------------------------------------------------|
| Corporate | : | HQ staff                                         |
| Regional  | : | Regional Facilities Managers                     |
| Hospital  | : | Facilities Managers and<br>Maintenance Engineers |

The functions identified as ES during the period of the study comprise the two functions as at 1.1.89 (as above), plus:

- \* Utility Services Negotiations, and
- \* Energy Conservation

The FM Department, as part of its remit, became the function responsible for the whole maintenance of property within PCSO. This responsibility ranged from the acquisition of property, in either clear site or standing

investment form, through the whole gambit of building maintenance including grounds, fabric, structure, services and plant; and including both the management and operational aspects.

The following table (Table 12.1) describes the range of work and values encountered during the study of ES, excluding acquisitions (for which the information was considered too sensitive to permit reproduction).

Table 12.1: Estates Services Work (1992)

| Type of ES Work                                                                    | Value £     |
|------------------------------------------------------------------------------------|-------------|
| 1. Capital Project Planning and Management (250k+)                                 |             |
| * New operating theatre block                                                      | 1.0m        |
| * Extension and refurbishment                                                      | 3.0m+       |
| * Major refurbishment                                                              | 2.0m+       |
| * General refurbishment                                                            | 0.5m+       |
| * Part refurbishment                                                               | 0.5m        |
| * Other                                                                            | <u>0.5m</u> |
|                                                                                    | 7.5m        |
| 2. Minor Capital Project Planning and Management (up to 250k)                      |             |
| * Various refurbishment projects; internal redecorations; plant replacements, etc. | 4.0m        |
| 3. Maintenance                                                                     |             |
| * Structure                                                                        |             |
| * Fabric                                                                           |             |
| * Mechanical Plant                                                                 |             |
| * Electrical Plant                                                                 | (Total)     |
|                                                                                    | 3.5m        |
| 4. Fuel, etc.                                                                      |             |
| * Gas                                                                              |             |
| * Electricity                                                                      |             |
| * Water                                                                            | (Total)     |
|                                                                                    | 2.7m        |
| TOTAL                                                                              | £17.7m      |

Support Q:       *What resources are possessed in-house to fulfil the ES function?*

The very first evidence collected for this case study was the following quote from the Group FMgr. during interview in response to the above support question:

“(PCSO) only contract out (the resources required for) capital developments.”

The answer changed or 'evolved' in response to further probing about specialist maintenance of plant and machinery - for example, it was made clear that the maintenance of air conditioning units (essential in an operating theatre) was contracted-out to a series of engineering suppliers around the country; similarly for lifts, generators, etc.

The evidence to answer this question needed to be dealt with at the two agreed levels of FM, namely, management and operational (implementation).

At management level, Group FMgr.'s evidence was that the base skills of the managers were not employed for particular professional tasks; e.g. the Regional FMgr. (South East) was a Chartered Building Surveyor, but was not called upon when these skills were required; similarly, the Regional FMgr. (North) was a Mechanical and Electrical Engineer.

Observations recorded indicated that the situation was not so black and white. For example, during the study the Director of Planning and Facilities (a Chartered Surveyor) was heavily committed in the procedures of a detailed planning enquiry, and also the process of site acquisition. The role he fulfilled could generally be described as a knowledgeable client because consultants were appointed to advise, but for both these cited tasks, DoPF undertook some of the hands-on professional work (i.e. operational).

Management's role reflected the models at Fig. 2.6 Management:Operational Continuum (Chapter Two) and Fig. 3.6 The Potential for Contracting-out (Chapter Three). The overriding role was strategic-tactical management (see Fig. 9.5 Chapter Nine), with the various services requiring a greater or lesser management input.

Secondly, the managers shared their specialist knowledge between themselves, but tended not to get heavily involved in operational matters; i.e. the management of FM Department acted at the left end of the PSS continuum shown in Fig. 3.6, representing a knowledgeable client presence - suggesting a significant potential for contracting-out.

The operational level of ES itself should be divided into two, in order to express the findings clearly, viz:-

- \* Technician
- \* Professional

In the 'trade' the technicians' work is variously classified as blue-collar, industrial, 'knob twiddlers', etc. PCSO directly employed an average of between 1.5 and 2 maintenance engineers (technicians) (ME) per hospital. The ME's, at the operational level, for example, help maintain the vital clinical sterilizers (See Chapter Ten), as well as the buildings' own plant and machinery, i.e. part ES work, part work of other FM functions.

The findings show that none of the in-house staff who undertake ES work do so exclusively.

#### FINDING

The implementation of the FM strategy has resulted in multi-skilling at all levels.

At management level in the FM function, such multi-skilling tends to be termed general management.



From the evidence collected for Case Study Two, the ME's are multi-skilled (Corgi; City and Guilds 2295 for Clinical Sterilizers, etc.). They did fulfil a part management role by taking responsibility for contractors' staff on site, but the majority of their tasks were hands-on maintenance; much of which was day-to-day PPM and first aid maintenance, and predominantly involved the engineering side of ES maintenance.

The majority of PPM, other than day-to-day, i.e. monthly, quarterly, half-yearly and annual, and including statutory maintenance of plant and equipment, was *contracted-out* to specialists.

The second category of Operational - 'Professional' incorporates the actual doing of professional tasks, such as those involved in the following ES:-

- \* Property procurement - (New Build)
- \* Property acquisition and disposal
- \* Landlord and tenant issues (for 3 properties only)
- \* Statutory property-related issues, e.g. planning, building regulations
- \* Health and Safety advice
- \* Building design - Construction
- Services

In order to resource these requirements, PCSO contracted-out to suppliers such as Chartered Surveyors, Architects, QS's, M&E engineers, etc.

A synthesis of Figs. 2.6 and 9.5 produces a model to demonstrate the process, see Fig. 12.3.

The area for each service, below the straight line, indicates the extent of the service resourced in-house; above the line indicates the extent of the service resourced out-house. The wavy line shows the split between Management and Operational; with some services being split fairly evenly between Management and Operations,

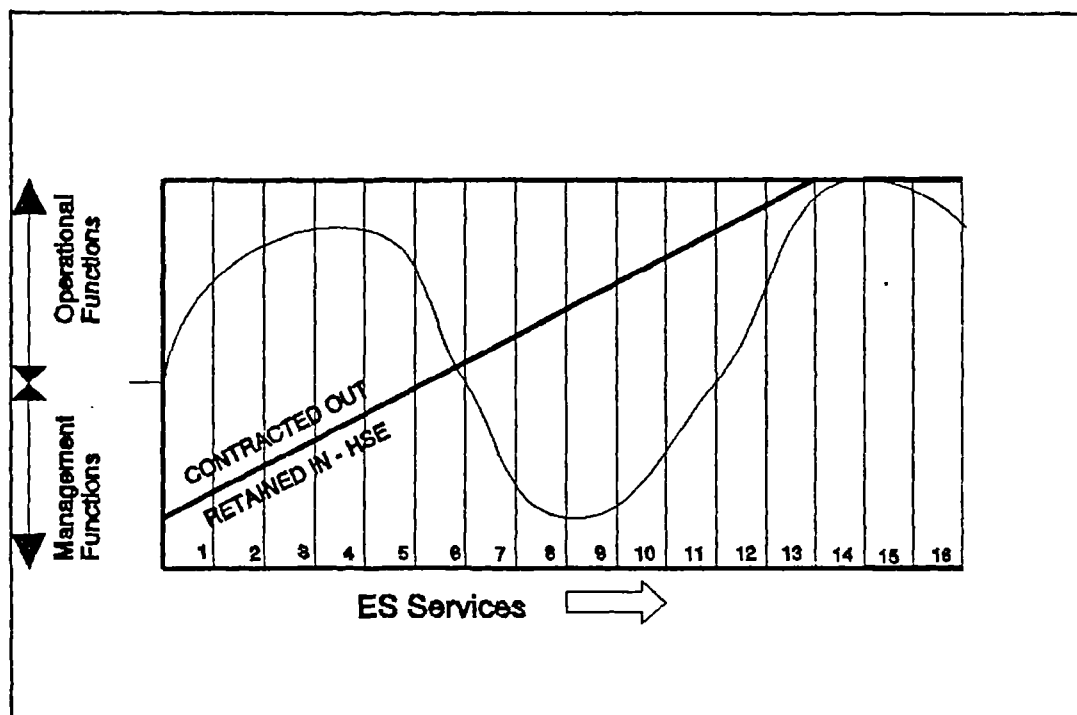


Fig. 12.3: Indicative Model of Resourcing Estates Services in PCSO

(e.g. Service 1), and others being either predominantly management, (e.g. Service 3, which could represent the monitoring of a PPM programme); or predominantly operational, (e.g. Service 8, which could represent grounds maintenance; comprising a modicum of in-house management - i.e. programming, standard setting, etc. and a mixture of contracting-out operational - i.e. hands-on doing and in-house supervision by the maintenance technician).

Broadly this model demonstrates the following finding:

**FINDING**

Some ES functions are largely *resourced* out-house, retaining a knowledgeable client management role (e.g. Service 1 where the area above the straight line greatly exceeds the area below); or alternatively some services are largely resourced in-house (e.g. Service 9).

The model also demonstrates the potential, for some services, to have all the management input resourced in-house (services 14 onwards). If the model were extended, the scenario of resourcing some operational services wholly in-house could be shown. Directly employed painters typified the latter scenario in three out of four regions.

Support Q:       *Why aren't more professional or technical staff employed to resource ES?*

(i) The data produced evidence of reasons for PCSO not employing more professional staff.

First, the 32 hospital locations only averaged 30-40 beds (36 bed average is a figure quoted by DoPF), with a typical hospital size of 4,000m<sup>2</sup>. Consequently, while the *aggregate* size of the buildings and their various plant and machinery appear large (e.g. 140+ boilers, 100+ air-handling units), individually they are relatively small buildings; unlike, for example, BUPA hospitals, which typically house 120-150 beds, or a district general hospital's several hundred beds.

Second, the locations are geographically widely dispersed.

Third, the number of newly built hospitals is small (none since 1982); i.e. there has been little work for a building design team or for site procurers.

Brought together, these factors describe a requirement for ES professional services which would not add up to a 'whole person requirement', for the individual specialisms, at below regional level. At regional level the requirement is to provide a knowledgeable client service, and this is resourced by devoting part of the Regional F.Mgrs' time to ES, with the Regional F.Mgrs. sharing their specialist knowledge with their opposite numbers. For many services, e.g. Architecture or Quantity Surveying - there is not a whole person requirement, even at national level.

Further, the requirement, when called for, would tend to be for a team; e.g. a team of building surveyors to prepare a condition survey, or a design team representing various disciplines and grades of competency for a refurbishment project.

Because of the national spread, employing one surveyor to undertake all general practice surveying work would prove inefficient because of travelling time, expense and overnight stays, lack of local knowledge, etc.

#### FINDING

PCSO employ out-house ES professionals on a location or regional basis, for the majority of professional operational tasks, because of insufficient work on a 'whole person' basis.

An example was observed at Location 4 (Bristol), where a local firm of Architects was involved in a refurbishment. Similarly, at Location 1, a local firm of Building Surveyors was involved in maintenance scheduling.

(ii) The evidence of the replacement of a directly-employed electrical technician with a contractor partly supported this proposition from a technical staff viewpoint, but also pointed to a further explanation. The data involved the

testing of electrical circuitry, etc. The problem encountered with employing an electrician, on a national basis, was that the workload required a survey of each hospital on a 3-yearly cycle. A typical year's schedule would be 11 hospital surveys and reports taking two weeks per hospital; plus the follow-up specifying and tendering of necessary works, to be followed by supervision and monitoring. DoPF estimated a total of four weeks per hospital, i.e. 44 weeks of a 47 week year accounted for. The downside of this method of working included excess travel time (unproductive time), travel and overnight costs, and the fact that electricians were found to be unwilling to spend the vast majority of the working year 'on the road', i.e. away from home. There was consequently a rapid staff turnover.

Other factors influencing the need to resource some technicians by contracting-out included:

- \* specialist skills needed for limited involvement per building, e.g. lift engineers, generator maintenance, air conditioning maintenance;
- \* specialist tools required for only a small amount of work per location, e.g. air-flow meters, damp meters, etc.

## STAGE IV: ANALYSIS

### 12.7 THE REASONS FOR THE SOLUTIONS ADOPTED

The findings show that ES are a bundle of FM Services. In all cases the strategic management was resourced in-house.

Supervisory management was resourced both internally and externally. The former was typified by a location's

maintenance technician supervising and monitoring all contractors on site.

Externally resourced management included the control of professional teams at tactical and supervisory levels (strategic and some tactical management being resourced by the in-house project managers); and the supervision of contract staff on-site by the contractor's management team, e.g. boiler maintenance engineers and lift engineers.

Operationally, ES was resourced by a mixture of in-house staff and contractors.

Cost was not a prime motivator for PCSO's resourcing decisions concerning ES.

The initial analysis of the evidence during the course of the study, suggested that tasks, which equated to a full-time requirement, were resourced in-house. Fuller analysis shows that this statement has to be amended, to read that *most* estate services tasks which, when linked together with other compatible FM tasks equated to a full-time requirement, were resourced in-house - the exception being where, due to the 'scale of operation', the full-time requirement results in inefficient use of time due to the dispersity of locations. However, the multi-skilling used to create 'whole person' requirements, especially at local level, demonstrates the value of PCSO adopting an FM strategy.

The foregoing apparently describes the main driver of the decision-making; i.e. if a skill was not required on a continual basis, and could not be efficiently incorporated into a whole-time role by linking with other compatible skills within FM, it was resourced externally. For example, lift engineers concentrate solely on one specialism and, there being insufficient work within PCSO for such an engineer (within a reasonable travel-to-work distance), lift maintenance was contracted-out. However,

the factors which governed this situation were identified by analysing the case of the electrical technician, resulting in the following:

#### Driving Factors

The analysis of the evidence identifies two closely inter-related driving factors, which determined that PCSO would contract-out ES tasks that equated to an infrequent or irregular resource skill requirement at location level, viz:-

- (i) The wide geographic dispersion of locations encouraged contracting-out by rendering work-sharing between locations impractical.
- (ii) The size of the individual locations (i.e. relatively small) encouraged contracting-out because a viable quantum of work was not generated for many sectors of ES.

The driving factor, directing that ES *management* functions were retained in-house, was the corporate policy to control and direct FM Services, by means of an internal management structure, which was integrated into the overall management structure of the business.

## 12.8 TEST AGAINST THE HYPOTHESIS

*Hypothesis:* 'The potential advantages to a User organisation of contracting-out discrete-aspects or bundles of FM Services are likely to outweigh the potential disadvantages'.

The evidence of this study into the way in which Estate Services were resourced in the PCSO, demonstrates that decisions of whether to contract-out or resource in-house were not based exclusively on the relative merits of

advantages over disadvantages, or vice versa, but on other influences; primarily in this case:-

- \* Whether a given skill was either required substantially full-time, or was able to be efficiently dovetailed with other FM skills to form a whole person multi-skill package.
- \* The operational need for an efficiently delivered service.

Factors which governed these influences, apart from the type of business, were size and geographic location of the facilities, i.e. the '*scale of the operation*'.

Where a full-time staffing requirement did not exist *within the FM function* (e.g. an architect), or where a full-time requirement did exist but could not be *efficiently* provided due to problems associated with geographic dispersity (e.g. electrical testing), the task was contracted-out.

The culture of the organisation favoured resourcing tasks in-house, if possible. Conversely, the balance of advantages/disadvantages, whilst not extreme was toward a dominance of advantages (i.e. resourcing out-house). Note: The term "*resort to contracting-out*", to describe the PCSO's decision-making when the in-house solution appeared unsatisfactory, was not considered appropriate. Rather, PCSO *utilized* contracted-out resources when, within the context of their organisation, good business management directed it was necessary.

### Summary

The case study does not fully support the explicit generalisation of the hypothesis, because of the incidence of relying on in-house resource, but *neither* does it propose a rival proposition that disadvantages of contracting-out are likely to outweigh the advantages.



There is an apparent need to consider the hypothesis separately for management and for operational services.

## 12.9 TEST AGAINST THE RESEARCH REVIEW

Tables 12.2(a) and 12.2(b) below schedule, respectively, the advantages and disadvantages of contracting-out, which were identified by the evidence collected for this case study; and compare those findings with the findings of the Research Review, by means of cross-referencing. (Note: It was an important part of the methodology adopted that the *scheduling* should be completed *before* the comparisons were made.

Table 12.2(a): Case Study Four: Research Review  
Comparison of Advantages of Contracting-out

| ADVANTAGES OF<br>CONTRACTING-OUT                                                                                          | CROSS REFERENCE TO<br>RESEARCH REVIEW.               |
|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| <b>Primary Advantages</b>                                                                                                 |                                                      |
| * Provides an intermittently<br>required resource:                                                                        | No.4: Improved<br>operational efficiency             |
| : specialist skills                                                                                                       | No.7: Overcomes skills<br>shortage/specialist skills |
| : specialist equipment/tools                                                                                              | No.5: Increased flexibility/<br>workload pattern     |
| : improved efficiency of<br>delivery                                                                                      |                                                      |
| * Provides an efficient solution<br>where a 'whole person'<br>requirement can only be<br>resourced by inefficient means   | No.4: Improved operational<br>efficiency             |
| <b>Spin-off Advantages</b>                                                                                                |                                                      |
| * Provides local knowledge<br>for intermittently required<br>skills (which would be<br>absent if resourced<br>nationally) |                                                      |
| * Overcomes staff problems<br>due to away-from-home<br>working                                                            | No.1: Reduced Costs                                  |
| * Contractors responsible<br>for training and currency<br>of knowledge                                                    | No.6: Latest technology<br>and specialist knowledge  |

Table 12.2(b): Case Study Four: Research Review  
Comparison of Disadvantages of  
Contracting-out

| DISADVANTAGES OF<br>CONTRACTING-OUT                                                                                                                                             | CROSS REFERENCE TO<br>RESEARCH REVIEW                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| <b>Primary Disadvantages</b>                                                                                                                                                    |                                                                 |
| * Lose management control                                                                                                                                                       | No.9: Worse strategic focus                                     |
| * Against culture of<br>organisation                                                                                                                                            | No.14: Contrary to the<br>culture of the User's<br>organisation |
| <b>Spin-off Disadvantages</b>                                                                                                                                                   |                                                                 |
| * Increase number of personnel<br>involved; e.g. several<br>contractors required to<br>resource skills currently<br>undertaken by one in-house<br>worker through multi-skilling | No.13: Supplier's capacity<br>No.15: Supplier's<br>availability |
| * Increases the management<br>resource necessary to<br>supervise contract staff                                                                                                 | No.8: New, different<br>management problems                     |
| * Reduces individuals'<br>knowledge of specific<br>building/plant                                                                                                               | No.10: Lose in-house<br>expertise                               |
| * In-house retained managers<br>lose or reduce their core<br>skills through lack of<br>practise                                                                                 | No.10: Lose in-house<br>expertise/capability                    |

The pattern of the advantages and disadvantages, forthcoming from the analysis of this case study's findings, reflects the fact that PCSO utilised both in-house and contracting-out resources; i.e. the categories generally cross-relate with accepted Research Review categories, but the pros. and cons. tend more toward a balance, with a bias toward advantages (particularly for

operational services) rather than displaying a *strong* preference.

The term 'intermittently required resource' is used to variously describe a requirement at location level, regional level or national level; e.g. a resource required only occasionally at each location = intermittent (and because of geographic dispersal of the locations is resourced out-house).

Two findings are worthy of further analysis to consider whether they constitute new categories:

- (i) Provision of *local* knowledge. In PCSO's case this could be interpreted in two ways; one as an advantage of contracting-out, and one as a disadvantage. Examples of the former would be local knowledge of:
  - (a) the property market;
  - (b) building/maintenance contractors;
  - (c) building control officials.

The closest advantages category recognised by the Research Review is 'specialist skills' but this specifically relates to skill base, not knowledge base, and for this reason, provision of local knowledge is proposed as a new advantage category.

An example of local knowledge as a disadvantage of contracting-out would result from interpreting 'local' to mean the buildings of PCSO at a given location; for instance local knowledge of:-

- (a) the plant and machinery, together with its maintenance history and quirks; or
- (b) hidden services distribution (wiring, ductwork, etc.);

i.e. directly-employed staff would be likely to possess more information than contract workers.

Consequently the advantages and disadvantages of contracting-out relating to local knowledge could be classified as:

- (a) Advantage of contracting-out: local knowledge *external* to the User.
  - (b) Disadvantage of contracting-out: lack of local knowledge of User's facilities.
- (ii) Contracting-out increases the number of workers involved, albeit not on a full-time basis. PCSO employ multi-skilling techniques and, because Estates Services was within the FM group, there is a wider range of skills with which to form groups; e.g. the ME's multi-purpose role. If these skills were contracted-out, such bespoke multi-skilling would not be available and, consequently, more individuals would be required to provide the individual parts. This would increase management burden (disadvantage category 8) but the case study provided no evidence of other knock-on effects of several contractors supplying 'bit parts', and therefore it is not proposed to formulate a new category.

Generally, the comparison of the evidence with the Research Review results greatly assisted the analysis process and justified the Research Review's inclusion in the research strategy.

## STAGE V: CONCLUSIONS OF CASE STUDY FOUR

1. Analysis of the evidence identifies inter-related driving factors which determined that PCSO would contract-out part of the ES, despite a cultural preference for directly-employed workers; i.e. the quantum of work required to be undertaken, governed by

factors of size and geographic dispersion of the organisation.

2. The case study casts some doubt on the hypothesis because of the incidence of tasks which were resourced by in-house means, in particular management functions. This suggests a refinement might be to consider the hypothesis separately for management and for operational services.
3. The analysis suggests a correlation between (i) an equivalence of findings compared with Research Review categories, and (ii) the extent to which both in-house resourcing and contracting-out are utilised; i.e. a tendency towards the balancing of advantages and disadvantages anticipates the User employing a mixed resourcing approach.
4. PCSO's starting base was to prefer to resource skills from an in-house supply; i.e. this study suggested it was the culture of the organisation to prefer to employ direct.
5. PCSO would acquire Estates Services by contracting-out if:-
  - \* a skill was required intermittently and could not be incorporated into a whole-time FM role; or
  - \* a role, equivalent to whole-time working, could not be efficiently resourced because of geographic dispersion of locations.
6. PCSO retained strategic management and knowledgeable client skills in-house, plus project management (tactical) skills, because of the corporate policy of management integration.
7. An advantage of the adoption of FM principles was to enable PCSO to employ workers in the FM function who were multi-skilled across previous functional

boundaries; e.g.<sup>1</sup> technicians possessing both engineering and estates services skills; e.g.<sup>2</sup> managers with a particular professional skill controlling other unrelated support services operations. In the case of ES, this method of working improved operational efficiency.

8. The evidence suggests that where local knowledge of matters *external* to the User's organisation is required, contracting-out can be an advantageous method of securing it. However, conversely, the local knowledge of the User's own facilities may be better provided by an in-house resource.
9. The data revealed that the User was *not* primarily cost-motivated when considering resource decision-making.

## CHAPTER THIRTEEN

### CASE STUDY FIVE:

#### Catering Services for a London Office User

##### PREAMBLE

##### Protocol Requirements

The protocol for case study data collection and analysis was developed in Chapter 7 (Section 7.2) above; the working document being replicated at Appendix V.

The model developed at Fig. 13.1 below summarises the requirements of the protocol and acts as a 'route map', describing the arrangement and marshalling of this study.

To safeguard and respect the confidentiality under which the data was made available, the identity of Case Study Organisation Five will not be specified in written form, but will be referred to as 'CS05'. By employing this tactic, the description of the study and the findings do not have to be disguised. Consequently there is no devaluing of the main points.

This study describes the research undertaken to establish how CS05 resourced the catering service provided by their FM function in their London locations, and the reasons for adopting that method.



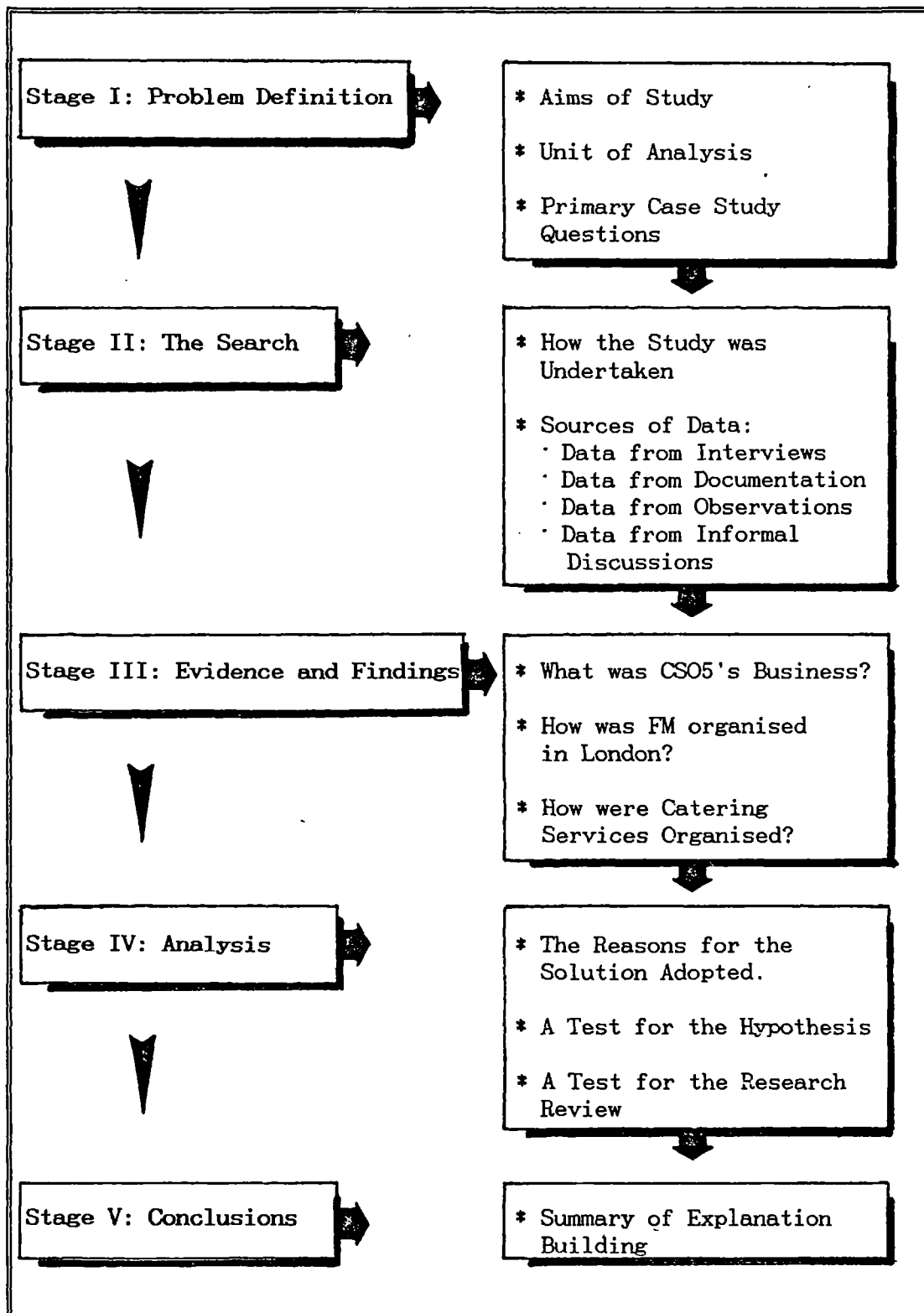


Fig. 13.1: Case Study Five Route Map

## STAGE I : PROBLEM DEFINITION

### 13.1 INTRODUCTION: PURPOSE OF CASE STUDY FIVE (CS5)

The purpose of this study is to ascertain the method/s by which catering services were resourced in the London locations of CS05; and by subsequently analysing the findings, to establish User-perceived advantages and/or disadvantages of contracting-out.

### 13.2 UNIT OF ANALYSIS

#### 13.2.1 Factors Governing the Choice of the Organisation for Case Study Five

The Pilot Case Study of this project focused on Hotel Services (HS). Following the principle of seeking convergence of evidence and literal replication, it was considered desirable to carry out a study of a part of Hotel Services as undertaken by another organisation. An important element of the HS function had proved to be catering, and it was decided to examine the catering services of an organisation in a different market sector.

CS05 was chosen for the following reasons:-

- (i) The previous incumbent, as Facilities Manager at CS05, had been one of the original informants used on the sounding-board for the project.
- (ii) CS05 was a member of the Cornell Facility Management Research Program, and some general data had been made available to this researcher during the Preparatory Phase of this project (both prior to and following the time spent at Cornell University).

- (iii) CS05 was a member of the LINK project; as a consequence there was ready accessibility to data and a willingness to assist with research.
- (iv) CS05 provided a contrast to PCSO in terms of size and market sector. There were few obvious common factors between the two organisations, except CS05 operated a well-developed FM system, which co-ordinated all support services. This meant there was at least one constant between the two studies; and by restricting the study to CS05's London operation, a very similar size of organisation, in terms of staff numbers, resulted.

#### 13.2.2 Description of Case Study Organisation Five (CS05)

CS05 was an international firm of accountants, represented in 670 offices located in 110 countries, and employing approximately 70,000 staff worldwide.

The core business was the provision of professional accountancy services, including tax consultancy.

In the U.K. there were 27 locations, of which six were in London. The U.K. staff roll totalled 7,000, half of which was located in the capital.

For the purposes of this comparative case study, the research was limited to CS05's London locations.

#### 13.2.3 The Unit of Analysis: CS5

CS5 returns to the principle of investigating an unfamiliar and non-property related aspect of a FM service, with the ambition of showing the findings in sharper relief. Catering services was chosen as the Unit of Analysis for

this reason and for its comparability with PCSO's catering function.

#### 13.2.4 Period of Study

This study was carried out between April and September 1993.

It is pertinent to note that the evidence was collected after the majority of data for PCSO had been gathered, but before any findings had been identified or analysis undertaken.

### 13.3 THE AIM OF CASE STUDY FIVE

The aim of the study was:

- \* to gain a general understanding of the business of CS05;
- \* to determine, in broad terms, how and where FM fitted into the organisation;
- \* to establish the means by which catering services were undertaken within the London locations of CS05;
- \* to identify the drivers for resourcing in this manner;
- \* to recognise, from the evidence, advantages and/or disadvantages of contracting-out the service as seen from the User's viewpoint;
- \* to analyse the findings to determine:-
  - generalisability to PCSO's catering service;
  - level of generalisability to other findings in the project;
  - whether the findings of CS05 supported the findings of the Research Review;
  - whether the findings supported the hypothesis of this research project.

The discipline of the study is to set down, in orderly form, sufficient detail of the case study in order for the

process to be replicable. To achieve this aim this study seeks, by following the Research Project Plan, to:-

- \* outline the CS05;
- \* record the parameters of the unit of analysis;
- \* record the field procedures adopted;
- \* record the sources of data used;
- \* record the evidence collected.

The purpose of the study was to enable an indepth examination to be undertaken of the unit of analysis and the organisational factors governing or restricting it.

#### 13.4 THE QUESTIONS

The preliminary remarks made in the first two paragraphs of Section 9.4 of the PCS (Chapter Nine) apply equally to this case study, and will not be repeated here.

The *primary* questions for CS5 were designed progressively to build-up:-

- \* an understanding of the unit of analysis;
- \* to identify as findings, key determining factors for reasons governing the way the unit of analysis, catering services in London, was organised.

The following figure (Fig. 13.2) describes the line of questioning adopted:-

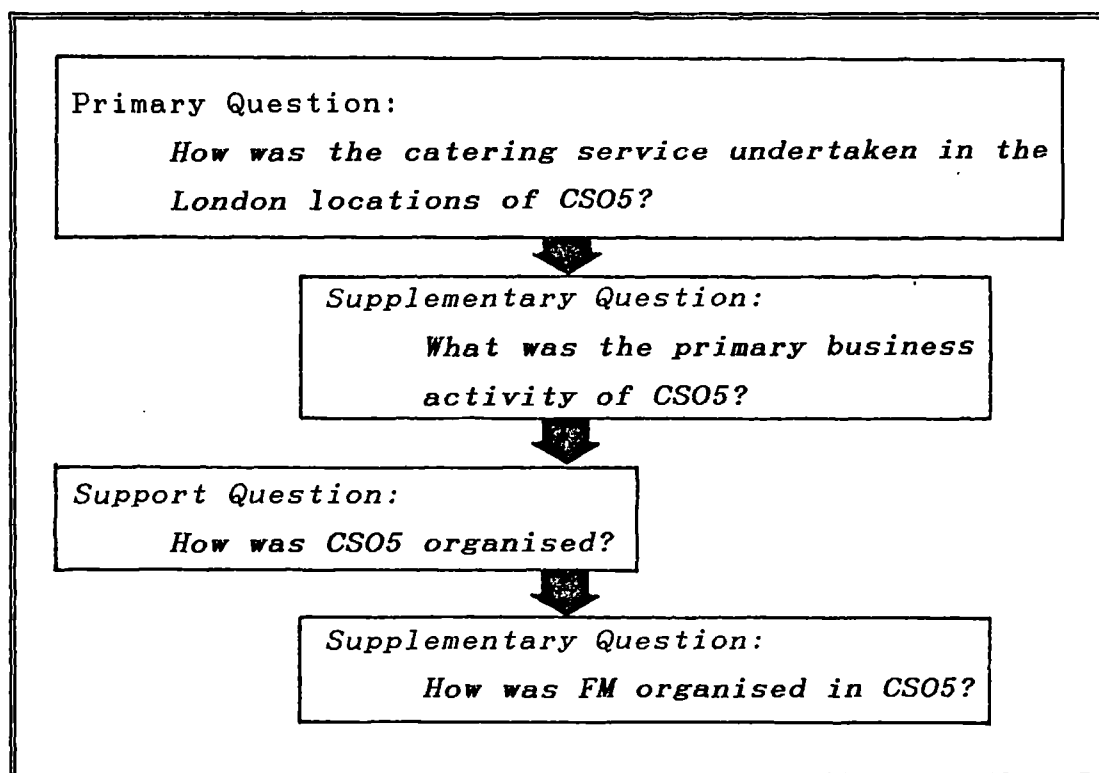


Fig. 13.2: Line of Questioning

## STAGE II : THE SEARCH

This section records the sources from which, and by which, evidence/data was gathered; and describes the manner in which the study was undertaken; linking the fieldwork with the 'protocol' refined by the PCS experience, and laid down in the Research Project Plan.

### 13.5 HOW THE STUDY WAS UNDERTAKEN

The system of data collection for this case study follows the model demonstrated in Figs. 9.3(a) and (b) of Chapter Nine (the Pilot Case Study).

The answer to the research questions were primarily sought by interviewing the Director of Administration, as Key Informant, who was based at Location 1 (London North).

Supporting evidence was recorded from:

- \* informal discussions with other staff;
- \* observations recorded during two visits to Location 1 and one visit to Location 2 (London South).

Following the form of other studies in this project, the collected evidence was then analysed. Interim findings were discussed with the Key Informant as part of the validation process before concluding the final findings.

From the findings, conclusions relevant to this particular case were drawn; these conclusions then became available for the next stage in the project, i.e. cross case analysis and generalisation.

### 13.6 SOURCES OF DATA

#### 13.6.1 Interviews

*Director of Administration (DoA)* : Two indepth interviews were held with the DoA at his office in Location 1, the second interview being tape-recorded. During the interview, various other staff, including the person manning the help desk and three members of Central Support Services (CSS) staff, were consulted by DoA on specific points; and documents, including wallcharts, contract documents, performance specifications, records, were shown and discussed.

*Client Services Manager (CSM)*: An interview was held at Location 1 with the CSM, as the manager directly responsible for catering for the London presence.

*Informal interviews/discussions:* were held with DoA on a regular basis during the course of the study; and at analysis stage, a verification of information session was conducted by telephone.

#### 13.6.2 Documentation

The following documents were obtained:

- \* '(CS05) Approach to Total Quality Facilities Management'
- \* Organisational chart of London Central Support Services
- \* Organisational chart of General Services
- \* Organisation chart of Premises
- \* Organisational chart of Telecommunications
- \* Facilities Operations Desk Bulletin
- \* 'Worldwide Business' - Corporate Brochure
- \* 'Leading Advisers to the World's Business' - Information Sheets

In addition, the contents of the documents, referred to in the indepth interviews, were used for evidence.

#### 13.6.3 Observation

Direct observations were recorded during the three visits (as noted in 13.5 above). One visit included sampling the catering service product (i.e. participant observation of the level of service provided, and standard of food produced).

### STAGE III : EVIDENCE AND FINDINGS

Supplementary Question:

*What is the primary business activity of CS05?*



The traditional response to this question was: "a firm of accountants". However, the evidence showed that the core products of CSO5 extended substantially beyond their original raison d'être.

DoA suggested that the core products could be considered "any professional service that money can be made out of" - a philosophy that would no doubt make many professionals from other disciplines shudder because of the underlying truth - but perhaps not suitable as a general descriptor.

Managers from the fee earning side of the firm tended to describe the organisation, variously, as management consultants or management accountants, and suggested that the core skills were accountancy and general business skills.

#### FINDING

CSO5 was a firm which sells to clients professional services, primarily accountancy and business management.

Support Question: *How is CSO5 organised?*

CSO5 was an accountancy and business management practice, structured within an international holding organisation. The U.K. operation's legal entity was based on a partnership.

The London presence was housed in a total of fourteen buildings, recognised for organisational purposes, as six locations due to inter-linking. These six locations were then grouped together into two 'campuses' - namely London North and South. The former located in the City, the latter in the City of Westminster on the South bank of the Thames. The locations, within a campus, were all within short walking distance of each other. Total space provided

approximated to 400,000 sq. ft., in buildings ranging in age from the late 1960's to early 1980's. All buildings were held on leaseholds.

Supplementary Question:

*How is FM organised in the London offices of CS05?*

Within CS05, FM was seen as the grouping together of all support services. In London, this FM Department was known as Central Support Services (CSS), and reported to the U.K. Director of Administration, who in turn reported direct to one of three Managing Partners.

CSS comprised 175 staff, of whom approximately 60 were contractors' implants. The annual budget, controlled by DoA, amounted to approximately £34m for 1993 (a figure which included allowances for building rents, rates and service charges).

Catering Services in London reported to the Client Services Manager (CSM), who in turn reported to the General Services Manager (see Annex 1).

Primary Question:

*How was the catering service undertaken in the London locations of CS05?*

The expectation of straightforward data, indicating a simple form of organisation within a well established 'FM' department was, as per previous case studies, once again not forthcoming.

Each campus had a kitchen, staff restaurant and dining room facilities. But the North Campus was resourced by in-house staff and the South Campus by contract staff. Why?

The answer proved to be historical. CS05 was the combination of the merger of two major firms of

accountants, which occurred circa 1989. The two HQ's were retained post-merger, each being the centre of a campus, and it was in those buildings that the catering facilities were located.

#### FINDING

One pre-merger firm historically contracted-out catering, the other resourced it in-house.

This finding made the subsequent evidence even more attractive; i.e. a direct comparison between the two alternatives of in-house and contracting-out, within the same organisation.

A Support Question became:

*Why, four years after a merger, in a well co-ordinated CSS department, is catering treated differently on the two sites?*

#### (i) London South

The structure of catering services at London South had undergone change shortly before the start of the study. The main catering provision (i.e. for staff) had been contracted-out for a considerable period (no documentary evidence existed, but estimates ranged from not less than ten years to more than fifteen years). The catering for 'client dining' (a term used to describe on-site entertainment of clients and private functions for partners) had been resourced as a separate entity, because of the perceived need for a discreet service - i.e. both a quality service and a high level of trustworthiness - resulting in client dining being resourced by directly-employed staff.

Since the merger (though not as a result of it), the standard of the in-house team providing client dining had

deteriorated. DoA and CSM both considered this was due to the unsatisfactory level of competence of the in-house catering manager, who had allowed hygiene levels, stock control and stock-keeping methods to fall below an acceptable standard.

Another factor cited in this case was the fact that the in-house team, providing client catering at London South, were requesting overtime payments for supplying evening meals and catering for functions/receptions, etc., held outside normal office hours. Such payments were thought normal in the catering industry, but for staff in a professional private practice, were seen to be threatening an unwelcome precedent.

The decision was made that the expenditure of management time from a more senior level (i.e. CSM's time), could not be justified to resolve the problem. The service was consequently contracted-out to the existing supplier of the staff dining services.

Nine months into the new arrangement, DoA and CSM were satisfied the correct decision had been made. Hygiene and stock control had improved and all other monthly targets had either been met or surpassed. The internal client feedback on questionnaires was that the service was provided in a more professional manner; that a greater selection of dishes was available; that the food appeared fresher, and was consistently served warmer. The Partners at London South, who had expressed concern that this personal service was to be contracted-out, were reporting full confidence in the contractor within a month of the change.

**FINDING**

The decision to contract-out client dining services was based on a combination of the need for an efficiency gain, and a disinclination to increase management time expenditure in order to resolve problems.

The data showed that the whole contracted-out service at London South comprised 40 staff, undertaking purchase, food preparation and serving. Five staff were bespoke to the newly absorbed client dining service; with a contractual requirement from the supplier for a continuity of staff for that part of the service in particular, in order that both the Partners and the clients should "see the same faces". All contract staff wore 'CS05' uniform, i.e. they were 'CS05-branded' rather than supplier-branded.

The contract was for three years, but performance was reviewed annually, which included CSS staff visiting other Users to assess the standards achieved by their respective caterers. Further, CS05 employed a system of performance targets, against which the supplier's achievements were recorded on a monthly basis. The contract allowed for termination of the agreement if these monthly targets were missed three months in twelve.

*(ii) London North*

The catering services at London North comprised 32 staff, all of whom were directly-employed.

The data collected showed that the CSS management were satisfied with the performance levels, and this was backed up by the questionnaires filled out by staff (i.e. catering services clients) on a routine basis.

In the same way that the contractor at London South was reviewed on an annual basis, the auditing process was

undertaken for the in-house team, using the contracted-out service as a benchmark.

DoA considered the service worked well because of the commitment of the catering manager and senior staff, all of whom were described by both DoA and the CSM as having no career progression ambitions beyond their existing roles.

No evidence was discovered to suggest or deny a problem of overtime payment requests for London North.

Generally, no cost comparison was recorded by CSS. There was no cost data concerning the comparable cost of the previous in-house client dining at London South -v- the contracted-out solution, nor was there data comparing the two operations generally.

However, DoA considered the cost of the in-house team would be higher because of the benefits which accrued to any long-serving staff member of CS05. Surprisingly, in view of the core business, CSS did not see cost as a major influencing factor.

If cost was not a primary consideration, quality and the continuing control of quality was.

## STAGE IV: ANALYSIS

### 13.7 THE REASONS FOR THE SOLUTIONS ADOPTED

CSS had developed a policy of considering greater contracting-out of FM Services, in the wake of increasing demands from the core business for generally greater efficiency. DoA described how the early attempts to

contract-out other services of FM, including:

- \* chauffeuring;
- \* litho and offset printing;
- \* post, distribution and mail room services;
- \* fax and telecom.;
- \* security guards;

had been met with resistance from Partners, who apparently feared a reduced standard of service, including lack of control. This fear was particularly marked where a personal service such as chauffeuring or client dining were concerned. However, with increasing pressures, starting in the late 1980's due to the recession, the culture of the organisation changed - aided by a realisation that the first services to be contract-out were performing well. Further it was realised key staff could be re-employed by contractors - enabling the User, subject to careful preparation of the contract, to select which workers it wished to 'retain'.

The progressive adoption of more advanced FM techniques by CS05 within CSS and, in particular, the imposition of a total quality management philosophy (TQM), in line with the core business, brought conflicts with the staff due to the process of change.

The cited example of the change from in-house to contracted-out client dining had been initiated because the service did not match:

- \* ever-increasing statutory and regulatory demands;
- \* the standards achieved by the other catering in London locations;
- \* the increasing standards expected by the internal clients of the service.

CSS formed the view that it would be necessary to change personnel, where such personnel were themselves resistant to change; i.e. a management 'battle' was not worth the time investment. With in-house staff this course of action resulted in the extra costs of redundancy payments, but was

considered a once-only problem. If subsequent difficulties were experienced having contracted-out, these were foreseen as resolvable by change of contractor.

CSO5 had retained much of the system for catering that existed prior to merger, but within a co-ordinated CSS function. The stated preference though was toward contracting-out catering services.

The factors which maintained the status quo of retaining a part in-house resourced service were mainly to do with the quality of service. This, in turn, is seen as being due to the input of key workers, directly-employed, who had plateaued in their respective careers.

#### FINDING

CSO5's culture was in favour of contracting-out support staff, but employer loyalty to efficient FM staff retained the status quo.

DoA summarised this point, at verification stage, with the statement "(CSO5) is in the business of accounting, they are not specialist in catering and cannot provide suitable career paths or training programmes".

CSO5 discovered a double-edged sword when employing less-than-competent staff: redundancy was expensive; but the alternative of retaining those staff and adding extra management was an unacceptable waste of resource. The former exemplified the problem of service department staff, employed in-house, accruing perks over and above their own market norms. when working for a large organisation; i.e. this equates to a disadvantages of *in-house* resourcing support staff.



# FINDING

In-house FM staff can become expensive to employ relative to the market norm. AND expensive to make redundant.

This finding raised the question:

*Why were CS05 prepared to contract-out catering services, along with other support services, but not all support services?*

This case study produced evidence of an important factor in the decision-making process. DoA believed that contracting-out would only be fully successful where the service concerned could be supplied by a *mature* market.

After discussion, *mature* was understood to encompass a supplier market that:

- \* was well established; i.e. comprised a sufficient number of experienced contractors, used to providing the service with a sufficiently large pool of suitably skilled workers;
- \* understood and operated in a performance-related partnership type role with Users.

Because of this philosophy, CS05 were, for example, concerned about contracting-out both the management and the operational elements of building maintenance; on the grounds that although represented by a well-established market, the suppliers operated in a closely specified (i.e. prescriptive) contractual environment, which was orientated to being adversarial. DoA contended that this market did not generally understand performance-related contracts based on agreed service levels. Consequently, as a minimum, the *management* of building maintenance was retained in-house, as were some of the operational aspects, which were performed by multi-skilled tradesmen.

For catering services, however, the management time spent on the contract-supplied staff was described as minimal, and the contractor's own supervisory management skills were recognised as very good. All the main suppliers were thought both able and used to operating in a performance-related manner, i.e. a *mature* supply market existed.

**FINDING**

CSO5 did not have a policy to contract-out all support services per se. Functions represented by 'immature' contracting markets posed risks which might make contracting-out disadvantageous.

**FINDING**

A well-specified performance contract let to an experienced contractor, reduces the User's management burden.

The corporate culture of CSO5 was to concentrate on core business. At a strategic level, the emphasis became that there had to be a persuasive reason *not* to contract-out individual FM services. In the case of catering, such reasons included:

- \* employer loyalty to long-term staff members;
- \* maintaining a satisfactory quality of service.

Cost did not appear to play a driving role in the decision-making process. Quality and efficiency of service delivery did. DoA had no analysis to show whether the recently contracted-out London South client dining was more or less expensive than before. Neither were there figures in existence comparing the cost of London North and South catering. There was a constant comparison of standards made both by Users and by CSS. DoA stated that if the in-

house performance fell, the service would be contracted-out; whilst if the contracted-out performance dropped, the contractor would be sacked in preference for another contractor.

#### FINDING

Quality of service was a major decision-driver in whether or not to contract-out.

The evidence demonstrates the following thinking of CSS management to catering:-

#### (i) *Directly-employed staff*

- \* Possess a different frame of mind/attitude to that of contract workers; due to their lack of continual comparison with the market-place norms.
- \* In-house training could not be as effective as that provided for staff by national (specialist) contractors;
- \* There was little possibility of career progression within a small in-house team, or of transfer to more general management in CS05; resulting in two disadvantages:
  - (a) Good staff tended to leave to make a career progression (only those who had reached a self-perceived plateau stayed).
  - (b) The size of CS05's catering teams were not sufficient to establish a succession path and therefore replacements were mainly recruited externally.

#### (ii) *Contract staff*

- \* Good managers changed regularly, but were replaced by equally capable staff.

- \* Contractors provided a career path for staff, which brought out an eagerness to perform efficiently.
- \* Contract staff were more up-to-date with legislative requirements, particularly hygiene and health and safety.

### Driving Factors

The analysis of the evidence identifies three driving factors which determined that CS05 would contract-out a small majority of catering services; i.e.:

- (1) CS05's senior management was increasingly encouraging the business to concentrate on core products and skills.
- (2) The company management strategy was to search for:
  - (i) greater efficiency;
  - (ii) improved quality.
- (3) CS05 was the result of a recent merger which had brought together different policies on contracting-out. An element of maintaining status quo situations, where demonstrably efficient service was given, remained because of loyalty to staff post-merger.

### 13.8 TEST AGAINST THE HYPOTHESIS

*Hypothesis:* 'The potential advantages to a User organisation of contracting-out discrete aspects or bundles of FM Services are likely to outweigh the potential disadvantages'.

This case studied the way in which CS05 resourced their catering service in London. The findings show a preference for contracting-out the service, but an acceptance to keep

part of the service resourced internally, while performance levels were comparable to those achieved by the external supplier of the service.

The evidence from the unit of analysis supports the hypothesis - the advantages of contracting-out catering services do outweigh the disadvantages, and this is neatly exemplified by the evidence of the client dining service at London South. The case study also demonstrates that just because advantages outweigh disadvantages, does not necessarily mean contracting-out will result; i.e. the *balance* of either advantages over disadvantages (or vice versa) is not, necessarily, ultimately the driver of action.

The findings do, however, cause a dilemma. Whilst explaining how CS05 made decisions about contracting-out catering services, evidence made it clear that not all of the CSS functions could be contracted-out as successfully. After contemplation, it was decided that although this evidence concerned subjects *other* than the unit of analysis, it was relevant to this case study because it played an influencing role in the decision-making of whether contracting-out was viable; i.e. for catering services, contracting-out was viable because of the *mature* market.

Having accepted the evidence, and hence overcome the dilemma, the resultant question was - did this affect the statement that CS05 supported the hypothesis?

The hypothesis was purposefully worded not to represent an 'all or nothing' position. The conclusion reached was that by CS05 recognising that the advantages of contracting-out catering outweighed potential disadvantages, and that this did not necessarily apply to all FM services, it in fact *added support* to the inclusion of the phrase in the hypothesis 'are likely to', and thereby supported the

implied proposition that contracting-out was not universally advantageous.

### 13.9 TEST AGAINST THE RESEARCH REVIEW

The analysis of the evidence makes the important point that a balance of either advantages of contracting-out over disadvantages, or vice versa, does not itself decide the outcome of whether contracting-out will be implemented. This supports the notion of two categories of driving factors.

The analysis also suggests that the work *environment* has to be receptive for contracting-out to be an acceptable solution; i.e. there may be a case made demonstrating numerous advantages of contracting-out, but unless the business environment of the User - i.e. the *culture* - permits it, contracting-out will not be implementable. The term *permit* denotes a range of acceptability from reluctance to accept through acquiescence and encouragement, to direct (mandatory). This point is developed further in Chapter Fifteen and Fig. 15.2 in particular.

#### Comparison with Potential Advantages and Disadvantages

Tables 13.1(a) and 13.1(b) below schedule, respectively, the advantages and disadvantages of contracting-out, which were identified by the evidence collected for this case study; and compare those findings with the findings of the Research Review by means of cross referencing. It was an important part of the methodology that the scheduling should be completed *before* comparisons were made.

Table 13.1(a): Case Study Five: Research Review  
Comparison of Advantages of Contracting-out

| ADVANTAGES OF<br>CONTRACTING-OUT                                                                                                                                                                                                                                                                                                                | CROSS REFERENCE TO<br>RESEARCH REVIEW                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>Primary Advantages</b>                                                                                                                                                                                                                                                                                                                       |                                                                                           |
| <ul style="list-style-type: none"> <li>* Improved efficiency:               <ul style="list-style-type: none"> <li>· Brought latest expertise to the task</li> <li>· Up-to-date knowledge of statutory and regulatory requirements, plus consequential working practices</li> </ul> </li> </ul>                                                 | No.4: Improved operational efficiency<br>No.6: Latest technology and specialist knowledge |
| <ul style="list-style-type: none"> <li>* Concentration on core business:               <ul style="list-style-type: none"> <li>· CS05 were experts in accounting, not catering</li> </ul> </li> </ul>                                                                                                                                            | No.2: Concentration on core business                                                      |
| <ul style="list-style-type: none"> <li>* Improved quality:               <ul style="list-style-type: none"> <li>· Service standards better</li> <li>· 'Product' better</li> </ul> </li> </ul>                                                                                                                                                   | No.4: Improved operational efficiency<br>No.8: Added-value/Quality/Value for Money        |
| <b>Spin-off Advantages</b>                                                                                                                                                                                                                                                                                                                      |                                                                                           |
| <ul style="list-style-type: none"> <li>* Reduced costs by replacing permanent staff employment packages with contract staff terms</li> </ul>                                                                                                                                                                                                    | No.1: Reduced costs                                                                       |
| <ul style="list-style-type: none"> <li>* Greater flexibility of working:               <ul style="list-style-type: none"> <li>· 'Overtime' accepted as normal working conditions</li> <li>· Overcomes resistance to change</li> </ul> </li> </ul>                                                                                               | No.5: Increased flexibility/ Workload pattern<br>No.15: Optimal equipment configuration   |
| <ul style="list-style-type: none"> <li>* Relevant training for contract staff:               <ul style="list-style-type: none"> <li>· Reduces burden on CSS</li> <li>· Keeps staff up-to-date</li> </ul> </li> </ul>                                                                                                                            | No.7: Overcomes skills shortage/Specialist skills                                         |
| <ul style="list-style-type: none"> <li>* Incentive of career progression for contract staff:               <ul style="list-style-type: none"> <li>· Suitable replacements = contractor's problem</li> <li>· Contract staff high flyers seeking to make impact</li> </ul>               Therefore better service to User             </li> </ul> | No.10: Career path development                                                            |
| <ul style="list-style-type: none"> <li>* Day-to-day management role reduced</li> </ul>                                                                                                                                                                                                                                                          | No.9: Reduced management burden<br>No.17: No operational headaches                        |

Table 13.1(b): Case Study Five: Research Review  
Comparison of Disadvantages of  
Contracting-out

| DISADVANTAGES OF<br>CONTRACTING-OUT                | CROSS REFERENCE TO<br>RESEARCH REVIEW                                                     |
|----------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>Primary Disadvantages</b>                       |                                                                                           |
| * Breach of loyalty to staff                       | No.2: Personnel problems                                                                  |
| * Risk of immature supply market                   | No.5: Risk of selecting<br>a poor supplier/Supplier<br>market insufficiently<br>competent |
| <b>Spin-off Disadvantages (Downside)</b>           |                                                                                           |
| * Staff Redundancies:                              | (No.2: Redundancies                                                                       |
| · Cost                                             | (No.20: Hidden costs                                                                      |
| · Managing Redundancies                            | (No.8: New management problems                                                            |
| * New Management Tasks:                            | No.8: New management problems                                                             |
| · Setting contract terms and<br>performance levels | No.20: Hidden costs                                                                       |
| · Selecting contractor                             |                                                                                           |
| · Monitoring performance                           |                                                                                           |
| · Reviewing performance                            |                                                                                           |

The advantages comparison raises the following points:

1. Overall there is a close correlation between CS5 findings and the Research Review
2. The Research Review grouping of 'Quality' with 'Added-value/Value for money' should be re-examined.
3. The possibility of grouping 'no operational headaches' with 'Reduced management burden' should be investigated.



4. At strategic level, CS05 had made an in-principle decision in favour of contracting-out support services, but had not decided that contracting-out *must* be adopted; i.e. the strategy was to give 'in principle' approval and it was left to tactics to determine how/whether to action it.

The disadvantages comparison raised the following points:

1. CS5 identified as a possible 'driver' an 'immature market' which, when present, would mitigate against contracting-out. This condition was *not present* in the case of this unit of analysis, but it was a consideration included in CS05's decision-making process, i.e. it was a potential disadvantage.
2. The real disadvantage present with CS5 relates to staff redundancies and the associated management and personnel problems and costs. Note (i): the primary disadvantage is *not* equated to Research Review Category No. 6, which specifically relates to staff loyalty to employer, because it is a problem of employer loyalty to staff. Note (ii): the question of redundancy costs was seen more as a result of a disadvantage of *in-house* resourcing, rather than as an advantage of contracting-out.
3. Having seen that the overall strategy of CS5 was in favour of contracting-out, some of the other disadvantages should be seen more as 'downsides'.
4. These downsides are the result of change; i.e. instead of management spending time maintaining the status quo; new, alternative tasks, need to be undertaken. These offset some of the advantages of contracting-out; e.g. reduced management burden is offset by new management tasks. This poses the question of whether

downsides to advantages of contracting-out are inevitable.

## STAGE V: CONCLUSIONS OF CASE STUDY FIVE

1. The Hypothesis is supported, with emphasis on the implied proposition that contracting-out is not a universally advantageous method.
2. The Research Review findings are broadly supported with the caveat that two groupings should be reconsidered.
3. The primary advantages and disadvantages, i.e. those capable of driving action (3 advantages/2 disadvantages) are represented by Research Review groupings 2, 4, 6+8; and 2+5 respectively; suggesting, in the main, that 'drivers' come from the more frequently appearing advantages and disadvantages.
4. CS05 had adopted a strategy of concentrating on their core business, which in turn gave 'in principle' approval to contracting-out FM services. The analysis proposes the recognition of the environment created by a User toward contracting-out. In this case, by strategically sanctioning contracting-out, CS05 created a receptive or hospitable environment in which for contracting-out to occur.
5. The case study identified one driving factor which would direct against contracting-out - namely, an immature supplier market. At the time of evidence collection this was thought to be a newly recognised factor - however, the Research Review comparisons revealed it to be an established criteria.

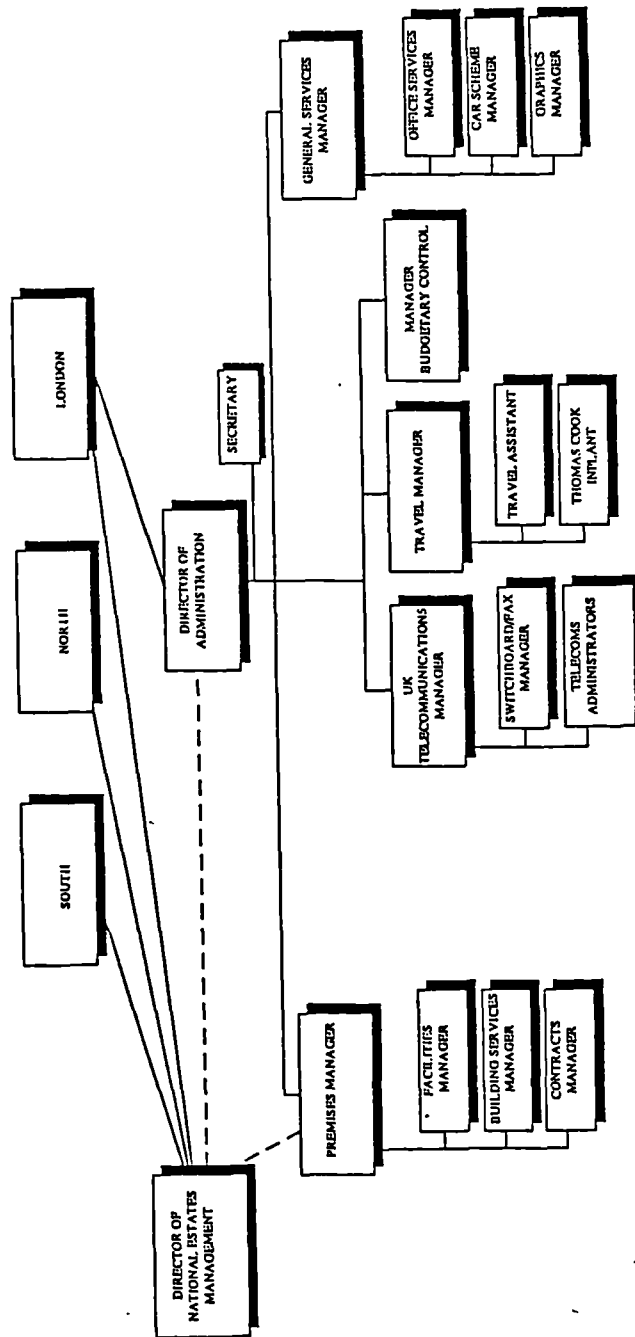
6. Cost was not a major deciding factor, despite CS05's quest for greater efficiency. Conversely, quality of service provision was a major consideration.

## CHAPTER THIRTEEN

### ANNEX ONE

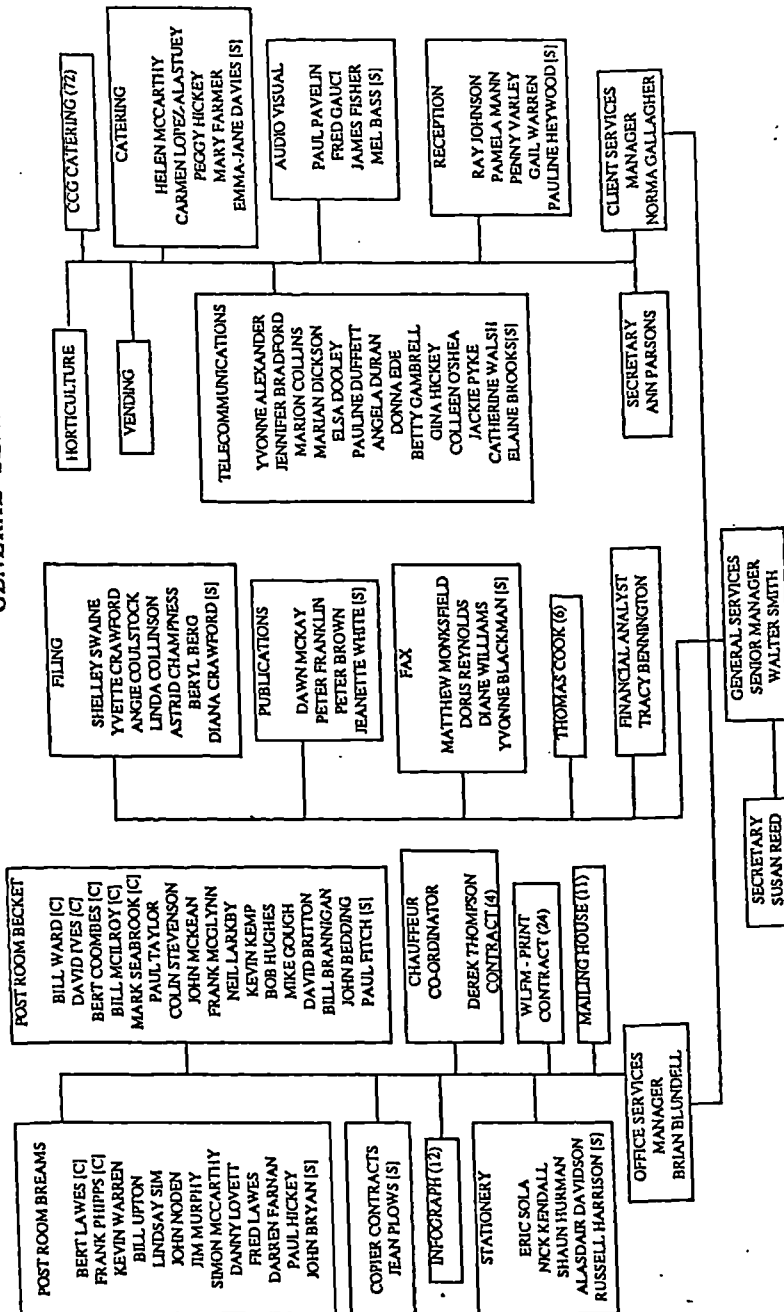
- \* London Central Support Services
- \* General Services

# LONDON CENTRAL SUPPORT SERVICES



1/9/90

## GENERAL SERVICES



## CHAPTER FOURTEEN

### CASE STUDY SIX :

#### Externally Resourced Management of an Office User's Facilities

##### PREAMBLE

##### Protocol Requirements

The protocol for case study data collection and analysis was developed in Chapter Seven (Section 7.2) above; the working document being replicated at Appendix V.

The model developed at Fig. 14.1 below summarises the requirements of the protocol and acts as a 'route map', describing the arrangement and marshalling of this study.

To safeguard and respect the confidentiality under which the data was made available, the identity of Case Study Organisation Six will not be specified in written form, but will be referred to as 'CS06'. By employing this tactic, the description of the study and the findings do not have to be disguised. Consequently there is no devaluing of the main points.

This study describes the manner by which a User employs an FM contractor to supply facilities *management* services.

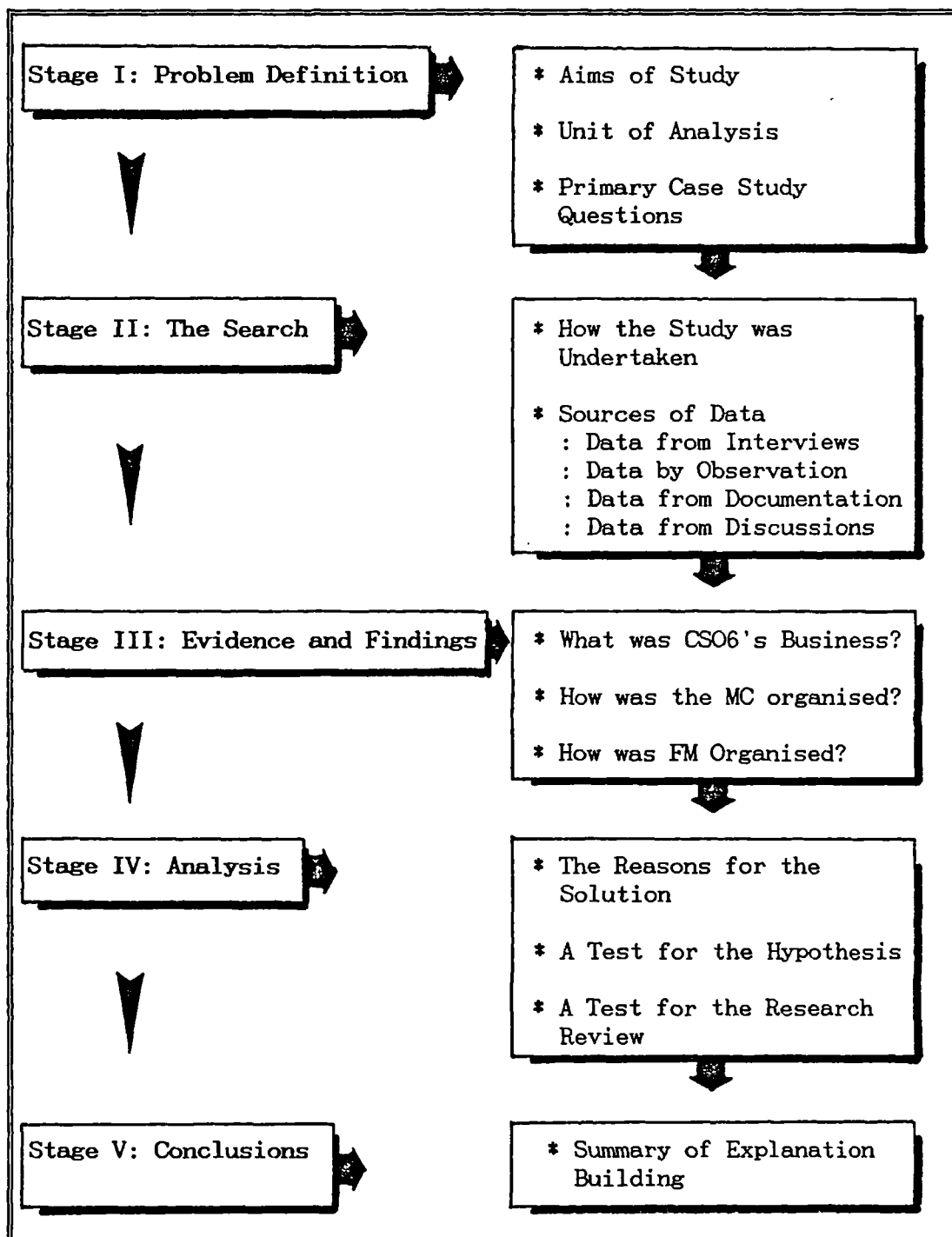


Fig. 14.1: Case Study Six Route Map



## STAGE I : PROBLEM DEFINITION

### 14.1 INTRODUCTION: PURPOSE OF CASE STUDY SIX (CS6)

The data collected for the first five case studies had, by design, been collected from Users' own sources. To attempt to ascertain whether this data was heavily biased, it was decided to include data about a User, but collected specifically from a supplier. The weakness of this method would be the risk of bias toward contracting-out.

### 14.2 UNIT OF ANALYSIS

#### 14.2.1 Factors Governing the Choice of the Organisation for Case Study Organisation Six (CS06)

To achieve the aim of the study, an organisation was sought that had contracted-out FM services via a *management* contractor. The rationale for this limitation was as follows:

first, the data to be sought would provide evidence of why a User might resource FM by contracting-out; i.e. the information required related to strategic and tactical decision-making, thereby putting emphasis on management.

Second, a contractor providing just *management* services (i.e. not supplying operational services) would be likely to provide a lesser biased view of contracting-out, than a contractor that supplied a range of operational services (i.e. tending toward TFM) - and which would want, presumably, to maximise opportunities for doing so; i.e. the large conglomerate service companies might be expected to make claims on behalf of their own subsidiary supply departments, to encourage the User to employ them. The

case study organisation was therefore chosen where the supplier was independent of all contractors.

CS06 contracted-out its FM services by employing a management supplier in September 1992. The supplier (to be referred to as 'MC' - standing for management contractor) had been the source of general information on FM, via two informants at other stages of this project. Four contractors had been used for such information-gathering, but the other three firms (BET, SERCO and P&O TFM - later Granada TFM) were predominantly suppliers of operational services resourced by companies in the same group.

#### 14.2.2 Description of Case Study Organisation Six (CS06)

The parent company to the User for this case study was a world player in petroleum, a multi-national corporation (MNC). They described their business as "finding it, extracting it, shipping it, refining it, converting it, selling it" (1992, Corporate Brochure).

The group of companies employed in excess of 100,000 people, represented in 70 countries, and they divided their business into four subsidiaries, viz:-

- \* Oil
- \* Chemicals
- \* Exploration
- \* Nutrition

Three of these were described as core businesses, with the fourth as a stand-alone; i.e. nutrition (covering animal feed, charcuterie, household and personal care products - and for which a purchaser was being sought).

The User for the case study represented the third of these three core businesses. The study covered its headquarters operation, comprising two adjacent office buildings, located on a business park close to Heathrow Airport; one building comprising 113,000 square feet, and the other 73,000 square feet. In addition there was a small

warehouse of 13,000 square feet and an associated creche or nursery building, which catered for 35 children aged between three months and five years.

There were 880 staff and contract staff occupying the buildings, with the two office buildings having been completed in September 1992.

#### 14.2.3 The Unit of Analysis : CS6

This study sought to find evidence to explain what the advantages and disadvantages of contracting-out are, by examining *why* the organisation decided to contract-out, and *whether* the resultant services met expectations.

The Unit of Analysis was therefore the contracted-out *management* of facilities services, as a 'bundle'.

#### 14.2.4 Period of Study

The evidence, collected from the User's premises, was the last of the data collection exercises for this project, and took place during the autumn of 1993. Information from the MC had been collected intermittently from January 1992, following an introduction by Professor Becker to the Managing Director of MC.

### 14.3. THE AIM OF CASE STUDY SIX

The aim of the study was:

- \* to gain a general understanding of the business of CSO6;
- \* to gain a general understanding of the way in which the management contractor (MC) was organised;
- \* to determine why CSO6 contracted-out the management of FM services;

- \* to identify, from the supplier's data, advantages and disadvantages to CS06 for so doing;
- \* to put forward a subjective assessment of any bias intrinsically contained in the MC's data;
- \* to analyse the findings to determine:-
  - ° whether the findings supported the hypothesis of this research project;
  - ° whether the findings of CS06 supported the findings of the Research Review;
  - ° the level of generalisability to the other findings of this project.

The discipline of the study is to set down, in orderly form, sufficient detail of the case study in order for the process to be replicatable. To achieve this aim this study seeks, by following the Research Project Plan, to:-

- \* outline the CS06
- \* record the parameters of the unit of analysis
- \* record the field procedures adopted
- \* record the sources of data used
- \* record the evidence collected

The purpose of the study was to enable an indepth examination to be undertaken of the unit of analysis, and the organisational factors governing or restricting it.

#### 14.4 THE QUESTIONS

The preliminary remarks made in the first two paragraphs of Section 9.4 of the PCS (Chapter Nine) apply equally to this case study, and will not be repeated here.

The *primary* questions for CS6 were designed progressively to build-up:-

- \* an understanding of the unit of analysis;
- \* to identify as findings, key determining factors for

reasons governing the way the unit of analysis, management of facilities services, was organised.

The following figure (Fig. 14.2) describes the line of questioning adopted:-

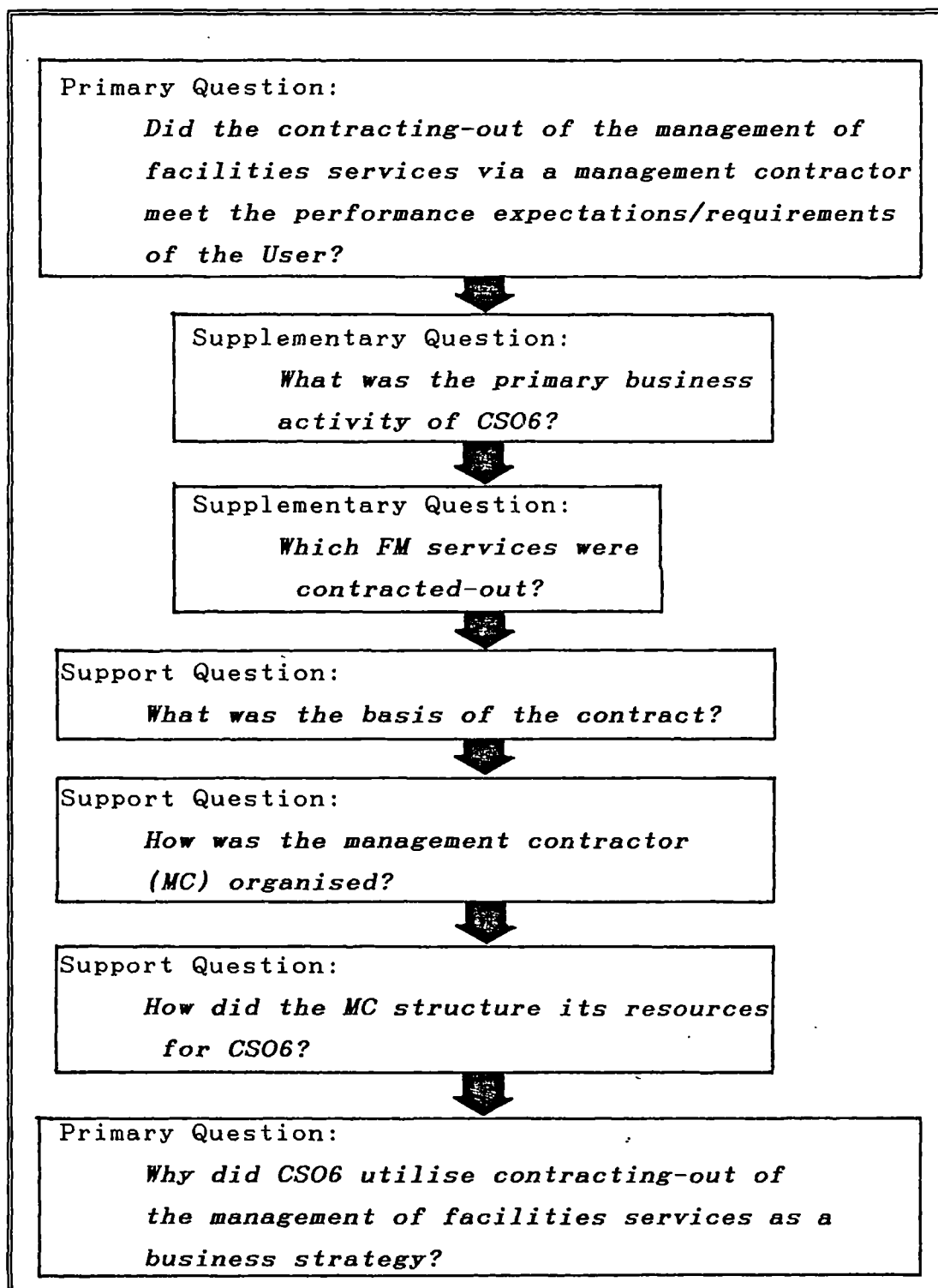


Fig. 14.2: Line of Questioning

## STAGE II : THE SEARCH

This section records the sources from which, and by which, evidence/data was gathered; and describes the manner in which the study was undertaken, linking the fieldwork with the 'protocol' as refined by the PCS experience, and laid down in the Research Project Plan.

### 14.5 HOW THE STUDY WAS UNDERTAKEN

The system of data collection for this case study follows the model demonstrated in Figs. 9.3(a) and (b) in Chapter Nine (Pilot Case Study).

The answer to the research questions were sought by:-

- \* interviewing staff of the MC on site;
- \* analysing documents (provided in confidence by the MC);
- \* making observations during visits to CS06's two office buildings and on numerous visits to the MC's offices (see below);

Interviews were conducted with the accounts manager responsible for the User's locations, and with corporate management and technical heads of specialist functions of the MC.

The majority of information revealed was provided on a commercial-in-confidence basis. Documents which were made available in this way are scheduled below.

Visits were made to the MC's head office on six occasions, to the User's main office premises on one occasion each; to the London office of the MC; and to one other location managed by the MC, in order to collect data by observation.

Following the form of other studies in this project, the collected evidence was then analysed. Interim findings were discussed with the Key Informant as part of the validation process before concluding the findings.

From the findings, conclusions relevant to this particular case were drawn; these conclusions then became available for the next stage in the project, i.e. cross case analysis and generalisations.

## 14.6 SOURCES OF DATA

### 14.6.1 Indepth Interviews

Indepth interviews were conducted with the undermentioned staff of the Management Contractor. The numbers in brackets indicate the number of discussions held:

Managing Director (3)

Commercial Director (3)

Consulting Services Manager (1)

Account Manager (1)

Business Development Manager (1)

Group Account Manager (Research and Development) (3)

Group Account Manager (Project Services) (1)

Consultant Designer (1)

### 14.6.2 Data Collected by Observation

6 visits to MC's Head Office

1 visit to MC's London office

1 visit to both offices of CSO6

2 visits to another site managed by MC

### 14.6.3 Documentation

- \* The Occupancy Health Check (part of the MC's internal handbook)

- \* Integrated Management Services
- \* (CS06) Managed Services (the performance specification of MC)
- \* Mission Statement Charts
- \* Organisation Structure Chart
- \* (CS06) Matrix Management Directory
- \* Client List
- \* Project Process Model
- \* Consulting Services and Project Services: Process Model
- \* Project Services Activities
- \* Product Listing
- \* Case Study 6: Organisation Chart
  - : Services
  - : Corporate Brochure and Annual Report
  - : Report on (CS06)
- \* Market Plan

#### 14.6.4 Background Information

General background information concerning the Management Contractor was obtained from:-

- \* Press articles (CSW 1991, The Times 1993(a) and (b) )
- \* The MC's external shareholder (Gillet, J. (1992), Mills, I. (1991) )
- \* The network of key informants including Marilyn Standley, Chairman, AFM/IFM (1993/4); Professor F. Becker; Dr. G. Gidley, Chairman AFM (1989/93); J. de Lucy.

### STAGE III : EVIDENCE AND FINDINGS

The description of the CSO at 14.2.2 provides the answer to the question: *How is CS06 organised?*



Support Question: *What was the basis of the contract?*

The agreement between CSO6 and the MC was on the basis of a 3-year contract with two one-year extendable options. The cost is to be renegotiated per year after Year 3, on a cost plus basis. For Year 1 (1992/93), the working budget was a replica of the 1991/92 actual figures. For Year 2 (1993/94) onward, the budget was to be agreed between the parties.

Supplementary Question:

*Which FM services were contracted-out?*

The MC provided the on-site management of the following 'major' contracts, all of which were contracted-out:-

- \* Cleaning
- \* Security
- \* Catering
- \* Mail, messenger and reprographics
- \* Mechanical and electrical maintenance
- \* Housekeeping, including fabric maintenance

In addition to the six major contracts there were 70 site-related contracts, together with the management, covering the following:-

- \* Project management/space moves and office churns;
- \* Settling of defects liabilities relating to the original construction and subsequent fit-out of the shell and core structure of the two office buildings;
- \* Fire: wardens, reports, equipment and evacuation procedures;
- \* Safety: training, accident statistics, COSHH, permits to work, fire authority certification;

- \* Security: access control, security of information, clean desk policy, radios and bleeps, incident reports and accidents;
- \* Reception/switchboard/conference rooms;
- \* A percentage of company fleet vehicles, together with insurance.

See Annex 1 to the case study

Primary Question:

*Why did CS06 utilise contracting-out of the management of facilities services as a business strategy?*

The research identified two primary drivers which motivated the User to contract-out such a broad range of facilities management services which, when compared with Fig. 3.6 in Chapter Three (Potential to Contract-out) will be seen to be towards the end of the range of the continuum tending towards total facilities management (i.e. the maximum potential for contracting-out).

The two primary drivers for the User to adopt contracting-out and which are ongoing in nature were:

- (i) To permit the User to concentrate on core business.
- (ii) To maximise cost and efficiency of support services, without compromising the high level of service required (including quality).

#### FINDING

The User contracted-out FM services in order to concentrate on core business and to maximise the efficiency of the support services.

Prior to occupying the current buildings, the User had been established in office buildings in London. The move had comprised a major relocation from several locations and brought with it a Property and Management Department staff of 17, plus clerical assistants, etc.

The relocation encouraged the User, by bringing previously disparate departments together, to concentrate on core business. The evidence shows that the User devolved full responsibility for the operational management of non core-product support services to the MC. Where previously an Estates Department of 17 professionals had reported up through a management line to a Board Director, contracting-out enabled:

- \* the closing of the in-house department;
- \* the redesignating of duties for the Property Director.

The Main Board received quarterly reports from the MC's Account Manager. The only other management involvement in this non-core business operation for the User, was the provision of one member of staff (an IT manager) who had, as part of his job description responsibilities, the role of attending the quarterly Board meetings; undertaking formal monthly meetings with MC's Account Manager and being available on an 'as required' basis to interface with the MC. The Property Director - an experienced manager - was re-assigned to core business activities.

Further, the User believed that by openly adopting such a strategy at corporate level, it had reinforced the corporate message to all staff regarding the need to identify and concentrate on core business.

In order to justify the re-emphasis on core business, those services considered non-core had to be undertaken in:

- \* a cost-effective manner;
- \* a manner which did not detract from the then current level of service but, if at all possible, improved efficiency and quality.

The User considered that it was most likely to achieve this aim if it first identified an organisation which had, for its own core business, the running of such an operation; and second, that they then entered into a partnership with that organisation so that the contractual agreements were expressly non-adversarial, relying on output based, innovation encouraging, specifications. The User described this as a "win:win situation", whilst the MC went further and described it as a "win:win:win situation", to reflect the fact that there was a group of three parties in partnership, vis: User, Management Supplier, Operational Suppliers.

Data concerning various cost savings was made available from both User (CS06) and the MC. Further, other cost efficiency gains were identifiable from the general data. These can be grouped together as follows:-

*Example .1: Cost-efficiency gain*

Prior to the contracting-out of FM services, the User dealt with an average of 6,000 separate invoices per month. A general rule of thumb exists in FM circles in the UK that, for a large corporate, an invoice costs £40 to process, but, in this instance, the User assessed the difference between processing 72,000 invoices per year and one invoice per month, at £240k. In addition to this saving was the reduction of two Accounts staff at a Group administration location, remote from the properties in question. This researcher's reaction to this data was that if the £240k was treated as a credit by CS06 on the balance sheet, it did not take into account any hidden cost of pro-rata-ing the payment to the MC.

*Example .2: Cost-efficiency gain*

The second cost saving to the User was clearly identified. The User's Property Department of 17 staff was reduced during the handover period to 8. The salary saving made by the reduction to 8 had been approximately £400k, whilst the salary costs of the eight staff remaining was £440k. At

first this latter figure appeared erroneous, but was verified as being salary, and not burden costs. It was justified on the basis that the Property Department had become the collecting point for *senior* management personnel who were 'floating'.

This finding demonstrated the problems associated with 'blue-chip' companies who reward all their staff, not only well, but irrespective of whether they are directly involved in core business or not. In this instance, average costs of employment of staff in the Property Department were clearly above market norm. for the function performed. Based on the salary scales used by firms of property managers, a salary roll for 8 staff, suitably competent for the work required, would be based on 1 director, 3 associates, 3 senior managers and 1 manager, and would have accrued to somewhere in the range of £200k-£250k; i.e. approximately £200k less than CS06's remaining salary roll prior to finalising handover.

The MC's solution was to provide four on-site managers, in lieu of CS06's staff of eight, at an aggregate salary of less than £120k.

#### Example .3: Cost-efficiency gain

During the handover period the MC commenced an analysis of the operational contracts in place. The first to be targeted was the office cleaning contract. The MC undertook, on a rolling basis, an elemental bench-marking analysis of running costs of all its clients' buildings for which they were responsible. This provided statistics which were used, amongst other things, to identify areas of likely savings for CS06. The office cleaning contract of CS06 proved to be one such case, and was immediately re-tendered upon the MC taking over responsibility. The specification was changed to become performance-orientated, with in-built service level agreements, performance measures and quality standards. The contract was let at a figure of £220k p.a., which compared with the previous

annual contract sum of £500k (the original contractor repriced at £270k). The User, one year later, considered the standard of office cleaning to be *better* than before.

Cost extras were not highlighted in the data provided by the MC, confirming the expected bias. But the evidence pointed to one clear example of additional costs, i.e. redundancy payments. On the basis of 17 staff redundancies from the Property Department and 2 Accounts staff, plus the knowledge that some of these staff commanded substantial salaries (8 earned a total of £440k), termination compensation would have had to reflect the number of years' service (again self-evidently, the senior managers had, individually, accumulated a significant number of years service). Such a redundancy package should be viewed as part of the one-off cost extras of setting up a contracting-out system.

#### FINDING

There are cost-extras in setting-up a contracted-out management of facilities system. These should be identified as one-off costs.

#### Support Question:

*How was the Management Contractor organised as a business and how did it structure its resource for CS06?*

The MC was one of the four market-leaders as identified by BSRIA (1993), and was recognised as an independent provider of management services. The essential difference between this provider service and consultancy is that the former includes hands-on operational management, as well as

tactical and strategic management, and also includes consultancy and project services.

The MC's head office was situated in the Home Counties. They had a London office and a Scottish office, and had the additional support of staff based in clients' properties around the country.

The company was formed in 1991, being the management buy-out from a large User organisation. At that time it comprised 94 staff, a figure verified by Morgan and Rydell, (1991). By 1993 this had grown to approximately 180 staff.

The services provided were grouped under ten categories, viz:-

- \* Technical Consultancy
- \* Architectural
- \* Operations and Maintenance
- \* Project Management
- \* Environmental Computer Rooms
- \* Information Management
- \* Personnel
- \* Consulting Services
- \* Health, Safety and Security
- \* Computer Rooms

Clients represented the following market sectors:-

- \* Retail
- \* Banking
- \* General office use (insurance, management consultants, petro-chemical and utilities)
- \* High tech. industrial
- \* Property consultants
- \* Government departments
- \* Transport Authorities

According to The Times (1993), MC managed 100 buildings.

The MC organisation set high standards, as befitted their blue-chip origins, from where they also brought a track record of efficient and high quality service in the Facilities Management sector. In their marketing they stated that their "entire working philosophy is founded on quality consciousness" (1993, 'People and Property: The (MC) Approach to Asset and Services Management', Corporate Brochure), and they were committed to total quality management.

The MC employed a matrix management structure, linking the ten service groups with the staff bespoke to each given client or location.

Primary Question:

*Did the contracting-out of the management of facilities services, via a management contractor, meet the User's performance expectations/requirements?*

Three examples of customer satisfaction can be identified from the collected evidence:-

- (I) During the period since the original contract commenced, CS06 had extended the MC's responsibilities to cover: IT Purchasing; Overseas Procurement; and worldwide Project Management (i.e. refurbs., fit-outs, space management, churns).
- (ii) After just one year's operation, the User's acceptance that the performance criteria had been met was evidenced by their submission of their partnership with the MC for a national business partnership award, because they believed the results reflected a very successful method of operating. (At the time of submitting this work that award has yet to be judged).



- (iii) The first phase of the operation entailed a major review of the six main contracts and an overview of the other 70 service contracts. The reviews included performance assessment, such as response-time monitoring, appropriateness of and adherence to specifications, quality achieved, etc. Subsequent changes made across the spectrum of contracts showed that in all cases the suppliers had either held or reduced their prices for the subsequent year, commencing September 1993.

This last example should be seen in the light of other evidence, which showed that, as a result of MC initiating and implementing a space-planning exercise, the usable space had been increased, and subsequently the User's staffing increased by 64 personnel (8%); i.e. by utilising the 1992 actual spend as the budget for 1993, inflation and an 8% increased requirement has been absorbed by efficiency gains.

## STAGE IV : ANALYSIS

### 14.7 THE REASONS FOR THE SOLUTIONS ADOPTED

It was anticipated that by collecting evidence from a supplier - albeit a 'management contractor' and not a service supplier - there would be a bias of evidence in favour of contracting-out. The fact that the one-off costs of setting-up the management contract, (not only staff redundancies as noted above, but also the in-house management time of debating the issue, and then going through the contract tendering/selection process), were not included in the evidence made available, supports this. However, as far as the absence of information regarding

one-off costs items are concerned, this was an accepted weakness of the data collection method - i.e. the supplier could not be expected to possess the relevant information. The User had made the strategic decision that it wished to convert to contracting-out of the management of facilities and that the system should be cost and quality competitive with its own previous in-house system. It did not wish to penalise the MC by including the cost of the change-over in the comparison. Such costs of change-over should, nevertheless, be recorded as a disadvantage (or downside) of contracting-out.

All the other information analysed pictured a system which had added value, quality and efficiency to the existing contracting-out of operational services. The User's submission of the work for a national award supports the analysis; whilst the researcher's own observations support the findings concerning the quality of the service provided (though not, of course, of any judgmental difference of improvement or otherwise over the previous system).

The benefits brought to the supply of FM services by the MC reflect:

- \* Knowledge of the performance specifying and tendering process;
- \* Experience of the level of supplier costs to accept;
- \* Well-tried systems, which minimised management resource.

Generally, the MC could be said to be competently providing its own core service; permitting the User to concentrate on its own core business. This fulfilled the primary reason for the User adopting contracting-out of facilities *management*.

The success of the MC in improving the performance of suppliers, suggests a possible *disadvantage* of contracting-out. CSO6 had previously managed, by in-house resource, contracted-out suppliers. The subsequent use of the MC's

expertise brought efficiency gains, including cost reduction, performance contracts based on service level agreements, right-sized headcount, space efficiency gain, etc. It follows that, by previously contracting-out operational FM services without this expertise, the efficiency of the supply of support services had *not been maximised*; i.e. possible scenarios are that contracting-out operational services *managed by in-house staff* had:

- (i) improved efficiency of delivery (but not maximised it);
- (ii) provided comparable efficiency of delivery with previous in-house operational services;
- (iii) reduced efficiency of delivery.

The empirical evidence was that the original contracting-out *operational* services had proved advantageous to the User and hence the subsequent policy of contracting-out management. There was no evidence to suggest management was contracted-out to 'turn round' a disadvantageous situation caused by contracting-out operational services.

However, by the evidence of the case study data alone, it is neither possible to support nor contradict the rival suggestion, because a comparison with the situation pre-contracting-out of operational services, was not undertaken.

#### Driving Factor/s

The analysis of the evidence identifies two driving factors which determined that CS06 would opt for contracting-out the management of FM services; i.e.:

- (i) To permit the User to concentrate on core business.
- (ii) To maximise cost-efficiency of support services.

#### 14.8 TEST AGAINST THE HYPOTHESIS

*Hypothesis:* 'The potential advantages to a User organisation of contracting-out discrete aspects or bundles of FM services are likely to outweigh the potential disadvantages'.

What was being studied in this 'case' was the contracting-out by CS06 of the *management* of FM services. The *operational* part of FM services had already been contracted-out; implicitly demonstrating that, for this organisation, there were overriding advantages of contracting-out that (large) bundle.

The findings show that for CS06, the contracting-out of the *management* bundle of FM services proved advantageous *when undertaken by this particular contractor*. This supports the hypothesis.

The principal success criteria, set by CS06 for the contracting-out of FM management, were that:

- \* Contracting-out should release CS06 management to concentrate on core business matters.
- \* The cost of providing support services should not increase.
- \* The quality of the service should not decrease or deteriorate over time.
- \* There should be a seamless handover.

The foregoing recorded evidence specifically shows that the first three criteria were met. There was no direct data collected which referred to the fourth criteria, except that the MC recorded it as a major objective. Evidence was available, however, of the efforts made by the MC to mark its arrival. Suppliers were instructed to make changes with effect from handover day so that the change in style was noticed; e.g. catering menus were changed; the type of soap in the toilets was changed; the cleaning contractor used a new fragrance in the vacuum cleaners, etc. Further,

the MC implemented innovations; e.g. the launching of a 'help desk'; a bulletin to advise all employees of the MC's policy on how to contact key workers, etc., was also launched. All these points were well received by the User, and the absence of recorded complaint suggests the fourth criteria was met.

### Summary

By concentrating on data from the supplier's (i.e. the MC) sources, there is a bias in favour of contracting-out - some disadvantages were not mooted, but can be deciphered from the evidence. For example, not all the costs of contracting-out the management of facilities were savings - redundancy costs were not included in the data collected but were deduced. Whether CSO6 treated such costs as a saving, either by taking a medium-term view of this item (i.e. more than one financial year), or whether the costs were treated as coming from a separate budget (e.g. Personnel or Human Resources), and were therefore irrelevant, is not clear. This is a weakness of the data collection process utilised, but it is not believed to be significant, i.e. it does not influence the thrust of the overall conclusions.

The data shows that by contracting-out the management of FM services, the performance of the contracted-out FM operational services were improved, in some instances significantly so.

The detailed analysis found that the User had selected a supplier whose business was management. The reasons for this choice over other suppliers, whose business was the provision of support services, were not investigated, being outside the parameters of this study, but a threat to the internal validity of the finding is recognised; i.e. a rival proposition could be that by contracting-out management to a different supplier, or different type of

supplier, the same advantages *may* not have accrued. The overall finding of this case study, which supports the hypothesis, is therefore limited by the rider '*with this particular contractor*'.

#### 14.9 TEST AGAINST THE RESEARCH REVIEW

Tables 14.1(a) and 14.1(b) schedule (respectively) the advantages and disadvantages of contracting-out identified by the evidence collected for this case study; and compare those findings with the findings of the Research Review, by means of cross-referencing. (Note: It was an important part of the methodology adopted that the *scheduling* should be completed *before* the comparisons were made).

Table 14.1(a): Case Study Six: Research Review  
Comparison of Advantages of Contracting-Out

| ADVANTAGES OF<br>CONTRACTING-OUT               | CROSS REFERENCE TO<br>RESEARCH REVIEW                                                                 |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Primary</b>                                 |                                                                                                       |
| * Concentration on core business               | No.2: Concentrates on core business/Strategic appreciation of service                                 |
| * Maximise cost-efficiency of support services | No.1: Reduced cost/<br>Economies of scale<br>No.4: Improved productivity/<br>Operational efficiencies |
| <b>Spin-off</b>                                |                                                                                                       |
| * Reduced headcount                            | (No.3: Right-sized headcount<br>(No.1: Reduced costs                                                  |
| * Reduced management involvement               | No.9: Reduced management burden                                                                       |
| * Expertise in managing FM services            | (No.6: Specialist knowledge<br>(No.7: Specialist skills<br>(No.15: Optimal equipment configuration    |
| * Added value                                  | No.8: Added-value at no extra cost                                                                    |
| * One-stop-shopping, one invoice               | No.13: One-stop-shopping/One invoice/Contractor acts as screen between User and suppliers             |
| * Innovation                                   | No.9: Optimal equipment configuration                                                                 |

Table 14.1(b): Case Study Six: Research Review  
Comparison of Disadvantages of  
Contracting-Out

| DISADVANTAGES OF<br>CONTRACTING-OUT                                                    | CROSS REFERENCE TO<br>RESEARCH REVIEW                                                                                                         |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Primary</b>                                                                         |                                                                                                                                               |
| * Nil                                                                                  | Nil                                                                                                                                           |
| <b>Spin-off</b>                                                                        |                                                                                                                                               |
| * Cost of change-over to<br>contracting-out including<br>additional cost of redundancy | (No.8: New, different<br>management problems<br>(No.21: Decision time<br>required when considering<br>contracting-out<br>(No.20: Hidden costs |
| * Contracting-out operational<br>services may not, of itself,<br>maximise efficiency   | No.3: Claimed savings =<br>forecasted hopes                                                                                                   |

The advantages comparison raises the following points:-

- (i) The two driving factors correspond to highly ranked advantages of contracting-out, namely Nos. 1, 2 and 4.
- (ii) Only two of the top ten in the advantages rankings were not recognised by the evidence, viz:
  - 5: *'Increased flexibility and workload pattern'* - this would relate more to the contracting-out of operational services, which had already taken place.
  - 10: *'Career path development'* - the property management department was wound up. The MC believed that the majority of its staff were not specialists, but had been 'parked' in



that department, having become surplus to requirement elsewhere. This category did not really apply to this service.

- (iii) At strategic level, CS06 had decided to adopt contracting-out (i.e. it was *required*).

The disadvantages comparison raises the following points:

- (i) CS06 *had adopted* a strategy of completely contracting-out support services; there was, per se, no recognition of driving factors against.
- (ii) The cost of change-over from in-house to contracting-out was discounted by CS06 as a set-up cost; i.e. it was not considered as a specific disadvantage of contracting-out.

## STAGE V: CONCLUSIONS OF CASE STUDY SIX

1. The conclusion drawn is that Case Study Six supports the hypothesis, including acceptance of the implied proposition that contracting-out is not necessarily a universally advantageous method. The caveat 'with this particular contractor' - as proposed above - specifically supports the implied proposition that contracting-out is not necessarily advantageous per se.
2. The Research Review findings, in terms of advantages, are supported, with the two main drivers coming from amongst the higher rankings. The balance in favour of advantages is aided by the lack of a 'primary' disadvantage, representing a 'driver' against contracting-out.

3. The contracting-out of the management of facilities was instigated as a result of CS06's strategy which required:

- (i) concentration on core business activities; and
- (ii) and maximising the efficiency of support services delivery.

These two statements can be identified as the driving factors of action in this case.

The evidence demonstrates that CS06 consider the strategy to have been implemented successfully.

4. A caveat of the analysis is that the findings can only be applied to *this* Unit of Analysis with certainty. At the stage of selecting an FM contractor, CS06 rejected the three other shortlisted applicants, who all represented service conglomerate companies, choosing instead a specialist FM management company; i.e. it was presumably anticipated that a different type of contractor would bring *more* (unquantified) disadvantages (hence rejection) and possibly different advantages.

The conclusion is that generalising to other Users would be unsafe.

X X X X X X X X X X X

Case Study Six concludes Part III of this thesis, which concentrated on the collection and analysis of data. This commenced, in Chapter Eight, with the recording of the Research Review, which culminated in the 'ring-fencing' of advantages and disadvantages of contracting-out (in an FM context) in two priority-ranked schedules.

Chapters Nine to Fourteen, inclusive, have detailed the data collected from each of six case studies and described

the subsequent analytical processes, which have resulted in individual case study findings and conclusions.

Part IV of this thesis next turns to ascertaining the level of generalisability that can be achieved by, in Chapter Fifteen, carrying out a cross-case comparison of case study findings, and including tests against the hypothesis and Research Review.

## CHAPTER FOURTEEN

### ANNEX ONE

- \* (Management Contractor) Central Services
- \* Facilities Management Organisation Chart

## CENTRAL SERVICES

Procurement/Accounting/Specialist Support

### TECHNICAL SERVICES SPECIALIST

M & E Tech Support  
Operational Safety  
Planned Preventative  
Maintenance

- Building 4
- Building 5

BMS Development  
Energy Management  
Material Stock Control  
Nursery Building Management  
Warehouse Building Management  
Contracts Management

- M & E Operations
- Fabric & Housekeeping Operations
- Cleaning
- Minor Specialist Contract & Suppliers

### ACCOUNT/FACILITIES MANAGER

Prime Interface  
Contract Compliance  
Strategic Development  
Agent Services  
Moves and  
Rearrangements  
(Space Planning/Cad  
Furniture)

### ACCOUNT ADMINISTRATOR

Invoice Approval  
Purchasing Process  
Systems Development  
Minor Contract Mgmt  
Measurements  
Financial Control  
Secretary Support  
Records Retention  
Statistics Compilation

### SITE SERVICES SPECIALIST

Production of Specifications  
Project Management  
Claims & Building Defects  
Quality  
Audits  
Financial Planning  
Manage Agent Costs  
Process Improvement  
Customer Services  
Asset Management  
Compliance  
Key Indications  
Contract Management (Major)

- Mail Messengers,
- Reprographics
- Security
- Catering
- Minor Contract Management
- Service/Suppliers

### PROCUREMENT SPECIALIST FOR IT & XFI EQUIPMENT

Sourcing materials  
Order Placement  
Supplier/Client Liaison  
Checking Goods Received  
Invoicing Procedures  
Purchasing Database  
management

### SPECIAL PROJECTS SPECIALIST

Project Management

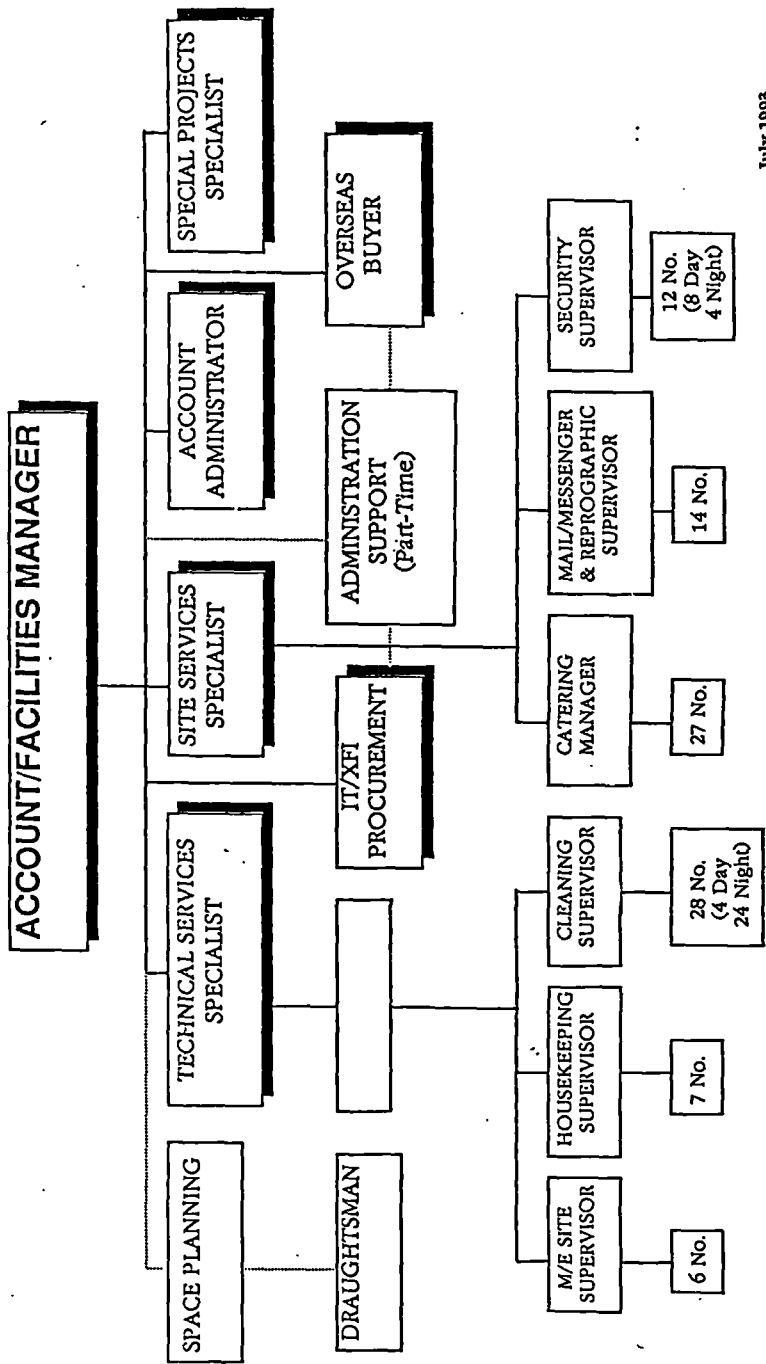
- UK
- Overseas

Support to Stockley Pk  
Specification/Designs  
Financial Control  
Measurement

### OVERSEAS PURCHASING SPECIALIST

Procurement  
Sourcing materials  
Order Placement  
Terms and Conditions  
Export Documentation  
Certification  
Customs Procedures  
Purchase Agreement  
Expediiting

FACILITIES MANAGEMENT ORGANISATION CHART



July 1993

## **PART IV : GENERALISING**

## CHAPTER FIFTEEN

### CROSS-CASE ANALYSIS

#### 15.1 PURPOSE

The six individual case studies were undertaken as 'whole' studies. For each one, convergent evidence was sought and analysed by inter-relating the pattern-making and explanation-building to:

- \* identify advantages and disadvantages of contracting-out;
- \* test the findings against the proposition articulated by the hypothesis;
- \* test the ranked importance of advantages and disadvantages of contracting-out developed by the Research Review.

The aim of the Cross-Case Analysis is to compare the results of the individual cases to establish:

- \* the extent of replication logic;
- \* the level of support for the hypothesis;
- \* if the influences, that advantages and disadvantages exert in determining whether FM services are resourced in-house or contracted-out, are generalisable across-case.

The purpose is to enable supported results to be stated more assertively, or alternatively to promote the generation of rival theories for results which lack support.





Note 1: A key step in the process was to summarise further the results of each case, by identifying the *main findings*.

The analysis of each case's findings had been conducted by reference to:

- \* the reasons for the solutions adopted, i.e. driving factors;
- \* a test against the Hypothesis;
- \* a test against the Research Review.

The *main findings* were therefore subjected to analysis using the same three reference points.

The model at Fig. 15.1 demonstrates the *mechanics* of the system (augmenting Fig. 7.2) by reference to the first stage of the *process*; i.e. for the pilot case study according to 'driving factors'. The process was then replicated for each case study in turn; and then repeated for tests against the Hypothesis and tests against the Research Review. The results are reported in Section 15.3.1 - 15.3.3 below.

### 15.3 ANALYSIS AND RESULTS

#### 15.3.1 Cross-Case Analysis of Driving Factors

##### (i) Pilot Case Study (Hotel Services)

The PCS demonstrated that the *driving factors* could act as variables in the decision-making process. The purpose of Fig. 9.8 was to show that variable influences, other than just the pros. and cons. of contracting-out, affect a User's contracting-out decision making. By further analysis, the decision-making *driving factors* could be sorted into categories, viz: (1) overriding advantages and disadvantages, and (2) other influences.

PCS displayed five influential *driving factors* which acted as variables and caused the rejection of contracting-out as an option for:

- (i) the management of facilities' services;
- (ii) operational FM staff who experienced regular patient contact;
- (iii) for contracts requiring large on-site labour presence.

Four of the five driving factors were termed 'external' to the subject matter of advantages and disadvantages - being referred to as Category Two driving factors. The fifth was the sole advantages/disadvantages driving factor - or a Category One driving factor, and shown as variable No. 5 in Fig. 9.8.

Case Study Two (Chapter 10), by comparison, found that there were 'primary' advantages and disadvantages, and 'spin-off' advantages and disadvantages of contracting-out. The former were considered 'powerful' enough to influence resource decision-making, i.e. were capable of being *driving factors*; the latter accrued as a result, rather than influenced the result. It was observed that the 'external' or Category Two driving factors demonstrated greater influence on the resource decision-making process. This leads to the proposition that the driving factor categories, as above, could be refined as:-

- (a) primary or *overriding* advantages and disadvantages of contracting-out (Category One);
- (b) influences which either take precedence over any advantage:disadvantage balance, or, which *dictate* whether or not contracting-out would be advantageous (Category Two).

Further, analysis in Case Study Two and Case Study Five proposed that these Category Two variables, for a given User, collectively determined the *environment* presented by the User toward contracting-out, and which ranged from being compatible with contracting-out (i.e. a friendly

environment), to incompatible, (i.e. a hostile environment).

Fig. 15.2 is a model of this proposal showing a continuum existing, ranging from contracting-out 'won't occur', through contracting-out may and contracting-out *should* occur, to contracting-out 'must occur'. At the same time the *environment* presented by Users is shown to range from 'hostile', through 'neutral', to a 'friendly' environment; equating to a range of influences impacting on contracting-out decision-making, from the extreme of required *rejection* (e.g. a corporate decision against contracting-out); through acquiescence - where the User does not express strong guidance either for or against contracting-out; through encouragement - where the User starts to promote contracting-out as the preferred method of resourcing; (e.g. an in-principle board decision to contract-out FM Services where possible, or Government policy for Departments to 'market test'); to the other extreme where the User *requires* contracting-out to be implemented (e.g. a corporate strategic decision).

The interface of the continuum is denoted by the dotted 'curve', which corresponds with the horizontal axes at both extremes. Above the interface contracting-out does not occur and below the interface it does.

Further, the top half of the model corresponds to the disadvantages of contracting-out for a given service exceeding the advantages, on an increasing grading away from the centre line zone. Note: it should be stressed that in the top half, *irrespective* of the disadvantages, contracting-out will occur below the interface, but not above it. Similarly below the centre line zone, where a balance occurs, advantages increasingly exceed disadvantages, but contracting-out only occurs *below* the interface. The horizontal centre line zone represents an area where a balance occurs between the advantages and disadvantages.

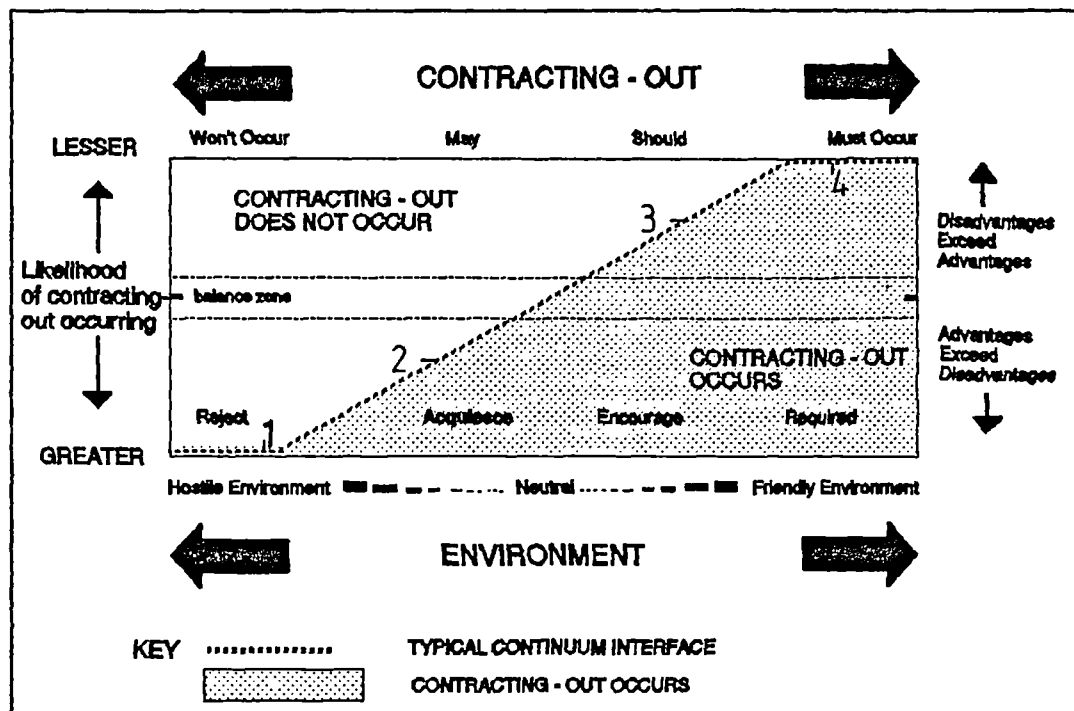


Fig. 15.2: The Inter-relationship of User Environment and Advantages/Disadvantages of Contracting-out : Base Model

This zone itself, according to the case study findings, would be of varying proportions.

To demonstrate the mechanics of the model, it follows that if a User presents an acquiescent environment (i.e. assent in a passive way) and the advantages and disadvantages balance, the position of the event on the model is likely to be above the interface and contracting-out won't happen; whilst in a more encouraging environment, the same event is more likely to be below the interface and contracting-out will happen. The logic assumes that the typical situation would currently reflect resourcing by in-house means - because of the recent historic pre-eminence of internally resourcing, compared with the relatively newly introduced method of contracting-out. It follows that, in an average acquiescent environment, where there was no dominant balance in favour of either advantages or disadvantages, there would be no active forces for change.

On the typical interface shown, the lower a given point, the less likely contracting-out is to happen.

E.g. at Point (1) : the User's strategy dictates contracting-out won't be allowed to happen; for instance, the Board policy, reflecting the organisation's culture, is to resource FM Services in-house.

At Points (2) + (3) : Contracting-out is more likely to happen at (3) in an encouraging environment than at Point (2).

At Point (4) : Contracting-out is enforced; e.g.<sup>1</sup> by a main board strategic decision, for example by outsourcing FM Services; or e.g.<sup>2</sup>: by government policy for central government departments.

The model was tested by applying to it the *influencing driving factors* of the PCS. First the management/operational split conveys that the environment is hostile to contracting-out management; i.e. it is rejected as an option as a result of corporate strategy, and therefore occurs above the curve to the left of the model. In addition, the findings show that for PCSO it is also disadvantageous (as well as anti-policy) to contract-out management - the findings range from in-balance with advantages, to primarily disadvantageous. This positions the event from the central zone up toward the top axis (See Fig. 15.4).

The findings show that some operational services may be contracted-out; i.e. there is no overall anti-policy. The data does not record an instance where contracting-out is *required*.

To analyse the findings further requires examination of the *embedded* cases of the PCS. Within the PCS, the unit of analysis, which was a 'bundle' of services organised together as Hotel Services, represented a series of 'embedded cases'; e.g. catering services, window cleaning, etc. These embedded cases responded to different variables, forming different micro-environments, such that

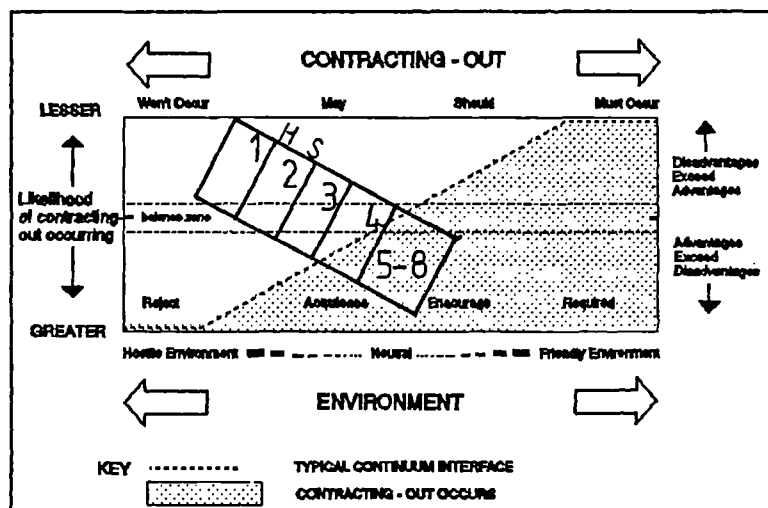
taken as *individual* services they were exposed to a range of User environments, as per Fig. 15.3.

Contracting-out of catering and cleaning were subjected to the hostile environment caused by the corporate decision to interface patients only with directly-employed staff, irrespective of the merits of contracting-out. Porterage attracted no driving factor advantages or disadvantages, but submitted to the corporate preference for roles which comprise full-time *local* involvement to be resourced in-house; i.e. a hostile environment as far as contracting-out was concerned.

Laundry and linen service was not 'governed' by the User's environment (i.e. a neutral environment existed) and was resourced differently according to the local preference.

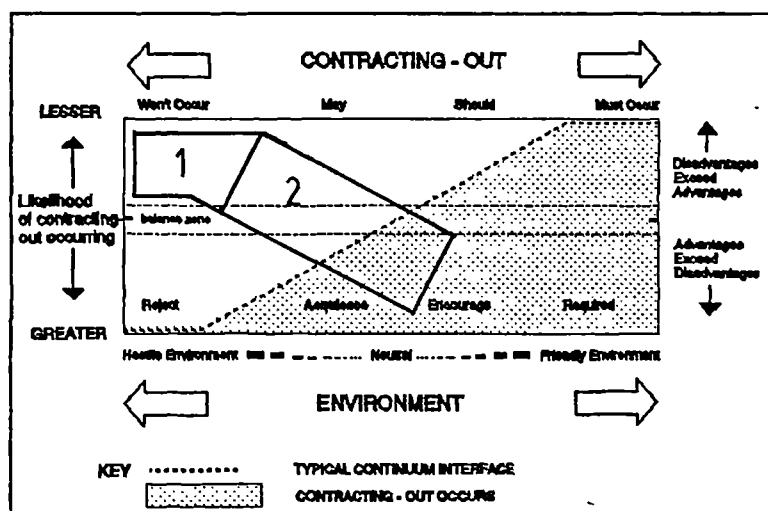
The remaining four services were contracted-out on a piece-meal basis primarily in a neutral environment (i.e. the User did not dictate circumstances as a result of other influences). Because of distinct advantages of contracting-out, which amounted to Category One driving factors, such as specialist skills and specialist equipment, part-time requirement, off-site process requiring specialist plant, etc., the advantages placed the events below the curve in the 'contracting-out will happen' sector.

By subsequently synthesising the findings of the analysis of the elements which comprised the HS unit of analysis, i.e. the embedded cases, results could be achieved for the 'bundle'. The position of HS operational services is shown on the model, together with HS Management. See Fig. 15.4.



- 1 = Catering
- 2 = Cleaning
- 3 = Portage
- 4 = Laundry
- 5-8 = Window cleaning  
Waste Management  
Gardening  
External Security

Fig. 15.3: PCS Embedded Case Studies - Operational Elements of Hotel Services



- 1 = Management
- 2 = Operational

Fig. 15.4: The Inter-relationship of User Environment and Advantages/Disadvantages of Contracting-out : The Pilot Case Study - Hotel Services



At this stage in the analysis the model had satisfactorily demonstrated the inter-relationship of 'Overriding advantages/disadvantages' (Category One) and 'External' (Category Two) driving factors. The model had demonstrated the potential for assisting understanding of why, in a given User organisation, there might be both contracting-out and in-house resourced solutions adopted; and would now be used to assist the analysis of the cross-case comparisons.

(ii) *Case Study Two (Clinical Sterilizer Maintenance)*

Notwithstanding primary advantages in Case Study Two for Level 3 clinical sterilizer maintenance in favour of contracting-out, PCSO decided to resource in-house *despite* the disadvantages of doing so, because of the corporate requirement for greater control. This supports the proposition that primary advantages could be overruled by more powerful 'external' influences. In this case one theory was that this was because of the importance of clinical sterilizers (CS's) to the core business 'production line'. A cross-case comparison with another service, also perceived to be important to core business, helped the analysis.

Laundry and linen service (L&L) provided the essential clean gowns and sheets for hospital use (see the Pilot Case Study). Where L&L was contracted-out, e.g. Location 2, the hospital carried sufficient stock to overcome any potential 24 hour delay in return of goods from the commercial laundry. The primary advantage, equating to the reduction in management 'hassle', was considered worthwhile to justify the cost of this back-up - a back-up that was *not* available if, for the comparative case, a clinical sterilizer failed and required essential repair, threatening operating theatre hours.

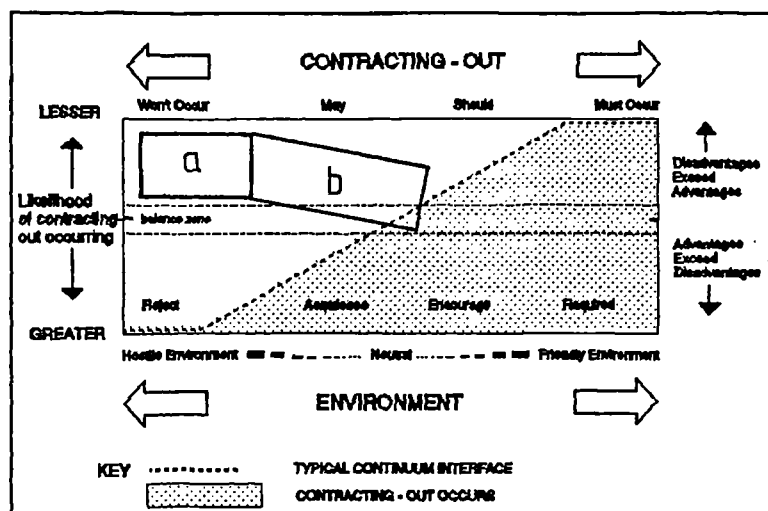
For Level 3 CS maintenance, contracting-out proved more cost-effective than in-house; conversely for L&L the cost

per item laundered out-house was more expensive; i.e. in both cases the *more expensive* alternative was chosen. An advantage of contracting-out L&L was seen as the shifting of risk to the supplier for the complex process of cleaning hospital laundry - even though a disadvantage of doing so was itself the risk of relying on a commercial laundry, which, for example, would not have the water priority rights of a hospital should, for whatever reason, a shortage occur. Conversely, the shifting of risk to a contractor for CS maintenance was seen as a *disadvantage* by the same organisation. Why?

The same organisation, in these two separate case studies, provided a rejecting or *hostile* environment and a *neutral-tending-to-friendly* environment, despite opposing cost impacts. The difference was not due to the variable of importance of the service to the core business. Rather, the process of CS maintenance was more *complex* than hospital laundering in one major respect - the former failed *unsafe* with greater potential impact on patient health, and hence the business.

Fig. 15.5 plots the indicative position of CS maintenance on the model; whilst the indicative position for L&L is shown at Fig. 15.6. Level 2 CS maintenance, carried out largely by the maintenance engineer, was wholly in-house resourced. PCSO require it to be so, and the balance of the pros. and cons. clearly tended toward the disadvantages of contracting-out. Hence it is positioned in the 'reject' sector of a hostile environment to contracting-out and above the balance zone where disadvantages exceed advantages.

Level 3 maintenance was only contracted-out where, (in the South East Region), PCSO *could not attract* a sterilizer engineer to join the payroll, i.e. this does not occur in the lower sector of the model (i.e. below the balance zone) as the result of an advantage balance, because cost-efficiency gain was a spin-off result, not a driving factor. The Level 3 CS maintenance study could have easily



a = Level 2 CS Maintenance  
b = Level 3 CS Maintenance

Fig. 15.5: The Inter-relationship of User Environment and Advantages/Disadvantages of Contracting-out  
: Case Study Two - Clinical Sterilizer Maintenance

been *misinterpreted* as an example of a Category One factor (primary advantage) driving a decision, i.e. an overriding advantage balance. The regional management preference for contracting-out Level 3 in the South East was off-set by the corporate management's 'hostility', resulting in an 'acquiescent' environment based on a 'needs must' attitude (i.e. the decision was made on the basis of no practical alternative - 'Hobson's choice').

Case Study Two findings in Chapter 10 proposed that it was how a User *perceived and interpreted* potential advantages and disadvantages that ultimately determined whether they became primary and, consequently, *driving* factors. The cross-case analysis provides the opportunity to examine this proposal further.

The Research Review, as reported in Chapter Eight, used the terminology 'potential' advantages and 'potential' disadvantages, because of the evidence that the pros. and

cons. would not necessarily be consistently applicable to a range of Users. Analysis of Case Study Two's evidence proposed that the same advantages and disadvantages may be interpreted differently for different FM services, even *within the one organisation*; i.e. for example a *primary* advantage of contracting-out one service (that is powerful enough to influence decision-making) may not be considered a primary advantage for another service; further an 'advantage' for one service may be seen as a 'disadvantage' for another service.

An embedded study, within the same User organisation, but a part of Case Study Four, described how the resourcing of electrical testing was being contracted-out. This provides a valuable comparable for Case Study Two's Level 3 clinical sterilizer maintenance. In both cases there was sufficient work to warrant employment of a complete individual, albeit for the former it equated to one person nationally whilst, for the latter, it was one person regionally. The potential advantages of contracting-out were *perceived* by the User to be dominant for electrical testing, especially cost-efficiency and operational-efficiency gains resulting from supply by more localised contractors (e.g. less travel cost; no or reduced overnight accommodation requirement; provision of specialist skills and equipment, etc.); i.e. the *same* advantages that had been *discounted* as driving factors for Level 3 CS maintenance. The reason is due to the respective need, or lack of need, for control over a process, depending on its importance to a core activity.

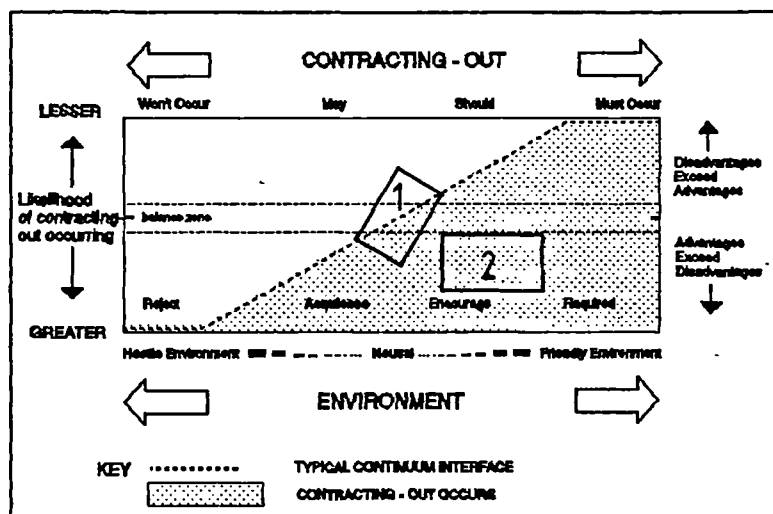
In Fig. 15.6, the two effects place electrical testing in the 'contracting-out happens' zone, viz:-

- (i) The *interpretation* by the User of potential advantages and disadvantages resulting in a pro-advantage balance (which therefore positions the event in the lower half of the model).
- (ii) The absence of other Category Two driving factors, (i.e. other external influences) overwhelming the power of 'scale of operation' - which on its own

tends, in PCSO's case, to present a Neutral-Friendly environment.

This can be compared with the indicative position of Level 3 CS maintenance in Fig. 15.5.

Fig. 15.6 also shows the earlier comparison with Laundry and Linen. In this case there is no strategic dictate for or against contracting-out, although the general attitude of PCSO against contracting-out suggests this event should be positioned on the acquiescent side of Neutral. The advantages and disadvantages of contracting-out L&L have more of a tendency toward balancing, than of demonstrating a dominance, and therefore a final position is indicatively located about the centre line - partly above and partly below the interface, reflecting the varied approach to resourcing.



- 1 = Laundry and Linen
- 2 = Electrical Testings

Fig. 15.6: The Inter-relationship of User Environment and Advantages/Disadvantages of Contracting-out : Compared with Electrical Testing Service and Laundry and Linen Service

## Summary

PCSO demonstrated, across-cases, a lesser regard for the more cost-effective solution, instead placing greater importance on the control of critically sensitive operations.

Where an intermittently-required specialist skill is required, the analysis proposes that contracting-out may be a more effective solution; but where a bespoke multi-skill role exists, it may best be resourced internally, largely because insufficient demand for that particular mix of skills would not stimulate an externally resourced supply.

Case Study Two highlights another reason for contracting-out, namely the inability of the User to attract personnel to the workforce.

The model should be taken to demonstrate, in the top half, disadvantages as *perceived by that particular User* for that particular service, and a similar case for advantages in the lower half; i.e. this supports the PCS suggestion that the driving factor category of 'advantages and disadvantages' (Category One) is a true variable influence, and hence restricts the potential for generalising these findings.

### (iii) *Case Study Three* (*Estates Surveying Services - ESS*)

The evidence for this case study demonstrated an environment for contracting-out that was '*friendly*' and very close to being a required scenario. The fact that contracting-out did *not* occur during the period of the study was due to a very powerful disadvantage; i.e. the probable detrimental cost effect on the User, caused by the significant reduction in viability of the remaining FM department as a result of disposing of Estates Surveying Services and contracting-out in lieu. Apparently a case

where a primary disadvantage is, at its most extreme, powerful enough to override an 'external' influence.

An opposite but comparable finding appeared to occur with Case Study Two, where Clinical Sterilizer Level 3 maintenance was resourced out-house for one region, despite the environment being close to rejecting contracting-out. The analysis of that case was, however, that it occurred more by default occasioned by the User's inability to recruit staff, rather than the power of an advantage of contracting-out; i.e. it was due to the influence of a Category Two driver, namely, the variables shaping PCSO to be an unattractive employer for this particular unit of analysis.

By re-analysing CS3 following this cross-case comparison though, it can be seen that this was indeed comparable with the CS2 findings - CS3 was a case where the driving factor was an advantage of *keeping* the existing service in-house, rather than a disadvantage of contracting-out.

These two cases show that the paired *vertical* components of the matrix proposed in Chapter 10 viz:-

|                        |                                  |                               |
|------------------------|----------------------------------|-------------------------------|
| <i>Primary Level</i>   | Disadvantages of contracting-out | Advantages of contracting-out |
| <i>Secondary Level</i> | Advantages of in-house           | Disadvantages of in-house     |

are *not* synonymous with each other, but their respective influences on Users *do* result in the same end. Analysis of CS5 and CS6 supported this proposal, wherein the employment packages accruing to directly-employed support staff were seen to be above market norms.; and the policy of direct

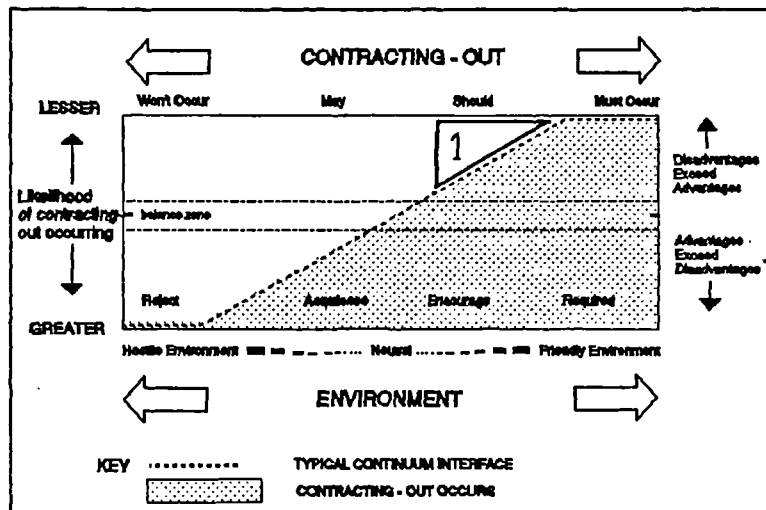
employment had the inherent disadvantage of redundancy costs at termination. Both aspects were seen as disadvantages of in-house resourcing.

CS3 also reflected an organisation that had decided on what its core business was, and had then determined to concentrate on that core business by (amongst other actions) reducing the extent of its in-house FM Services department (eventually selling the whole). Comparison of data showed that a strategy of concentrating on core business had been the same motivating influence for CS6 to contract-out all FM services, and for CS5 to actively encourage contracting-out of operational services.

For the PCS a re-appraisal of core business, and a growing awareness of core products, led to a re-assessment of the importance of Hotel Services to the organisation's overall performance, and resulted in the bringing back in-house of HS management, in order to control better the operational elements. PCSO exemplified: the potential complexity of determining core business; the shortcomings of viewing core business as one entity and not a conglomerate of core products produced by core skills; and the value of identifying customer groups. For CS03, the implementation of a strategy of concentrating on core business became 'doctrinal' - see reference under Case Study Six below.

The position on the model of CS3's Estates Surveying Services is shown at Fig. 15.7. The conflicting forces of the User's 'encouraging' environment to contracting-out were ameliorated by the extreme disadvantage to the User of contracting-out this particular aspect of FM Services; i.e. contracting-out should have occurred, but didn't, because of an extreme disadvantage or, more accurately, the extreme advantage of retaining the resource in-house.





1 = Estates Surveying Services

Fig. 15.7: The Inter-relationship of User Environment and Advantages/Disadvantages of Contracting-out : Case Study Three - Estates Surveying Services

### Summary

- \* As the User's environment moves away from a neutral position, the power of contrary advantages or disadvantages of contracting-out has to tend toward the extreme end of the range in order to influence decision-making, i.e. they have to assert more power.
- \* The cross-case analysis supports the proposition that advantages of contracting-out and disadvantages of in-house resourced (and vice versa) whilst not synonymous, are complementary and generate the same end result. This suggests that the matrix of options should be applied to decision-making; and hence it would be more accurate to apply the matrix options to the respective halves of the model, rather than just referring to advantages/disadvantages of contracting-out.
- \* The cross-case analysis supports the suggested benefit to a User of scrutinising its operation, in order to identify accurately the elements of core business, core products (including core skills) and customer

groups, by recording converging data, which evidenced the resultant increase in efficiency.

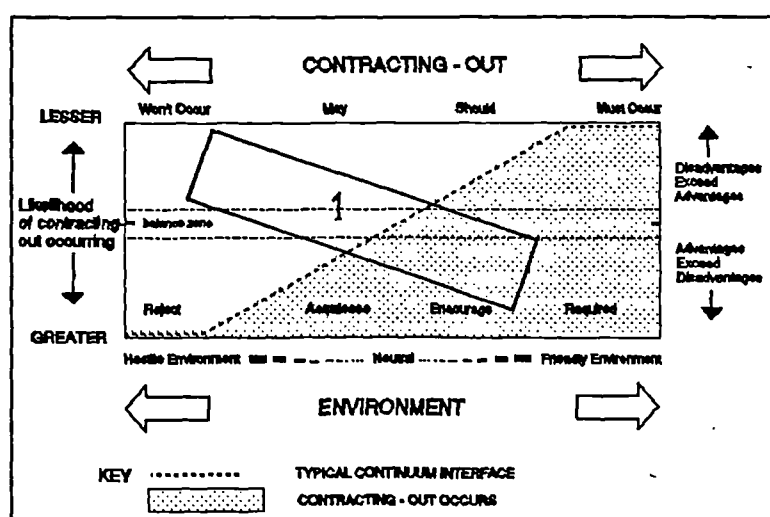
(iv) *Case Study Four (Estates Services)*

CS4 reinforced one finding of the PCS; i.e. the need to consider whether the unit of analysis compositely included management and operational. The PCS did, as did CS4 (i.e. the management and delivery of estates services) and, less clearly, CS3 was the same. CS2 (clinical sterilizer maintenance) was operationally specific, with some tactical, but no strategic management consideration; CS5 (catering) excluded strategic and tactical management, and CS6's unit of analysis excluded operational services.

The common denominators are that neither PCSO nor CS05 would consider contracting-out level 1 and 2 management (strategic and tactical); CS03's policy, where contracting-out did occur, was to contract-out some tactical and monitoring management roles (but to separate contractors from those used for operational roles), retaining an in-house knowledgeable client presence, which retained the strategic management role, together with some tactical and supervisory. CS06 went one step further by contracting-out to separate management and operational suppliers, *without* retaining an in-house knowledgeable client presence.

For CS4, the Estates Services was *managed* strategically and, in the main, tactically by in-house resources. There was a grey area with some tactical management of projects being the responsibility of external design team members. The range would therefore approximate to the parallelogram on the model at Fig. 15.8. This replicates closely PCSO's position regarding management of Hotel Services, where some tactical management would be the responsibility of suppliers; e.g. waste management, laundry processes, and determining the best way of providing external security.

CS3's Estate Surveying Service was not directly comparable with CS4's. The former equated to more traditional estates surveying services, the latter to estates management services. Operationally CS4 resourced tasks that equated to full-time requirements at locational level from in-house sources - albeit achieving this by multi-skilling outside the ES service, i.e. for intermittent tasks the environment encouraged contracting-out; for full-time tasks at location level, contracting-out was rejected. CS3 tended to equate to operational services requiring professional skills, whilst CS4 tended to operational services requiring technical skills. But it was the *extent* of the task, not the content, which determined the method of resourcing. Other operational resource requirements were contracted-out. On the model this would be as per Fig. 15.8. The strategic management at one end of the spectrum was largely retained, with the disadvantages for contracting-out exceeding the advantages. At the other end of the range were elements of operational services for which it was very advantageous to contract-out, with an encouraging environment to do so.



1 = Estates Services (Management and Operational combined)

Fig. 15.8: The Inter-relationship of User Environment and Advantages/Disadvantages of Contracting-out  
: Case Study Four - Estates Services

## Summary

- \* The importance of identifying the separate elements of 'management' and 'operational' services is reinforced by cross-case examination. In all cases the *main* strategic management decision-making was retained in-house - albeit for CS6 this equated to decision-making and some monitoring only at Board level (all other management was delegated).
- \* By separating the management and operational roles, it was possible to gain a clearer picture of what was, and what was not, contracted-out.
- \* Where contracting-out of elements of both management and operational services occurred, there was a consistency of approach in all cases, whereby strategic and the main tactical decisions were contracted-out independently of operational services. No case was identified where a supplier of operational services also controlled strategic or tactical management.

### (v) *Case Study Five (Catering Services)*

The recession concentrated CS05's efforts toward improving business efficiency, and their strategy became one of encouraging contracting-out. The inefficiencies of the client catering at the London South location were overcome by contracting-out, i.e. Categories One and Two driving factors acted in harmony; (viz: contracting-out was advantageous and the external influences created an encouraging environment).

Catering at London North remained in-house resourced, and it appeared this would continue either for as long as the catering team retained its efficiency, or until the environment influences (i.e. the external influences) shifted further toward 'requiring' contracting-out. This was an example of the primary advantages (Category One

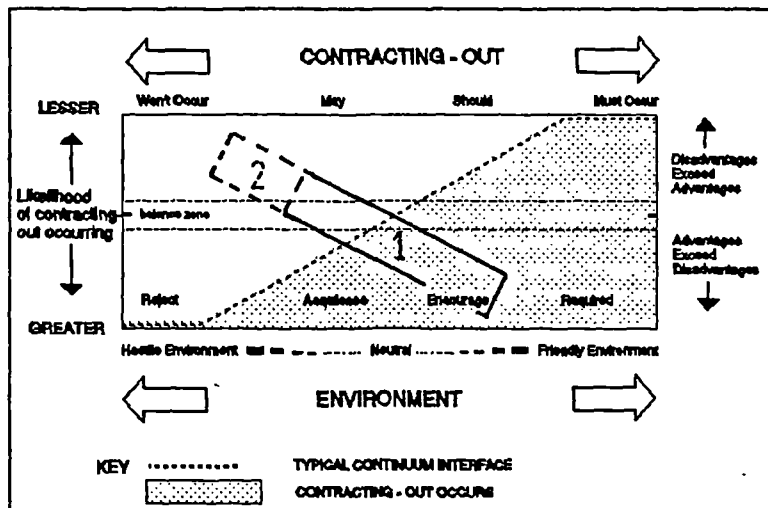
driving factors) of contracting-out not being sufficiently powerful enough to implement change, even though the environment appeared to be encouraging it. Further analysis shows that the reason for this situation relies on two factors. First, CS05 was a relatively recent (4 years old) merger of two *opposing* cultures as far as contracting-out was concerned. Subsequent to the merger, and with increasing recessionary pressures focusing on business efficiency, the emphasis had shifted, as far as Operational Services were concerned, from an acquiescent centre for the environment toward contracting-out at date of merger (i.e. within a range, with extremes of *reject* and *encourage*) toward a centre point of '*encourage*' (i.e. with extremes of *acquiesce* - maintain status quo, as long as it is efficient - and a tending toward *require*). However, as far as the unit of analysis was concerned, CS05, in practice, presented an acquiescent environment to resourcing catering in London North, because of employer loyalties to long-term employees. The advantages of contracting-out were not powerful enough to overcome this Category Two 'external' contrary influence.

The strategic management of catering services, which was not specifically part of the study itself, was retained in-house. This part of the cross-case analysis supports the importance of being able to isolate management and operational and, as with PCSO's three cases, suggests that where there is a mixed environment for contracting-out, the management (strategic and tactical) is likely to be the retained element and operational services (inc. supervisory management) will probably be the contracted-out element.

In comparison, CS6 is an example of complete contracting-out. In the studies there was no case where the operational services were retained in-house and management was contracted-out except the situation pertaining in PCS during the study period which was reversed because it was found unsatisfactory. This change supports the observation

that the contracting-out of management only is an unlikely scenario.

Fig. 15.9 demonstrates the decision-making concerning CS5. Management is shown for comparative purposes. The part of the catering operation that is not contracted-out is largely contained in the balance zone. Because opposing influences are insufficiently strong - and an acquiescent environment exists - the status quo of not contracting-out this part of the service is retained. The majority of catering is contracted-out, in an environment which is increasingly tending toward requiring it to occur.



- 1 = CS5 Catering Operation  
 (2 = management of catering - not part of study)

Fig. 15.9: The Inter-relationship of User Environment and Advantages/Disadvantages of Contracting-out : Case Study Five - Catering Operational Services

## Summary

- \* To effect change in an 'acquiescent' environment, the power of the advantages/disadvantages balance would have to overcome status quo influences; which tend toward anti-contracting-out, because historically this has been the predominant method of resourcing support services.
- \* Where a User resources a given aspect or bundle of services by both contracting-out and directly staffing, the retained services will normally include the higher level of management.
- \* It is unlikely that operational services will be retained and management resourced externally.

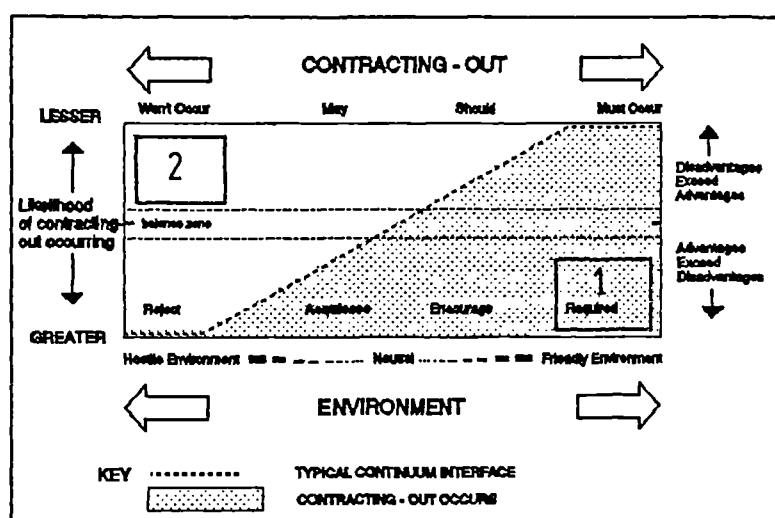
### (vi) *Case Study Six (Contracted-out Management of Facilities Services)*

At the other extreme to PCSO, CS06 *required* contracting-out. Operational services - not part of this study - had been contracted-out first, successfully. Contracting-out of the management of these operational facilities services followed - but to an independent management contractor.

The driving factor which appears responsible for the corporate decision to contract-out was to concentrate on core business. This correlates so closely with one of the primary advantages of contracting-out, it is difficult to see which is the horse and which the cart. The unit of analysis for CS6 was the management of FM Services, providing a literal replication for the embedded case study of management from the PCS. The cross-case analysis of the two helps resolve the horse and cart problem.

Reference to the model (see Fig. 15.10) demonstrates how the two cases oppose each other, supporting the proposal

that it is the way an organisation *perceives* the advantages and disadvantages of contracting-out that affects which become driving factors. I.e.: CS06, seeking greater efficiency by concentration on core business (a Category Two driver), perceived the advantages of contracting-out as complementary to the overall business strategy. However, PCSO, seeking efficiency, perceived the advantages of *in-house* resourcing as complementary to their overall business strategy.



- 1 = CS6 Management  
2 = PCS Management

Fig. 15.10: The Inter-relationship of User Environment and Advantages/Disadvantages of Contracting-out : Case Study Six - Management of FMS

This supports a view expressed in Chapter 2, i.e. that FM could be seen as a management strategy. It follows that contracting-out or in-house resourcing could also be seen as a tactic, i.e. a method of implementing a strategy.

Both CS06 and PCSO had similar strategic goals concerning quality and efficiency, but the former perceived contracting-out as being *complementary* to the aim, whilst the latter perceived contracting-out as tending to being



*injurious* to the aim. The perceptions would be formed by variable influences; for example, PCSO's striving for efficiency and quality was also influenced by its cultural strategy of providing a caring, personal service, and by its 'scale' of operation.

For CSO6, the external influences on FM resource decision-making established a friendly environment in which contracting-out was *expected* to occur, i.e. it was required by strategy. Further, CSO6 perceived little in the way of disadvantages to counter-balance the advantages; and hence the event is indicatively shown at the extreme of the model.

PCS *expected* the management of facilities witnessed in PCS, CS2 and CS4 to be retained in-house, i.e. it was required by strategy. Further, PCSO did not perceive contracting-out to be, overall, advantageous and hence the event occurs above the balance zone in a 'hostile' environment.

As another example: for CSO3, the strategic goal of business efficiency was shaped by *political* influences, which, after the commencement of the case study period, required Government Departments to 'market test' their FM Services, i.e. not a contracting-out requirement per se, but a benchmarking test of cost and operational effectiveness, which effectively fostered a 'friendly' environment toward contracting-out.

## Summary

FM resource decisions are made in environments shaped by variable influences. Some of the influences equate to differing User perceptions of the respective merits of in-house resourcing or contracting-out.

(vii) *Driving Factors: Summary Scheduling*

A second technique was adopted to assist the cross-case comparison of 'reasons for solutions adopted'. This was to put the information into a different array - a technique proposed by Miles and Huberman (1984) and used by Yin (1991) both as "preliminary data manipulations" and as "an approach to case study analysis". (pp.105-106)

Table 15.1 displays the main findings on a case-by-case basis, with the driving factors scheduled according to the two previously recognised categories of 'overriding advantages and disadvantages', and 'external influences'. The following results were achieved by this analytical process.

(a) *Cost*

- \* Two User organisations resorted to contracting-out in response to aims of improving operational effectiveness and efficiency.
- \* Only one User employed the tactic of contracting-out in response to the aim of specifically achieving greater cost-efficiency.
- \* One organisation did *not* contract-out the unit of analysis, because of the probable negative effect both on cost and operational efficiency for the retained FM Department.
- \* Two Users (PCSO and CS05) were not *driven* by cost factors in respect of resourcing FM.

(b) *'Doctrine'*

CS03 and CS06 appeared to share a common 'doctrine' of favouring contracting-out. In the former's case implementation was thwarted only because of a powerful disadvantage of proceeding. This was the only case which presented the management scenario of an organisation

TABLE 15.1: MAIN FINDINGS RELATED TO DRIVING FACTORS - CASE BY CASE

| PCS                                                                                                                                                                                                                                                                                                                  | CS2                                                                                                                                                                                                                                                                                                                          | CS3                                                                                                                                                                             | CS4                                                                                                                                                                | CS5                                                                                                                                                                                                                                         | CS6                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CATEGORY ONE                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                 |                                                                                                                                                                    |                                                                                                                                                                                                                                             |                                                                                                                                                                  |
| OVERRIDING ADVANTAGES                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                 |                                                                                                                                                                    |                                                                                                                                                                                                                                             |                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>* Provides specialist training needs</li> <li>* Overcomes specialist equipment/plant needs</li> <li>* Provides non-essential support skills</li> </ul>                                                                                                                        | <ul style="list-style-type: none"> <li>* Greater Operational efficiency</li> <li>* Overcomes specialist skills shortage (Level 3)</li> <li>* Overcomes specialist equipment needs</li> </ul>                                                                                                                                 | <ul style="list-style-type: none"> <li>* Improves provision of specialist skills</li> </ul>                                                                                     | <ul style="list-style-type: none"> <li>* Provides intermittently required resource</li> </ul>                                                                      | <ul style="list-style-type: none"> <li>* Improved efficiency</li> <li>* Permits concentration on core business</li> <li>* Improved operational standards</li> </ul>                                                                         | <ul style="list-style-type: none"> <li>* Permits concentration on core business</li> <li>* Maximises cost efficiency of service delivery</li> </ul>              |
| OVERRIDING DISADVANTAGES                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                 |                                                                                                                                                                    |                                                                                                                                                                                                                                             |                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>* Not cost efficient</li> <li>* Against culture of the organisation</li> <li>* Operationally inefficient to contract-out management</li> <li>* Risk not transferred to contractor</li> <li>* Lack of flexibility to deal with seasonally variable workload pattern</li> </ul> | <ul style="list-style-type: none"> <li>* Lose flexibility</li> <li>* Less control over staff</li> <li>* Slower response time</li> <li>* Inability to supply bespoke skill requirement (Level 2)</li> </ul>                                                                                                                   | <ul style="list-style-type: none"> <li>* Reduces operational and cost-efficiency of retained FM services, which would impact on the User as the funding organisation</li> </ul> | <ul style="list-style-type: none"> <li>* Lose management control</li> </ul>                                                                                        | <ul style="list-style-type: none"> <li>* Potential risk of immature supply market</li> </ul>                                                                                                                                                |                                                                                                                                                                  |
| CATEGORY TWO                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                 |                                                                                                                                                                    |                                                                                                                                                                                                                                             |                                                                                                                                                                  |
| EXTERNAL INFLUENCES                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                 |                                                                                                                                                                    |                                                                                                                                                                                                                                             |                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>* Management/Operational split</li> <li>* Patient/staff contact</li> <li>* Staff:Contract worker ratio</li> <li>* Scale of operation</li> <li>* Dedicated culture of organisation</li> <li>* Customer expectations</li> </ul>                                                 | <ul style="list-style-type: none"> <li>* Control over 'production process'</li> <li>* Lack of employment attractions (Level 3)</li> <li>* Scale of operation</li> <li>* Availability of supply of required skill from an external source</li> <li>* Inability to recruit required skill to the in-house workforce</li> </ul> | <ul style="list-style-type: none"> <li>* User doctrine</li> <li>* Search for greater cost efficiency</li> <li>* Search for greater operational efficiency</li> </ul>            | <ul style="list-style-type: none"> <li>* Full-time skill requirement at location level</li> <li>* Scale of operation</li> <li>* Culture of organisation</li> </ul> | <ul style="list-style-type: none"> <li>* Management to concentrate on core business</li> <li>* Search for greater efficiency</li> <li>* Search for improved quality of service</li> <li>* Status quo</li> <li>* Loyalty to staff</li> </ul> | <ul style="list-style-type: none"> <li>* Concentration on core business</li> <li>* Search for greater cost-efficiency of delivery of support services</li> </ul> |

wishing to impose contracting-out, prior to seeking justification for the action (as it transpired, temporarily rejecting the action). This suggests the 'influence' of a User *doctrine*, which can be thought of as actioning User culture.

In CS06's case the reason for the 'doctrine's' existence was to permit staff to concentrate on core business. This was the same primary reason as encountered in Case Study Five, but CS05 had not progressed as far as *imposing* the decision.

(c) *Size Factors*

PCSO adopted more of a 'Fordism' approach to business; i.e. an in-house resourced organisation, but the common denominator of the three cases studied with PCSO was 'scale of operation'. At verification stage, DoPF agreed that if PCSO comprised the same size of business but had concentrated on one, or at most, a few sites (i.e. not thirty-two), the influences on decision-making would be radically changed.

(d) *Core Business*

The research questions how clearly the Users understood their core businesses, and also proposes that organisations might benefit from seeing core business as a conglomeration of core products. Two Users presented environments shaped by strategic decisions to concentrate on core business. A third User required particular in-house control of a process seen to be essential to the fulfilling of core business. No evidence was forthcoming regarding contracting-out being a method of 'rightsizing' a workforce - even cosmetic rightsizing for balance sheet purposes (e.g. by outsourcing FM staff, showing a 'reduced' workforce, returning the same production figures - an apparent increase in efficiency). Such slimlining may have been integral to the strategic decisions to concentrate on core business, but there was no data to support this proposition.

(e) *Generally*

- \* The table of findings shows that advantages to one organisation can be experienced by another as being disadvantageous - e.g. by contracting-out management, a User variously improves efficiency or loses control.
- \* The Category Two 'external influences' (i.e. influences other than advantages/disadvantages) help shape the User's wants into strategic decisions. Contracting-out is then seen as a possible tactical solution to the strategic requirements. Some Users decided the tactic of contracting-out fitted their strategy well, for other Users the tactic was used with restraint.

**Summary**

The arranging of Category One driving factors (primary advantages and disadvantages of contracting-out) in tabular form assisted analysis by matching patterns, undertaken in the sense that the display enabled the pattern of findings of each study to be compared across the cases.

The gross matches/mismatches identified were:-

- \* Seeking cost-efficiency of service delivery was not a generalisable main aim of the User organisations.
- \* Contracting-out did not exclusively help deliver improved cost-efficiency.
- \* For PCSO the determining factor in contracting-out decision-making for all three cases was 'scale of operation'.
- \* Support was gained for the finding, emanating from the earlier analysis of driving factors by explanatory means, that the cultural doctrine of an organisation influences contracting-out decision-making.

- \* Despite a lack of precision of definition of core business, two Users contracted-out to enable their organisations to focus better on core business.

### 15.3.2 Cross-Case Analysis of the Test Against Hypothesis Results

Adopting the principles previously employed for the summarising of driving factors, an across-case summary table of the tests against the Hypothesis was developed, see Table 15.2. The proposition had been formulated as an hypothesis to focus analysis of data on the influence advantages and disadvantages have over contracting-out decision-making. Analysis of the findings across the cases produced the following results:-

- (i) Only two of the six cases completely supported the Hypothesis. A possible criticism could be that three cases were conducted at the same organisation and should therefore, for this comparison, only count once. If the criticism were accepted, this would make the result: two cases supported the Hypothesis and two against. However the validity of the findings of the three individual cases within PCSO is strengthened by the facts that:
  - (a) different driving factors influenced each case, with the only common denominator being 'scale of operation';
  - (b) contracting-out was not precluded by mandate, it occurred to some degree in all three cases.

It is this researcher's opinion that the results of the three cases involving PCSO *do stand* as individual cases - as intended.

In one of these three PCSO cases (CS4) the findings were that contracting-out was the preferred resource tactic for many of the occasional tasks (especially professional tasks),

TABLE 15.2: SUMMARY OF FINDINGS OF TEST AGAINST HYPOTHESIS - CASE BY CASE

| PCS                                                                                                                                                                                                                                                                                  | CS2                                                                                                                                                                                                          | CS3                                                                                                                                                                           | CS4                                                                                                                                                                                                     | CS5                                                                                                                                        | CS6                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Challenged the Hypothesis                                                                                                                                                                                                                                                            | Challenged the Hypothesis                                                                                                                                                                                    | Challenged the Hypothesis                                                                                                                                                     | Casts doubt on the Hypothesis by not fully supporting the generalisation.                                                                                                                               | Supported the Hypothesis                                                                                                                   | Supported the Hypothesis                                                                                                                                                                                                                       |
| Emphasised the need to differentiate between management and operational functions.                                                                                                                                                                                                   | Emphasised the importance of the term 'potential' advantages and 'potential' disadvantages, because these factors were not necessarily viewed consistently within an organisation.                           | Emphasised that the study related to a 'bundle' of services, which as a part of FMS would be disadvantageous for the User to contract-out, because of the likely cost-impact. | Emphasised that contracting-out was not necessarily the best solution.                                                                                                                                  | Emphasised the importance of the rider 'likely to'; i.e. contracting-out is not a universally advantageous tactic.                         | Emphasised the particular circumstances of the case.                                                                                                                                                                                           |
| Proposed the existence of variables which influenced contracting-out decision-making, and proposed a model to demonstrate the process.                                                                                                                                               | Proposed that the alternative to an advantage was not necessarily a disadvantage (and vice versa) i.e. there could be a neutral position.                                                                    | Proposed that decisions concerning contracting-out individual aspects or bundles of services would not necessarily be consistently applied to contracting-out TFM services.   | Emphasised the importance of 'full-time' staffing requirement -v- 'intermittent-time' in resource decision-making.                                                                                      | Proposed that a dominant balance of either advantages or disadvantages would not necessarily drive subsequent resource decision-making.    | Proposed that the <i>method</i> of contracting-out (in this case the choice of the <i>type</i> of contractor) could affect the result and therefore, because of the presence of such variables, caution should be exercised with generalising. |
| Suggested that Driving Factors acted as variables in the FM decision-making process.                                                                                                                                                                                                 | Suggested the analysis was aided by taking the view of in-house advantages to complement contracting-out disadvantages, and disadvantages of in-house resourced to complement advantages of contracting-out. | Suggested a subsequent proposition to test the benefit of contracting-out TFM Services for some Users.                                                                        | Recorded the need for a full-time or whole person requirement to be capable of efficient delivery                                                                                                       | Recognised 'primary' and 'spin-off' advantages and disadvantages.                                                                          | Recognised the presence in the Hypothesis of the implied proposition that contracting out is not necessarily advantageous per se.                                                                                                              |
| Proposed that advantages and disadvantages were two of these variables.                                                                                                                                                                                                              | Recognised that where contracting-out did occur it was not consequent upon an advantages of contracting-out but due to a disadvantage - or shortcoming - of in-house resourcing.                             |                                                                                                                                                                               | Proposed that other business influences besides advantages and disadvantages could determine whether contracting-out would be implemented; notably geographic dispersity and scale of the organisation. | Proposed that a 'mature' supplier market was necessary for contracting-out to be effective.                                                |                                                                                                                                                                                                                                                |
| Proposed that a strict adherence to viewing core business as a single entity could prove to be a barrier to understanding the workings of FM. Restricting FM solely to non-core business overlooked its role in services which were part core, part non-core, or were core products. |                                                                                                                                                                                                              |                                                                                                                                                                               | Noted that where advantages of contracting-out did not outweigh disadvantages, it did not necessarily mean a balance in favour of disadvantages the alternative.                                        | Proposed that influences created an environment in which contracting-out had to exist, ranging from a hospitable to a hostile environment. |                                                                                                                                                                                                                                                |
| Suggested that the hypothesis was too generalised.                                                                                                                                                                                                                                   |                                                                                                                                                                                                              |                                                                                                                                                                               |                                                                                                                                                                                                         |                                                                                                                                            |                                                                                                                                                                                                                                                |

but for the regular tasks (full-time requirement at local level) contracting-out was not utilised. Because statistical measures had not been set to define quantitatively when 'outweigh' - referred to in the hypothesis - was deemed to have occurred, the assessment of whether the hypothesis was supported in this case was based on the simple empirical test that significant numbers of tasks were sourced by *each* method, summarised as *casting doubt* on the Hypothesis.

- (ii) Other factors as well as just advantages and disadvantages were identified as influencing the resource decision-making; supporting the proposal made following analysis of 'reasons for solutions adopted' concerning Category One and Category Two influences.
- (iii) Users paid differing attention to the relative importance of potential advantages and disadvantages, not only as *between* Users but within the *same* organisation for different FM services, and even within a given group of FM services, which had been 'bundled' together as a management function. The outcome was dependent upon the influences of other variables.
- (iv) For an advantage or disadvantage to *determine* the resultant action taken, it had to have a powerful impact on the organisation. Two scenarios were recognised:-
  - (a) To overcome contrary variable influences;
  - (b) Where no other variable existed.
 In the former case, the advantage or disadvantage would have to be increasingly powerful the more the other variable influences directed the organisation away from a neutral environment in a contrary direction; (e.g. only powerful advantages would override influences driving an



organisation toward a hostile environment, and vice versa).

A third scenario would be where an advantage or disadvantage was in *harmony* with other variables (e.g. pro. contracting-out in an encouraging environment), but in this instance it could not be said to be specifically *determining* the course of action, but rather complementing it.

### Summary

- \* The hypothesis proved an essential focus for the analysis of data.
- \* As a result of analysis of the projects' findings (i.e. across-case), it is not possible to support the implicit generalisation that advantages of contracting-out FM services are likely to outweigh the disadvantages.
- \* The hypothesis, as formulated, *does not* reflect the finding of the project that other variables influence decisions-making; i.e. a balance in favour of advantages or disadvantages does not necessarily determine the resultant action taken by a User.
- \* The proposition *does not* convey the finding that potential advantages and disadvantages are viewed differently, not only by different Users, but by the same User for differing FM services, according to variable circumstances.

### 15.3.3 Cross-Case Analysis of the Test Against the Research Review Findings

The result of the Research Review was to propose a priority ranking of potential advantages and disadvantages based on weighted averaging. The purpose of the test against these findings was *not* to assess support for the Research Review

by statistical analysis of the case study findings, but to assist the case study analysis process.

Part of the methodology of the cross-case analysis, described by Fig. 15.1, was to reduce findings to 'main findings'. The case-by-case test against the Research Review had identified 'primary' and 'spin-off' findings. 'Primary' were deemed to be the advantages or disadvantages experienced by a given User, which influenced the course of resourcing action taken. Spin-off advantages were seen as benefits which accrued to a given User, but which were not part of the reason for adopting the course of action. Spin-off disadvantages were seen as disbenefits, i.e. as the downside of taking a particular course of action.

For the purpose of the cross-case analysis, the focusing down to main findings for this test was achieved by concentrating on the primary advantages and disadvantages.

The *primary* potential advantages and disadvantages identified by the case studies are summarised in Table 15.3. Across the cases analysis of the findings produced the following results.

- (i) Whether a category of advantages or disadvantages is classified as primary (i.e. an influence on decision-making) depends on the circumstances of the individual case.
- (ii) The primary advantages and disadvantages evidenced by the cases tend to correlate toward the higher ranking Research Review categories. This does *not* mean that Users exclusively recognise high ranking *categories* only as primary advantages/disadvantages. Two alternatives were possible:-
  - (a) no recognition;
  - (b) recognition as a spin-off advantage or disadvantage.

TABLE 15.3: POTENTIAL PRIMARY ADVANTAGES AND DISADVANTAGES OF CONTRACTING-OUT - CASE BY CASE

| PCS                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CS2                                                                                                                                          | CS3                                                                                                                                                                        | CS4                                                                                                                                                                                                                                                                                            | CS5                                                                                                                                                                                                                                                                        | CS6                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Primary Advantages of Contracting-out</p> <ul style="list-style-type: none"> <li>* The contractor provides specialist training</li> <li>* Where a process is concerned, contractor provides plant, skills and reduces management burden.</li> <li>* Delivers a range of locally required support services</li> </ul>                                                                                                                                 | <ul style="list-style-type: none"> <li>* Overcomes skills shortage</li> </ul>                                                                | <ul style="list-style-type: none"> <li>* Provides a more complete range of skills</li> <li>* Provides a better range of experience/technical information</li> </ul>        | <ul style="list-style-type: none"> <li>* Provides intermittently required resource more efficiently</li> <li>* Provides an efficient solution where a 'whole person' requirement can only be resourced in-house by inefficient means</li> <li>* Provides specialist equipment/tools</li> </ul> | <ul style="list-style-type: none"> <li>* Allows concentration on core business</li> <li>* Improves efficiency of operational support services</li> <li>* Improves quality of delivery of operational support support</li> <li>* Immature supply market products</li> </ul> | <ul style="list-style-type: none"> <li>* Permits User to concentrate on core business</li> <li>* Maximises cost-efficiency of support services</li> </ul> |
| <p>Primary Disadvantages of Contracting-out</p> <ul style="list-style-type: none"> <li>* Contracting-out of management was not cost-effective</li> <li>* Contracting-out of management loses control</li> <li>* Could establish an imbalance of contract workers-to-staff</li> <li>* An unmanageable number of separate contracts may be necessary</li> <li>* Lack of understanding of User's culture</li> <li>* Not acceptable to customers</li> </ul> | <ul style="list-style-type: none"> <li>* Lack of control over contract staff</li> <li>* Lack of supply of required human resource</li> </ul> | <ul style="list-style-type: none"> <li>* Reduces the viability of the then remaining FM Services</li> <li>* Not cost-effective</li> <li>* Hidden costs involved</li> </ul> | <ul style="list-style-type: none"> <li>* Reduces/Loses management</li> <li>* Against culture of the organisation.</li> </ul>                                                                                                                                                                   | <ul style="list-style-type: none"> <li>* Immature supply market products</li> <li>* Breach of loyalty to staff</li> </ul>                                                                                                                                                  |                                                                                                                                                           |

Where equivalent Research Review high ranking categories were only perceived as a spin-off advantage or disadvantage they were not powerful enough reasons to drive decision-making action; e.g. the cost-effectiveness of contracting-out Level 3 CS maintenance in Case Study Two, albeit equating to the highest Research Review category, was only perceived by PCSO to be of secondary (or spin-off) importance.

- (iii) The Research Review proposed some categories which were mutually exclusive (e.g. advantage = reduced cost; disadvantage = not always cost-effective). The cross-case analysis of this proposal agreed that different Users experienced opposite results; e.g. for CS06 a driving factor was that contracting-out was cost-effective, while for CS03 contracting-out was especially cost-ineffective. Further it was identified that such mutually exclusive categories could be occasioned by Users perceiving the *same* advantages or disadvantages differently according to the influence of variables. Even within the *same organisation* there were such incidences: e.g.<sup>1</sup> contracting-out being both advantageous to the User by supplying a skill (i.e. overcoming a skill shortage) and being disadvantageous to the same User by being unable to replace a direct employee with another mix of skills pertinent to the delivery of the same service (CS2); e.g.<sup>2</sup> In PCSO, shifting risk to the contractor for Laundry & Linen services was considered an advantage, but shifting the risk to a contractor for clinical sterilizer maintenance was disadvantageous. I.e. generalisation was a flawed proposition.

- (iv) One case (CS6) was conducted within an organisation which, it was found, had developed a strategy for contracting-out *all* FM services.

No disadvantage driving factor could be identified (i.e. the advantages completely harmonised with a 'friendly environment'). It would be considered inadvisable to take this as demonstrating that the scenario of contracting-out all FM services together can be generalised as advantageous. Rather it should direct the need for further research into organisations which have undertaken full contracting-out of FM services. This suggestion is supported by the empirical evidence that CS03, having found that contracting-out of the unit of analysis would be an overriding detriment, adopted a strategy to outsource their complete FM Department (i.e. contracting-out a part was disadvantageous, but contracting-out the whole was advantageous).

- (v) Cases where data was analysed into comparable or balanced groupings of Research Review categories both for and against contracting-out, were likely to adopt *both* of the alternative means of resourcing tasks (e.g. CS4's findings equated to advantages 2, 15 and 13 and disadvantages 2 and 15; the result was a mixture of resourcing by in-house and by contract means).
- (vi) It appears that adopting a policy of contracting-out one or more FM service/s (because it is advantageous) will *necessarily* or inevitably impose some disadvantages on the User, i.e. there will be a 'downside'; e.g. contracting-out will cause the imposition of new management tasks.
- (vii) The following new categories were proposed:
  - (a) Potential advantage : The provision of local external knowledge.
  - (b) Potential disadvantage : Lack of knowledge of the User's facilities.

- (c) Potential disadvantage : The presence of an immature supply market.
- (d) Potential disadvantage : The transfer of responsibility (being seen separately from the transference of risk).

Further, the following two categories could be amalgamated in the amended form:-

- (e) Potential disadvantage No. 10 : Strategic risk/contracting-out segments may jeopardise the User's organisation, or lose or *jeopardise* in-house expertise or capability.

### Summary

The conclusions to be drawn from the Test against the Research Review are that:-

- \* Generalisation of the application of advantages and disadvantages of contracting-out FM services is not possible. Prediction of whether contracting-out will be advantageous or disadvantageous will depend on variables, which are likely to be case specific; i.e. without data of other influences, which will be variables, it will not be possible to predict the outcome.
- \* Classifying advantages and disadvantages in order to demonstrate the *likely* range and importance of parameters is a useful aid toward assisting identification of outcomes for a particular User.

### 15.4 CROSS-CASE ANALYSIS CONCLUSIONS

The cross-case analysis sought to identify the main findings, not only of the case studies but, by including

tests against the hypothesis and the Research Review findings, to draw together the main findings of the whole project. I.e. from an unstructured position of theory building, where numerous sources of information suggested a tentative position; through a process of analysis, which developed findings or firm propositions; to a structured position, where theory testing tested the propositions and established generalisability. This testing of the main findings was achieved by reference to gross matches and mismatches. By carrying out this analysis:-

- \* findings which could be attributed to the project as a whole were identified; and
- \* clarification of individual case study findings was achieved.

The following are the main conclusions.

1. It is unsafe to suggest that potential advantages to a User of contracting-out FM services are likely to outweigh the potential disadvantages.
2. Decision-making concerning the method of resourcing FM services is case specific, not only as between organisation but possibly within an organisation for differing services.
3. Factors influencing the decision-making are variables which can be categorised as:-
  - i) Category One factors: primary advantages and disadvantages of contracting-out, which react as variables because Users perceive the benefits and shortcomings of contracting-out differently.
  - ii) Category Two factors: 'External' driving factors (i.e. external to Category One) which tend to be components of the organisation's strategy; e.g. 'scale of operation' is a component of the User's strategy to, for example, operate from 32 locations instead of one central location.

4. The analysis recognised benefits to a User of:
  - i) accurately identifying its core business, subdivided into core products;
  - ii) accurately identifying its customer group;
  - iii) identifying separate management and operational functions within its FM services.

Note: (i) and (ii) were likely to become important Category Two influencers.

5. For a Category One variable - primary advantage or disadvantage - to control a decision, it has to be of increasing power (importance) the more an organisation tends to present a contrary extreme environment (hostile or friendly).
6. A simple balance in favour of either advantages or disadvantages of contracting-out will not necessarily determine the means of implementation.
7. The influence of advantages and disadvantages of contracting-out on decision-making is most likely to be greatest in *neutral* User environments.
8. The *balance* of advantages of contracting-out over disadvantages, or vice versa, can either *reinforce* the User's environment (*complementary*) or can *oppose* the User's environment (*contradictory*).
9. Individual advantages of contracting-out and individual disadvantages of resourcing in-house, are not directly equivalent, but influence decision-making in the same way; (and similarly for disadvantages of contracting-out, etc.).  
 E.g. a factor influencing the decision-making may be the advantage to a particular User of specifically resourcing a service in-house, rather than any potential disadvantage of contracting-out for the same service.



As a result the base model at Fig. 15.2 can be amended so that the vertical axis refers to



"disadvantages of contracting-out or advantages of in-house resourcing increasingly becoming dominant"



advantages of contracting-out or disadvantages of in-house resourcing increasingly become dominant."

10. A prioritised schedule of potential advantages and disadvantages of contracting-out is likely to be a helpful tool in assisting organisations determine which tactic to adopt
11. Where partial contracting-out is implemented, the User is likely to retain the management elements and contract-out the operational elements of the service.
12. A User presents an environment which is determined by the variables of Category Two; (i.e. the driving factors excluding those which are advantages and disadvantages). The cross-case analysis shows that these variables changed:
  - i) between the case study organisations;
  - ii) within the one organisation which was used to explore more than one FM service;
  - iii) within one bundle of FM service; (i.e. for individual services within an FM bundle).

E.g.<sup>1</sup>: a User could be hostile to contracting-out management but friendly to contracting-out operational services.

E.g.<sup>2</sup>: A User could be hostile to contracting-out some FM services of a given bundle but neutral or friendly to contracting-out others from the same bundle.

The next chapter now seeks to summarise the work of this thesis, taking each of the main Parts in turn.

## CHAPTER SIXTEEN

### SUMMARY

#### 16.1 INTRODUCTION

This study has four discernible parts:

- Part I : The subject matter
- Part II : Developing the Research Project Design
- Part III : Data Collection and Analysis
- Part IV : Generalising

This chapter will be restricted to summarising the study by reference to the four parts, leaving Chapter Seventeen to draw conclusions.

#### 16.2. THE SUBJECT MATTER (PART I)

##### 16.2.1 General

The subject of this thesis has been described as contracting-out in an FM context, where FM comprises the background theory or field of study, and contracting-out comprises the focal theory, i.e. the focus of the study.

The aim of the project was two-fold. First, the overall objective was to master the subject in a way that demonstrated a command of research techniques. The second aim more specifically focused on the subject of the research itself, and was to identify the potential advantages and disadvantages of contracting-out FM services, as experienced by building users, and to analyse

the influence of such factors in the organisations' decision-making processes concerning methods of resourcing.

#### 16.2.2 Field of Study

In order to review the field of study, a method described as 'literature and background review' was employed. The reasons for this nomenclature was to specify a process which incorporated the techniques of a traditional literature review, with an added dimension including:

- (a) information gathered directly from leading practitioners by interview;
- (b) information gathered from conferences and associated forums.

This method was adopted in recognition of the fact that, because FM was such a new concept, there were only limited standard texts of relevance.

Information was gathered from a wide range of sources. Geographically, information was directly collected from the U.S.A., Hong Kong, Singapore, Malaysia, Belgium, France, as well as the United Kingdom. Convergence of evidence confirmed that FM was first established, and is still in its most advanced state, in North America. The majority of data collected for this project relating to the origins and development of FM, was gathered from the U.S.A.

Data collection in the U.K. concentrated upon the recognition and subsequent interviewing of the leading exponents of FM. These 'key informants' variously represented Users, Suppliers, Academics, and the trade associations.

The review synthesised the findings obtained by examining three aspects of FM, viz:- its history, its definition, and its scope. FM was found to be a recent concept, which had developed from a variety of business backgrounds, principally: the IT industry, business administration and space planning of buildings. FM's development was traced

from the time it established a critical mass in the USA, circa 1979-80, and then followed its progression as macro-economic pressures during the 1980's encouraged organisations to continually seek more efficient methods of operating.

The continuing success of FM developed a 'bandwagon' attraction. This reinforcing loop process encouraged a great variety of players to become involved, both on the Users' side and as Suppliers to the FM marketplace. With this growth came lack of clarity regarding the identity of the subject matter, with the often-heard criticism that FM was 'all things to all people'.

Definitions of FM were found to abound, but this research considered they risked criticism for being either too general or too restrictive in scope. The finding was that an understanding of FM was to be better achieved by an awareness of the scope of the application of FM, supported by a description of the subject, rather than could be gained from a tightly drawn definition.

The description used by this researcher as a working tool during the study evolved into the following statement:

"Facilities Management is the active management and co-ordination of an organisation's non-core business services, together with the associated human resources and its buildings, including their systems, plant, IT equipment, fittings and furniture, necessary to assist that organisation achieve its strategic objectives." Owen (1993a)

This attempted to draw together all the principal components of FM, as follows:-

- \* It is a building User-orientated management concept.
- \* It requires a pro-active approach to co-ordinating the use of the buildings, support services, IT and, variously, environment issues and, for some Users, infrastructure.

- \* It is carried out as a wholly *complementary* function to the organisation's business strategy.

During the course of the study, relating FM to non-core business services was found to best describe the perceived trend in FM in the U.K., whereas in the USA, FM related more to special and human ecology considerations. However, following the findings of the case studies, future research should consider whether equating FM to '*non-core*' business services is sufficiently discriminating, or alternatively, whether it is unduly restrictive, or 'reductionist' as Byatt (1993) describes it. The finding of the Pilot Case Study, in particular, encourages the Prahalad and Hamel (1991) view of recognising core *products*, rather than a monolithic core business, and this theory certainly fitted the case of Hotel Services in PCSO. The relationship of FM to core and non-core products is developed in Chapter Seventeen.

#### 16.2.3 Focal Theory

The strategy adopted for the research was to first obtain a detailed understanding of FM, and then to focus on one aspect, chosen as the focal theory for this study.

That choice was based on:- factors of relevance to the field of study, and relevance to a wide range of Users; that it recognised management as an essential component of 'FM' (rather than the interpretation given by the 'supply' side of the market, which perceived FM more as a marketing opportunity); and that the topic had to be of current interest.

Contracting-out (in an FM context) was the chosen subject, and this focus for the project was then reviewed in a manner replicating the review of the field of study.

After the subject matter was identified, the first problem to be overcome was to ascertain the correct terminology to

describe it. Two terms were found to be in common usage at the commencement of this work, the more popular being 'outsourcing', and the alternative being 'contracting-out'.

After much deliberation, extending over at least 60% of this study and involving an interview technique referred to as direct consultation, (i.e. questioning key experts on a specific topic), a consensus view was eventually reached.

'Contracting-out' was proposed as the generic term, describing the whole process of resourcing FM services from sources external to the User. 'Outsourcing' was seen to be largely accepted as a synonym for contracting-out, especially in the U.S.A. But, for the purposes of this project, its use was restricted to what was believed to be its original meaning, namely, that aspect of contracting-out which involved the *transfer* of assets from a User to a Supplier; where assets included, amongst other things, people together with their inherent management capabilities.

From this focus on the subject matter of the research, a proposition was formulated to direct the study toward ascertaining the importance of contracting-out in FM. This was achieved by framing the hypothesis to identify, from a User's rather than a Supplier's viewpoint, the potential advantages and disadvantages of contracting-out in an FM context; proposing that such advantages would outweigh potential disadvantages.

Having established the need for the research and the subject matter of the research, the next part of the thesis concentrated on establishing a robust and rigorous strategy for collecting and analysing data.

### 16.3 DEVELOPING THE RESEARCH PROJECT DESIGN (PART II)

Research Project Design was the term given to the 'blue-print' for this study, covering work from the commencement of the project to its conclusions. Producing such an overall framework by reasoned design, it was argued, would make the work far more rigorous than if a strategy had either been allowed to evolve or, weaker still, if research strategies had been adopted by intuition; i.e. it was determined that the project would firstly set a plan and then follow it.

The description of how the design was developed extends over four chapters. First the skeleton of the overall project was mapped out by determining the need for the following phases:

- \* Preparation Phase
- \* Theory Building Phase
- \* Data Collection Phase
- \* Data Analysis Phase
- \* Completion Phase

An important principle for the project was established at this stage, namely, that although necessary to articulate the phases in sequential form, the process of both developing the *design* and subsequently carrying out the research, i.e. *implementation*, would rely on an approach described as 'looping'.

Looping recognised the inter-relationship between design and implementation throughout the entire project. Models were produced to show that during the early stages of the work, the ratio of design to implementation would be greatest, with it progressively reducing, but remaining actively present, during the course of the project. Thus the design of the project and its implementation were seen in a circular-spiral form as a cone around a cylinder, rather than as a linear sequence.



The process of looping enabled early decisions to be made with the simultaneous considerations of later decisions; i.e. as the project was progressed, newly discovered design aspects and research findings could be imposed on earlier work.

Having established this fundamental principle, the subsequent chapter built on an important proposal of the design; i.e. that within the overall blue-print for the entire project was an embodied, but identifiably separate, strategy which related to data collection and analysis. In recognition of this fact, an argument was put forward against labelling the whole project just by reference to the category of data collection adopted. This argument was both supported by, but also, in a sense, was part overtaken by, the proposal to employ a multi-type research strategy for this project - which would have made such a labelling too complex to utilise. However, the significant factor was the recognition of research strategy as an embedded part of the whole design.

A review of available research strategies was undertaken and, again, clarification of terminology became an important part of the work. In this instance it necessitated discerning between methods (or techniques) of data collection, and strategies for data collection. It was determined that a given research strategy could, and probably would, include several different methods of data collection.

Following a process of elimination, based on criteria synthesised from various authorities into a selection model, three potential strategies were identified, viz: Case Study, Interview and Research Review. All three strategies were put forward for consideration in the research strategy design.

The design of the research strategy examined the shortcomings of each strategy in turn, and investigated

whether steps could be taken to overcome, or at least, ameliorate, the shortcomings.

For the case study strategy, a total of eight steps were incorporated into the design to improve the quality of the research. These steps were built into a Research Project Plan (RPP) which over-arched protocols for each individual case study. The protocols laid down the field study procedures, and provided a framework for selecting units of analysis, formulating case study questions and identifying sources of data. The RPP provided a co-ordinating medium for the protocols, drawing the individual cases together as one work.

The Interview strategy's potential problems were countered by taking measures to overcome bias. For both these strategies the only answers to the concern of the time-consuming nature of the inherent research process, was to manage time carefully, and also to start with a cognisance of the effort that would be required.

The main potential shortcoming of the Research Review strategy was addressed by building-in the requirement to examine as many references as possible, until the point was reached where new categories of reference were no longer forthcoming.

The overall research design then called for the inter-relating of all three strategies to seek triangulation; i.e. the plan was to enhance the rigour of the project by employing a multi-strategy approach, with each strategy relying on a range of sources.

Two detailed models were developed to describe the overall blue-print and the application of the research strategy to case study (Fig. 4.10, Chapter Four; and Fig. 7.2, Chapter Seven respectively).

#### 16.4 DATA COLLECTION AND ANALYSIS (PART III)

The evidence collected by the strategies was analysed in a progressive framework, culminating in a cross-case comparison of the main findings of the individual case studies, which included testing the findings against both the Hypothesis and the findings of the Research Review.

The purpose of this section is to summarise the ways in which the data was collected and analysed, and not to reiterate the respective findings. This is achieved by examining each of the strategies in turn, starting with the Research Review.

##### 16.4.1 Research Review Strategy

The purpose of undertaking this review was to synthesise the advantages and disadvantages of contracting-out, as perceived by a broad range of authorities on the subject, with the aim of establishing the boundaries of the topic, and investigating whether an order of importance could be postulated. The results of the review would then be used to test against the hypothesis and the case study data.

After the imposition of quality checks, the views of 32 authorities were included in the meta-analytical process, comprising a total of 696 individual references, categorised into 47 groups.

The analysis proposed 19 categories of advantages of contracting-out and 28 categories of disadvantages. By noting a more established grouping for advantages, the theory was expressed that thinking concerning advantages was in a more advanced state, possibly because of a lack of effluxion of time that the contracts had run - restricting the opportunity for disadvantages to be registered by Users.

A 'weighted average' technique was used to rank the categories, respectively as advantages and disadvantages. This achieved the aim of determining the parameters of the subject, and proposing an order of importance to use as a test against the findings of the case study; i.e. a test to see if the primary data supported the synthesised view of the authorities.

#### 16.4.2 Case Study Strategy

The purpose of undertaking the research by case study was to obtain primary data following indepth investigations of User organisations. The blue-print for this strategy required a pilot case study to be undertaken to test and, where necessary, modify the methodology adopted. The strategy was laid down in the Research Project Plan, which co-ordinated the individual protocols for the six cases chosen.

To avoid bias, the interrogation techniques employed did not seek to ask simple and direct questions of a User, such as 'What are the advantages of contracting-out you have experienced?'. Rather, the approach was a theory building technique, which first sought to understand the structure of the Organisation, and subsequently to positioning FM generally within that structure. The role of the unit of analysis within the FM function was then explored in the context of gaining an understanding of how that particular aspect of FM was managed and resourced.

By repeating this indepth exercise for a total of six units of analysis, a volume of high quality data was collected.

Particular attention was paid to the selection of the case studies, with the pilot and two other studies concentrating on the health care sector, specifically to obtain evidence from a non office-user environment. Further, by selecting Hotel Services, Clinical Sterilizer Maintenance and Catering Services (x2), four of the studies centred on

services of which this researcher had no experience, and thereby minimised pre-conceived notions. Similarly, the choice of Hotel Services and Catering; and Estates Services for two separate organisations, enabled literal replication of two pairs of studies to be attempted (one fully, one in part).

#### 16.4.3 Interview Strategy

Interview was used as a *technique* within the case study strategy but, more particularly, it was used in addition as a strategy in its own right.

The interview strategy was devised as a method of obtaining primary data concerning the field of study and the focal matter; and as a method of verifying information by testing findings against a 'sounding board' of key informants.

The data collection was primarily used to establish the nature of FM and, subsequently, of contracting-out. The design of the strategy relied upon a networking principle; i.e. as part of the questioning the interviewee would be indirectly asked to confirm the standing of previous interviewees, and to propose future candidates. As described in Section 16.2.2, these key informants represented a range of backgrounds, and were chosen to give both a global perspective and a U.K. focus.

A particular contribution to this project of this strategy was the resolving of the confusion in terminology between contracting-out and outsourcing (See Section 16.2.3).

### 16.5 GENERALISING (PART IV)

This phase of the project covered the comparison of data obtained, not only from the various research strategies,

but also the comparison of data from the *individual* case studies. Analysis of this summation of data enabled project conclusions to be drawn and proposals for future research to be made.

The purpose of this section is not to repeat all the findings, but to summarise the approach adopted and the main results, prior to drawing final conclusions, which are recorded in Chapter Seventeen.

The findings of the individual cases were further reduced by analysis to main findings. This 'filtering' process necessitated ascertaining the reasons for the resourcing solutions adopted, plus testing the data against both the hypothesis and the findings of the Research Review.

The subsequent main findings of the units of analysis were then made the subject of a cross-case comparison, which entailed taking the main finding of each case in turn and seeking gross matches or mismatches from within the other cases. The process was assisted by the development of a model, which described the existence of a continuum between in-house resourcing and contracting-out. The two categories of influences recognised by this study were superimposed on the model; namely:-

- (i) Primary advantages and disadvantages of contracting-out (referred to as Category One Driving Factors). Taken in isolation, the influence of this category in decision-making would be to reduce progressively the likelihood of contracting-out the more the disadvantages exceeded advantages; and similarly to increase progressively the likelihood of contracting-out the more the advantages exceeded disadvantages.
- (ii) Driving factors external to the foregoing (referred to as Category Two Driving Factors). Taken in isolation, the influence of this category on decision-making would be to 'shape' the User's *environment* toward

contracting-out. The environment ranged from a 'friendly' environment - which, at its extreme, directed that contracting-out 'must occur' - to a 'hostile' environment - which, at the opposite extreme, directed that contracting-out 'won't occur'.

The model demonstrated how the two categories of influences could 'complement' or 'contradict' each other. For example:-

- (a) 'Complementary': In CS5, the organisation's strategy was to concentrate on core business, thus 'shaping' an 'encouraging' environment toward contracting-out. In the same case an instance was provided of contracting-out being more efficient than in-house resourcing, i.e. advantages exceeded disadvantages. In this way one category complemented the other.
- (b) 'Contradictory': In CS3, the User's policy was to implement the contracting-out of the unit of analysis shaping a 'friendly' environment. However, the overall cost of actioning this policy was extremely disadvantageous to the User; i.e. the influences of the two categories contradicted each other.

A subsequent finding was to suggest the refining of the model to show that Category One influences *could* include the similar, but not synonymous, advantages and disadvantages of *resourcing in-house*. The revised model is shown at Fig. 16.1.

By indicating the main findings as events on the model, the analysis of the variables discovered by this research was enhanced. The conclusions of this analysis are summarised below.

A second technique was used to compare the main findings. This entailed pattern matching by re-organising the findings into a different array - in tabular form - and identifying common denominators. This technique was used,

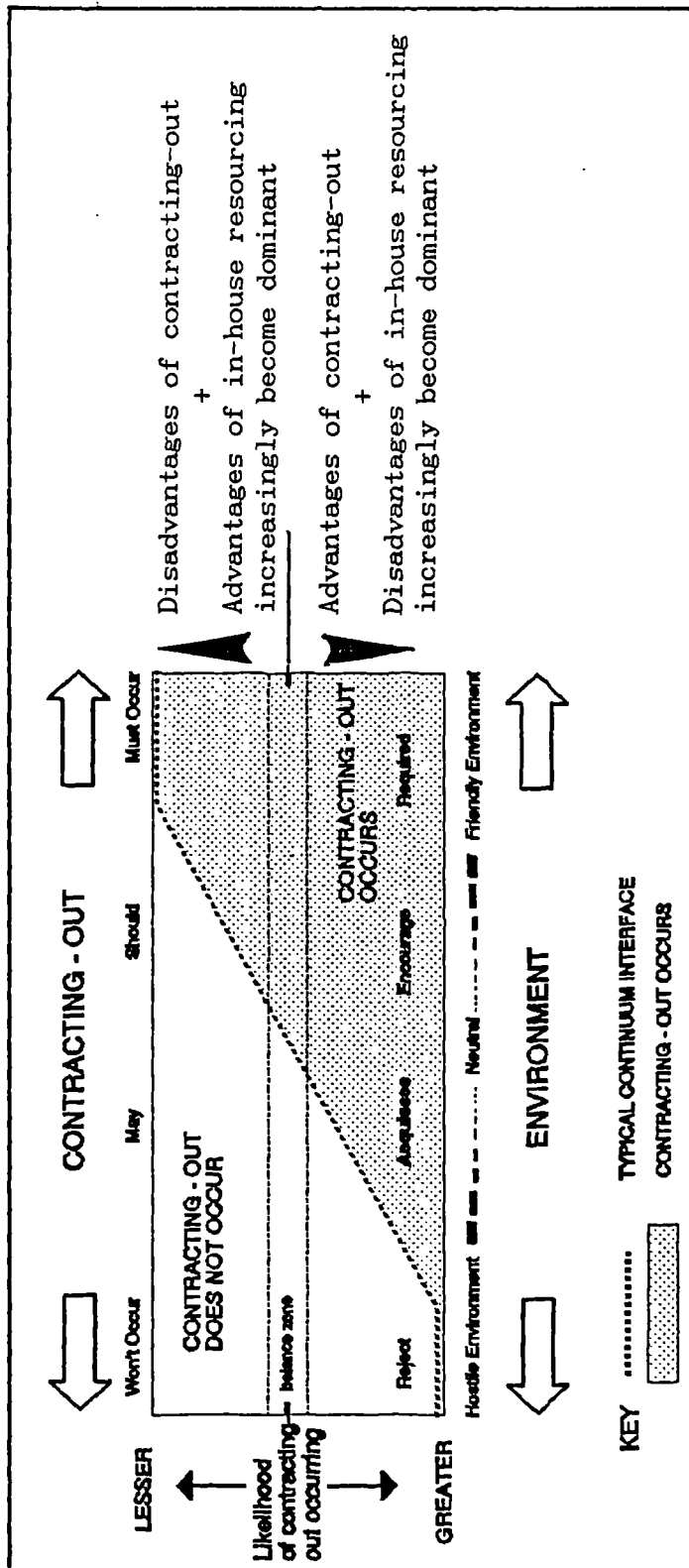


Fig. 16.1: The Inter-Relationship of User Environment and Advantages/Disadvantages of Contracting-out : Revised Base Model



separately, to focus on: the reasons for the resourcing solutions adopted by the case study organisations; the results of the tests of each case against the hypothesis; the results of the tests of each case against the Research Review.

The findings and conclusions of the comparisons describe the level of generalising that is possible as a result of this study. The following is a brief summary of these conclusions:

- (i) By focusing on the proposal that advantages of contracting-out, in an FM context, outweighed the potential advantages, the project was accurately directed toward data concerning the factors influencing Users' resource decision-making.
- (ii) The proposition that Users would generally find the contracting-out of FM services to be advantageous was *not* supported.
- (iii) The evidence showed that advantages and disadvantages of contracting-out in an FM context could be not only particular to a given User, but also particular to a given element of an FM function within a specific organisation.
- (iv) Predicting the outcome of whether contracting-out would be advantageous or disadvantageous across the cases, was considered impractical, due to the number of variable influences affecting resource decision-making which were encountered.
- (v) Such variable influences were categorised as (a) advantages and disadvantages of contracting-out, coupled with corresponding advantages and disadvantages of resourcing by in-house means; (b) other external influences; which tended to have more strategic impact than the former category.

- (vi) Generalisations which the analysis suggested were safe to make concerned the split between management and operational, viz: that organisations were likely to adopt different strategies for the resourcing of the implementation of operational FM services from those adopted for the resourcing of the management of facilities; that organisations were less likely to contract-out the main decision-making levels of management than the operational services; that organisations were not likely to contract-out the main decision-making levels of management unless the operational services had already been, or were being, contemporaneously contracted-out, and then only to a separate contractor (supplier).

## 16.6 SUMMARY

This chapter has summarised the process of the entire project, by which research has, within a reasoned and planned framework, progressively focused on a problem; has collected primary data concerning the problem; and has, following predetermined analytical methods, been able to draw conclusions about the problem.

The final chapter now seeks to draw overall conclusions for the work, including an assessment of the contribution made; and seeks to set out the potential for further research, to build upon the findings of the project.

## CHAPTER SEVENTEEN

### CONCLUSIONS

#### 17.1 INTRODUCTION

The purpose of this chapter is to evaluate the contribution made by this research, to identify any limitations or modifications of theory necessary, and to make proposals for relevant future research. These matters will be addressed by assessing them in relation to:-

- (i) The strategy adopted for this project
- (ii) The field of study and subject matter
- (iii) The hypothesis
- (iv) The findings of the Research Review
- (v) The findings of the Case Studies
- (vi) Proposals for future research

#### 17.2 THE STRATEGY ADOPTED FOR THIS PROJECT

The strategy adopted required the systematic planning or *designing* of the project. The overall plan, or blue-print, termed the Research Project Design, incorporated a detailed embedded strategy for data collection (the Research Strategy). By adhering to this strategy, it is believed that the logic of the project is replicable, and that the rigour of the project is enhanced.

A main aim of this doctoral research was to demonstrate the ability to carry out research competently. A major facet of this was to clearly show the benefit of conducting a planned and auditable work, as opposed to carrying out research intuitively, whilst at the same time retaining

flexibility in the approach to be able to maximise research opportunities and overcome unforeseen problems.

The following contribution has been made to methodology:-

(i) *Terminology*

This work proposes that for so-called 'big bang' projects, such as PhD theses, referring to the whole work by the nomenclature of the method of data collection may distract the researcher from designing a suitably rigorous blueprint for the work, by diverting attention from the importance of the design process. A rigorous design process is essential for the selection of the most appropriate research strategy.

(ii) *Looping Approach to Research Design and Implementation*

This work takes forward the notion that research is neither designed nor implemented in a linear (or sequential) manner, by refining the recognition of iteration or looping, with the development of a conceptual model.

Building on the work of others, it is suggested that a project should not be implemented without a prior plan, or design; but recognises that the design cannot be completed without the advancement of the project's implementation.

Following the development of a series of models, it is concluded that design is an integral and ongoing part of the project, which can be described, in three dimensions, in the form of a cone around a cylinder. The cylinder represents the implementation of the work; whilst the cone reflects the design of the project, reducing in extent over the life of the project, but actively present until the last stage of the work.

The design cone incorporates the concept of a spiral, which enables design input to be made at any point in the duration of the project; with that input either being fed

backwards to impact on earlier decisions, or fed forwards to formulate future courses of action.

The work carried out in relation to the 'design' of the project, and its inter-relationship with implementation throughout the project, both provided a suitable framework for the study and enhanced flexibility.

Two examples of flexibility are pertinent to mention in this conclusion. An early opportunity arose to study the facilities management function of Canary Wharf. Because this was understood to be organised with an emphasis on a large in-house team, it was considered that such a study would add robustness to the findings due to the perceived *challenge* to the hypothesis. The fact that as the study was about to start, a large proportion of the Canary Wharf FM Department were made redundant, was able to be viewed as a positive occurrence, because of the inherent flexibility of the Research Project Design, pointing the findings then toward *supporting* the hypothesis. This flexibility was then further called upon to accommodate the need to abort this particular case study very soon afterwards, due to the User organisation being placed into receivership; and facilitated the substitution of an equally valid study in lieu - a contingency event planned for by the Research Project Plan element of the overall blue-print.

The looping nature of the design was central to the working of the plan, embodying the cyclic nature of research work as opposed to a linear approach.

The second example of flexibility endorsed this mechanism, permitting the conversion of the pilot case study into a longitudinal study, in order to maximise the collection of emerging primary data.

#### (iii) *Selection of Research Strategy*

One authority who was relied upon particularly for the detailed design of the case study strategy was Yin (1990).

Yin proposed a matrix for selecting the most appropriate research strategy, based upon three criteria. However, it was found that by employing the matrix, the choice of strategies proposed by Yin was, at best, reduced from five to three, with only 'experiment' being mutually exclusively selectable.

This work proposes a fourth choice criteria to add to the matrix, namely 'source of data'. This criterion directs the researcher toward the accessibility and availability of data, and is thought to be valuable for identifying the size of the sample, and the potential complexity of research questions that will be acceptable to respondents. Consequently the choice between strategies, such as survey by questionnaire and case study, is clarified; the former being appropriate for a large sample, whilst the latter strategy would better handle a small sample which was able to provide quality data, if subjected to an indepth investigation.

Applying the selection process enabled a design for research strategy to be progressed, which enhanced the robustness of this project by developing a multi-strategy approach that sought convergence of data by triangulation.

Further, by employing a planned approach to the design of the project; including the development of an embedded research project plan, which addressed the potential shortcomings of each strategy as well as added the dimension of co-ordinating the protocols; it is concluded that the rigour of the whole work was enhanced.

The Research Project Design's reliance on a multi-strategy method of data collection and analysis, added considerably to the workload. But it is believed that this approach has contributed significantly to the rigour of this work, by achieving the triangulation of findings, and underscoring where evidence from different sources did not converge.

A potential criticism of this project may be that, with a minor exception, the work is not based on a statistical analytical approach. However, it is contended that this potential shortcoming was both recognised and overcome at the design stage; first by devising and employing the multi-strategy approach, in order to alleviate the inherent biases of the individual strategies; and second by discovering, as anticipated, good quality primary data, which could only have been unearthed by the non-statistically aligned process of indepth research by case study.

### 17.3 THE FIELD OF STUDY AND SUBJECT MATTER

The field of study for this project comprised Facilities Management. By undertaking a broad review of the subject, relying both on the traditional methodology of a literature search, together with what has been termed a 'background review', three primary sectors of FM were recognised:

- (i) Premises
- (ii) Support services
- (iii) IT

FM, as a result of this work, is described as a management concept, which entails the co-ordination of these three primary sectors; noting that as the concept evolves, other sectors may become applicable - for example, infrastructure or environmental.

A conclusion of this study is that the emphasis on FM being the co-ordination of non-core business, which is a view perceived by this researcher to be gaining ground particularly on the Eastern side of the Atlantic, would be better directed if organisations were to focus on core *products* rather than just core *business*. This proposition is made in the light of evidence which recognises that

organisations have difficulty with the articulation of their core business, and subsequent differentiation with non-core; possibly because the term 'core business' tends to be understood as a homogeneous mass, rather than as a conglomerate of core products.

To exemplify the concern regarding identification of core products, the data collected described how catering in a private hospital group was an important factor in gaining customer satisfaction. This suggests that if a clear distinction had been drawn in this case, between catering for customers (patients) and catering for staff, a clearer perception of support service and core product may have been achievable. In a literal replication study, the catering services for a London office User was seen to be primarily for the benefit of staff, and only a small minority of the function was devoted to catering for clients. The service was, therefore, more clearly discernable as a support service.

A comparable to catering for patients in a private hospital may be a 'product', such as retailing for the British Airports Authority - more profit reportedly being made from retailing than from the obvious, first impression, core business of running an airport. Catering for airlines or for railways may also be a useful comparable. Some of these organisations may operate such services as support services, forming part of their FM functions, others may see them as part of their core businesses, i.e. as core products.

This research concludes that the demarcation cannot be generalised as a simple 'black and white' division between core and non-core (see Section 17.7 below). The result of analysis of the primary evidence collected for this project argues that it may be unnecessarily restrictive to promulgate an understanding of FM based upon only that which is clearly non-core business; proposing instead that



a continuum exists between core and non-core, enabling certain core *products* to be seen as part of FM services.

In the same way that terminology generates confusion, clouding a clear understanding of FM as the field of study for this project, so too was terminology a source of confusion concerning the subject matter. A conclusion of this project is that the terms 'outsourcing' and 'contracting-out', as strictly interpreted, are not synonymous, but, as a result of common usage, have largely become *coterminous*.

Analysis of the evidence of this project argues that 'contracting-out' should be the generic term used to describe the process of resourcing a task, by which a User establishes a contractual agreement with an external supplier. It follows that 'outsourcing' is a *form* of contracting-out, and this requires the User to transfer assets to the contractor. Such assets may include human and equipment resources, with the former being likely to include management skills.

#### 17.4 THE HYPOTHESIS

**Hypothesis:** *'The potential advantages to a User organisation of contracting-out discrete aspects or bundles of FM Services are likely to outweigh the potential disadvantages'.*

The value of the hypothesis to this work has been:

- (a) the setting of a benchmark against which to test the primary data;
- (b) to bring sharp focus to the areas under examination.

In both these senses the hypothesis worked well.

However, a main conclusion of this project is that the hypothesis, as formulated, is challenged more than it is supported. The reasons for this are:-

- (i) the hypothesis proved to be too broadly drawn;
- (ii) the hypothesis did not recognise the fundamental need to examine *management* functions and *operational* functions of FM separately.

By being broadly drawn, the hypothesis firstly proposed that a balance in favour of advantages of contracting-out was likely to occur. The evidence clearly showed that not only was this not necessarily the case, and that generalising in this way would be unsafe, but, that the situations encountered were *far* more complex than the simple 'black and white' balance envisaged.

Second, the hypothesis implied that the envisaged *balance* would be a significant factor in a User's FM resource decision-making process. However, analysis of the data showed that achieving such a balance, whether in favour of advantages or disadvantages, did not necessarily direct subsequent resource decision-making. For example, in Case Study Three the numerical weight of evidence, i.e. the *balance*, was in favour of advantages of contracting-out; but the determining factor was the single disadvantage of cost implications. This is discussed further in Section 17.6 below.

Third, the hypothesis did not predict the finding that advantages of contracting-out would not be synonymous with the disadvantages of in-house resourcing, and vice versa. I.e. it was found that the advantages of contracting-out did not equally describe the disadvantages of in-house resourcing; similarly the disadvantages of contracting-out did not equally describe the advantages of in-house resourcing. Decision-making should take cognizance of these four inter-related elements, viz:

|                                      |                                         |
|--------------------------------------|-----------------------------------------|
| Disadvantages<br>of contracting-out  | Advantages<br>of contracting-out        |
| Advantages of<br>in-house resourcing | Disadvantages of<br>in-house resourcing |

Fourth, by not recognising a management-operational split (as per (ii) above) the hypothesis did not articulate a fundamental element of the FM concept. I.e. the method of respectively resourcing the *management* of facilities and the *operational* FM services, should be considered separately. This would not preclude the contracting-out of both sectors - in a TFM manner - but would encourage a more beneficial and meaningful analysis.

Fifth, by referring to 'bundles' or 'aspects' of FM services, the scenario of total facilities management was excluded from the hypothesis.

Sixth, the hypothesis did not predict that a User might find it advantageous to contract-out one or more element of a recognised bundle of FM services and not others from the same bundle.

Seventh, the hypothesis did not draw attention to the possible existence of other decision-making influences.

A main conclusion of the project is that it is unsafe to generalise in the terms of the hypothesis.

## 17.5 THE RESEARCH REVIEW

By synthesising secondary data relating to the advantages and disadvantages to a User of contracting-out in an FM context, a ranking of the perceived pros. and cons. was proposed. This did not show a dominance of advantages over disadvantages and thereby the findings of the Research Review did not support the hypothesis.

A conclusion was drawn from the data that the state of thinking concerning the advantages of contracting-out was currently more advanced than for disadvantages. This may be attributable to the consequences of an aggressive supplier market successfully propounding the advantages of contracting-out. However, an additional reason was identified by this researcher, namely, that Users generally have had relatively little time to evaluate performance consequent to contracting-out, in order to assess any potential downside, i.e. factors contrary to supplier propounded advantages. This statement is based on the recognition that contracting-out, in an FM context, is a relatively newly-introduced tactic.

Whilst the purpose of the review was not to compare advantages with disadvantages, it became apparent that most advantages would engender some contrary disadvantage, and vice versa. This may be seen more clearly if the contrary forces, in each case, were consistently referred to as downside; i.e. the proposition would be that for every action decided upon, there is likely to be a downside. The closer the balance of advantages and disadvantages, the more influential the downsides would become in resource decision-making (See Sub-section (c) below).

Three specific Research Review findings warrant mention at this conclusion stage, as follows:-

(i) *Advantage of cost reduction achieved by contracting-out*

Preconceived ideas are difficult to eliminate altogether from the research process. One such expectation, and one which was refuted by the case study findings, was that the highest ranked Research Review advantage of contracting-out (i.e. reduced costs), would be supported.

Attitude to cost was described earlier in this thesis, in order to avoid the scenario which might suggest that a cost implication could be conceived in all business situations. For this study, the taking of cost to the 'nth' degree in this manner was rejected.

It was found that the Users studied tended not to see potential cost saving as the prime motivator in favour of contracting-out (notably, one User saw *increased* cost as the reason for *not* contracting-out). Where contracting-out occurred, cost reduction had not driven decision-making. In other cases, contracting-out had not occurred *despite* an acceptance by the Users that cost reductions would have resulted by so doing. This generalisation of the findings (perhaps surprisingly) included a Management Accountant User (an organisation that could be expected to be very cost-conscious), a factor which is considered to add robustness to the evidence.

(ii) *Concentration on Core Business*

This topic was referred to in Section 17.3 above. The Research Review, used as a test against other findings, helped highlight the confusions witnessed amongst Users concerning definition of their core businesses. The case study findings support the Research Review finding that concentration on core business is currently a powerful influence, encouraging organisations to consider contracting-out FM services.

From the evidence of the cases, this Research Review category could be made a more useful 'tool' of resource decision-making if it required the:-

- (a) separate identification of the *management* and *operational* aspects of FM services;
- (b) recognition of the inter-related presence of core business, core products and core competencies.

(iii) *Management-operational split*

A limitation of the Research Review, noted in (ii) above, is that it does not separately categorise according to 'management' and 'operational' services. This proposal has wider implications than just for 'concentration on core business', and is carried forward to Section 17.7, for further consideration.

A general benefit of the Research Review is that it could be developed to become a useful 'tool', to assist Users as a guidance framework, when considering FM resourcing options - with the caveat that it should be subject to ongoing refinement and modification.

By comparing the Research Review findings with the case study data, the following six points became evident:-

- (a) Advantages of contracting-out did not necessarily equate directly to disadvantages of in-house resourcing, and vice versa.
- (b) Many of the 'advantages' categories identified by the Research Review were reciprocated by the disadvantages categories, e.g. contracting-out may be cost-advantageous or cost-disadvantageous. The primary data supported this notion and hence the generalisation that advantages and disadvantages could not be safely proposed.

- (c) Further to (b), and the acceptance that one category may also entail the acceptance of a contrary category; e.g. an advantage of contracting-out may be perceived to be a reduction in management burden (Research Review Advantages Category No. 9), but adopting this policy would generate new management problems (Research Review Disadvantage Category No.8). Such contrary results may be seen more clearly if described as downsides, as noted above.

For example, a decision *not* to contract-out for the reason of not wishing to risk losing in-house expertise (Research Review Disadvantage Category No. 10), might engender the downside of missing the advantage of providing latest technology or specialist skills (Research Review Advantage Category No. 6).

The conclusion drawn is that advantages and disadvantages of contracting-out should not be described either in a generalist way or in a mutually exclusive way.

The value of categorising the advantages and disadvantages, as per the Research Review findings, is considered to be as a framework, by which the parameters of contracting-out are described, enabling Users to determine a four-way matrix of considerations, to assist decision-making processes.

- (d) Similarly, advantages or disadvantages which were important decision influences for one organisation, (i.e. became Category One Driving Factors), might be either of only spin-off importance (i.e. peripheral), or, of no recognised importance to other Users, and vice versa.
- (e) Categories used for the findings of the Research Review were necessarily broadly defined. The comparison with the case study data supports the notion that their use would be in a decision-making

matrix, rather than as singular definitive decision-making statements; e.g. *within* PCSO's FM function, lack of control (Research Review Disadvantage Category No.3) was an important factor when dealing with the highly sensitive process of clinical sterilizer maintenance, but not important *within the same* FM function when dealing with a low risk task such as gardening; i.e. generalisation, on the basis of advantages and disadvantages only, was not possible for this category, even within the one User's FM function.

- (f) Advantages and disadvantages did not represent the whole picture of influences steering Users' FM resource decision-making (see Section 17.6 below).

## 17.6 THE FINDINGS OF THE CASE STUDIES

The overall picture proved to be less clear than expected. For the given unit of analysis in each of the six cases, there was resourcing by in-house and by contracted-out means, albeit for Case Study Six there was the absolute minimum of retained management. This supports a proposition that it is likely most organisations in practise contract-out some aspect of FM services. Further, it is possible to say that some organisations contracted-out more FM services than was realised by senior management.

One conclusion drawn from the analysis proposes that contracting-out has not been established for sufficient time in the FM sector, for Users to fully realise the relative advantages and disadvantages. This, coupled with the recognised biased view of the suppliers, may partly account for the popular acceptance of contracting-out.



By continuing research in a longitudinal manner, it should be possible to question whether contracting-out represents either a long-term change in working practice, or a point on a pendulum swing that ranges over time, from a directly-employed emphasis, to a reliance upon an externally-resourced supply of labour.

The study identified the possibility that some organisations may implement contracting-out procedures in order to effect change; for example, evidence from Case Study Five recognised employee resistance to change. The following proposition was formulated as a consequence, and was verified by the key informant for that case, viz:

That an organisation may need to contract-out in order to overcome resistance to change.

An ongoing question, as a consequence, is: once that change has been accomplished and consolidated, might there be reversion to in-house resourcing; i.e. does contracting-out, in part, become a method of overcoming barriers to change?

The notion of overcoming barriers to change may also go some way toward explaining the current popularity of contracting-out as a management tactic, occurring, as it does, at a time of rapid change, as discussed in Chapter Two. Future research could usefully build on this proposition by conducting longitudinal studies to examine whether there is evidence to support the base proposition and the subsequent suggestion that, having accomplished change by contracting-out, an organisation might then revert to direct resourcing. (Both these points are addressed in Section 17.7 below).

The analysis of the data attempts to determine what drives the decision-making processes which govern contracting-out, in order to satisfy one primary aim of the project, i.e. 'the influences such factors (advantages and disadvantages of contracting-out) exert in determining whether FM services are resourced in-house or externally'.

In the given context of the project, two categories of *drivers* were identified, namely:

*Category One* - factors which comprised primary advantages and disadvantages of contracting-out;

*Category Two* - factors external to the advantages and disadvantages of contracting-out.

An important conclusion of this project is that these *drivers* are variables, not only as between organisations, but potentially within a given organisation in respect of different FM services.

One of the Category Two driving factors which needs to be addressed further is the, so-called, *environment* that an organisation presents to contracting-out. It may be possible to re-order this environment into FM resource decision-making 'layers'.

The first decision-making 'layer' concerning the environment toward contracting-out, would be one which permeates the organisation at strategic management level. Three scenarios can be anticipated:

- (i) Contracting-out is required.
- (ii) Contracting-out is not permitted.
- (iii) Contracting-out may be allowed.

The model developed in Chapter Fifteen and refined in Chapter Sixteen assists the explanation of these scenarios and is repeated here (as Fig. 16.1) for ease of reference.

Scenario (i) equates to '*must* occur'.

Scenario (ii) equates to '*won't* occur', meaning, *must* not occur.

Scenario (iii) equates to a neutral environment ranging from '*acquiescent*' to '*friendly*'.

The second decision-making 'layer' would equate to the tactical management level. Contracting-out may be:

- (iv) required to be implemented by the strategy.
- (v) required to be discounted by the strategy.

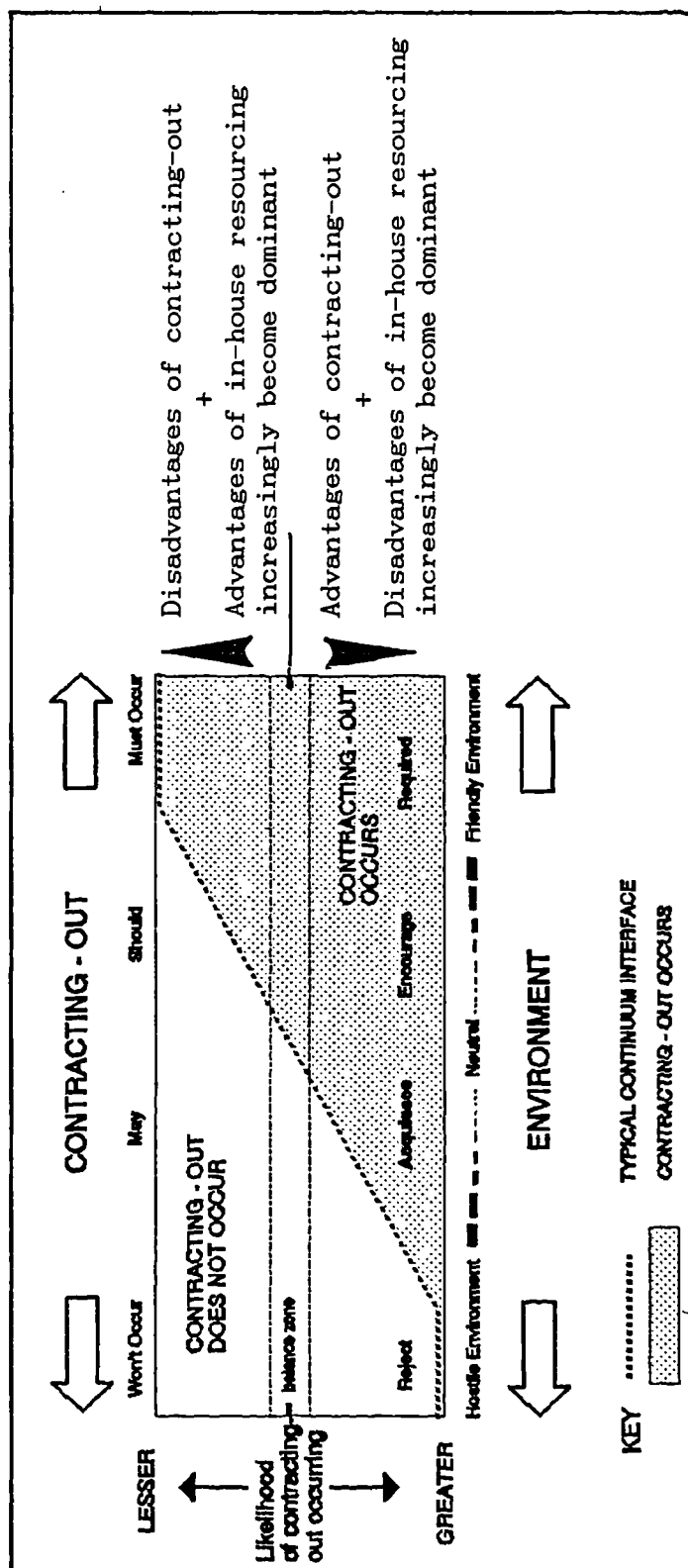


Fig. 16.1: The Inter-Relationship of User Environment and Advantages/Disadvantages of Contracting-out : Revised Base Model

- (vi) a possible solution: dependent on tactical decisions taken at this level as a result of a strategy as per (iii) above, and which could vary from 'encourage' to 'discourage'.

Scenario (iv) and (v), as before, equate to 'must occur' and 'won't occur', respectively.

Scenario (vi) presents environments dependent on tactics. This could relate to a different environment for each FM service.

The potential advantages and disadvantages of contracting-out might help *shape* strategic decision-making, and would *influence* tactical decisions in Scenario (vi). In a neutral environment, a favourable weighting of advantages or disadvantages would influence the decision. In an acquiescent environment, the weighting in favour of advantages would have to be dominant for contracting-out to occur and, similarly, disadvantages would have to be dominant in a friendly environment for contracting-out *not* to occur.

However, a general conclusion of this project, in this respect, is that a simple numerical superiority of potential advantages or disadvantages of contracting-out in an FM context (or vice versa), is not necessarily sufficient to influence the resourcing methods adopted by a User.

Figure 17.1 models the decision-making layers proposed by the foregoing.

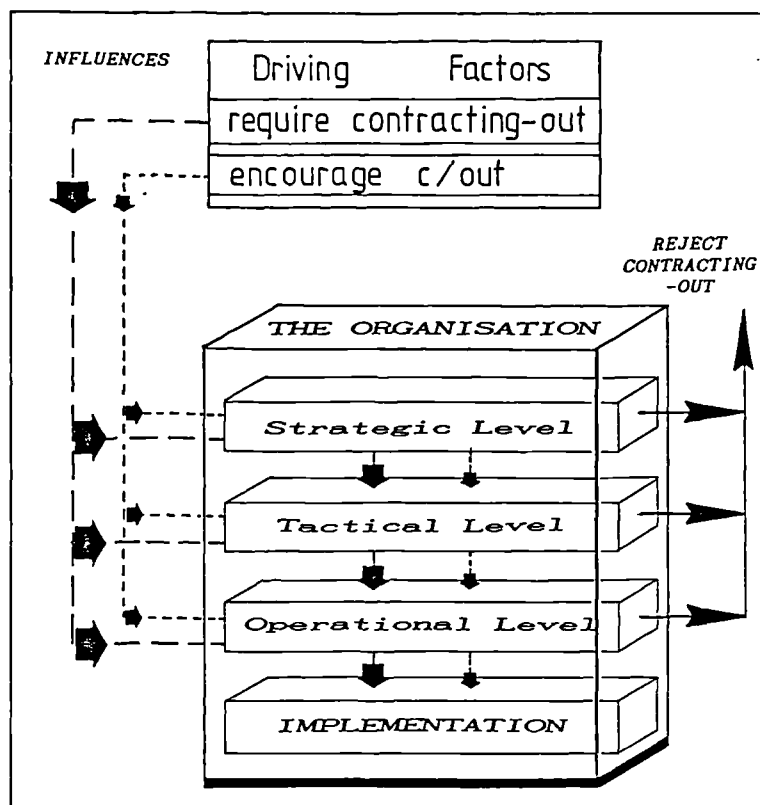


Fig. 17.1: FM Resource Decision-Making Layers

Influences at strategic decision-making level can be (i) rejected; (ii) passed down the line for *required* implementation, as per Case Study Six; or, (iii) passed down the line to 'tactical level' for further consideration, e.g. an in-principle acceptance of contracting-out FM services, such as occurred in Case Study Five.

Influences can impact directly at tactical level, e.g. PCSO's varied means of resourcing the laundry service. Also at tactical level, decisions passed down from strategic management have to be converted into action. Tactical management *could* decide to reject contracting-out for all but the strategically *required* tasks. However, the more the environment encourages contracting-out, the more tactical management is likely to utilise it.

Influences can impact directly at operational level, e.g. PCSO reinforce their directly-employed painters by contracting-out as necessary. But in the main, resourcing at operational level is governed by strategic and tactical decision-making.

One limitation of the study to address, is that the evidence collected did not fully consider the impact upon personnel of contracting-out, *especially* in the public sector.

In the context of this study (i.e. taking the Users' viewpoint, not the employees'), the impact on staff did affect Users' human resource decision-making. For example, in Case Study Five, the User displayed continuing loyalty to staff at their London North campus. The reason for the shortcoming in this study was that the issue of the impact of contracting-out on personnel is a highly sensitive one, because of the implications on the staff themselves; for example, the potential of making wholesale redundancies; or, by outsourcing, the problems for staff associated with changing their terms of employment.

Notwithstanding this latter difficulty, there is a clear need to investigate the contracting-out decision-making process further, and in the public sector in particular; with specific regard for the implications of legislation concerning job security, and continuity of conditions of employment, where outsourcing is the adopted method. At the time of concluding this project, the legal position concerning outsourcing in the public sector is awaiting clarification (See 17.7(i) below).

#### 17.7 PROPOSALS FOR FUTURE RESEARCH

The following eight proposals made for future work, are derived from the benefits which this study now recognises could accrue, by extending the *scope* and the *time-frame* of the focal theory. They are resultant both upon the experience gained from undertaking this project and from the contribution made by this work; and include the

questioning of the longevity of the term 'Facilities Management' itself.

(i) *The implications of employment legislation on contracting-out FM services in the public sector*

As described in Section 17.6 above, this would be a difficult project to manage, because of the inherent sensitivity of data. It may be possible, in the first instance, to gather sufficient data from organisations where contracting-out decision-making has already been concluded (either for or against), rather than attempting to monitor the process by action research. This may enable generalisable propositions to be formulated, which this researcher perceives would help satisfy a real need for guidance amongst public sector managers.

Research into this difficult area may be able to establish whether employment legislation such as the Transfer of Undertakings (Protection of Employment) Regulations, (1981), or the Trade Union Reform and Employment Rights, (1993), is restricting opportunities to contract-out in the public sector, and whether there are quantifiable and generalisable differences between public and private sector organisations in this regard.

(ii) *Longitudinal studies of the benefits of contracting-out*

Such a research project could monitor the ongoing benefits and disbenefits to User organisations that have implemented contracting-out policies. The purpose would be to analyse whether anticipated benefits occur, following effluxion of time and particularly after such contracts have completed more than one cycle; (for example, to study any changes that occur at the end of, say, a three year contract, including whether, and for what reasons, the User continues with the contracting-out policy; or reverts to in-house resourcing; re-instructs the same supplier; changes supplier; etc.).

Analysis of such data may help improve understanding of whether contracting-out, in an FM context, represents a cyclical trend, a point on a pendulum swing, or reflects a long-term change in business administration methodology. This could be analysed in terms of a pendulum swing (non supportive) versus a circle of causality (supportive); the latter follows Senge's (1992) model for describing entire reciprocal processes (pp.73-78).

(iii) *The accuracy of adopting a simple core -v- non-core business approach when considering the scope of FM*

This project's findings have led to the proposition that such a split is too broad a categorisation to facilitate the mechanics of certain decision-making, which occur close to the interface of a given organisation's core business. It also builds on the evidence that some Users do not possess a precise understanding of the constituent elements comprising their respective core businesses.

A possible scenario considered by this researcher is that, based on the evidence of this project, there is likely to be added value to a User by employing greater managerial co-ordination of the organisation of support services, which may include some services that could be described as 'secondary' core products; (i.e. products which are demanded by customers, but which are not, prima facie, part of the raison d'etre for that organisation's existence, e.g. catering in a private health care organisation).

Further, the research should consider whether such co-ordination may be better described as something other than *facilities* management; i.e. a proposition could be that:

The term 'Facilities Management' is now so entrenched, as entailing the management of menial tasks, and is associated mainly with the supply side of the industry, that a more appropriate descriptor needs to be coined in order to accurately and positively describe the strategic



management concept of co-ordinating all non *raison d'être* activities of a User organisation.

(iv) *Management and Operational elements of FM*

Further research is necessary to look more closely at the need to consider these two aspects of FM separately. The experience of this project has been one of encountering confusion between the two. The accusation directed at FM that it is 'all things to all people' may be due partly to the inappropriate usage of terminology, suggesting that this is closely linked to the proposition in (iii) above.

The proposed research could address the question of whether two discernable functions have developed under the one nomenclature, namely the *management* of facilities and the *implementation* of operational facilities services.

Clarification of FM may be achieved if, for example, research was to support the proposition that the existing broad church of FM comprised facilities implementation and facilities management. If this was found to be the case, this would strengthen the argument for a new descriptor, particularly for strategic management of support services, called for in (iii) above.

Investigation into a management-operational (implementation) split could also usefully address the appropriateness of the term 'total facilities management', by examining whether Users and suppliers can be identified, who, respectively, instruct on this basis and supply on this basis. The hypothesis suggested in Chapter Eleven above (Conclusion No. 6) may assist in formulating a study in this regard.

(v) *Acceptable ratios of resident contract workers to directly-employed personnel*

A key finding of one of this project's case studies was that, for the User in question, there was a barrier to contracting-out, in the shape of an intuitive belief that

too many resident contract workers would disrupt the working practices of the organisation. In the case in question, 'too many' was not quantified, and it was also recognised that 'too many' was likely to be a variable factor depending on the nature of the business, the culture of the organisation and the 'scale of operation'.

Research could be directed to investigate whether other Users experience the same misgivings; whether the type of Users can be categorised according to cultures which are receptive to contracting-out, or protective of directly-employed staff; and how the scale of operation does affect the balance. For example, whether a proportion of four resident contract workers out of a total workforce of ten may be too many (i.e. a ratio of 4:6). Whilst in a workforce of one thousand, four hundred contract workers may be acceptable, i.e. the same ratio, but a different scale of operation.

(vi) *The recognition of a mature supplier market*

One of the case studies drew evidence which suggested that the absence of a mature supplier market might be a barrier to the successful contracting-out of a given FM service. 'Mature' meaning a supplier market possessing not only the necessary resource in terms of skills and other relevant requirements, but also the experience of acting in a partnership rather than adversarial relationship with a 'client' (i.e. a User).

Research could investigate this proposition, by attempting to identify any 'immature' supply markets, and the disbenefits experienced by Users.

(vii) *Contracting-out may be necessary in order to overcome resistance to change*

The proposition for this future research follows the evidence of Case Study Five, reiterated in Section 17.6 above, i.e. that where a workforce is resistant to change, e.g. in terms of working practices, it may be necessary to

release the staff concerned, and contract-out the tasks under contract terms and conditions which reflect the newly required manner, in order to effect change.

The longer term question to investigate would be that, having achieved and consolidated changed working methods, would the User then revert to re-employing personnel by direct means?

(viii) *Size of the U.K. FM Market*

Data collected for this project demonstrated a wide discrepancy in the value attributed to, not only FM, but to individual elements of FM. For example, in Chapter Two, quoted sources equated the total value of FM work in the U.K. to, variously £64.1bn. and £4bn.; whilst the value of work in the IT sector of FM was separately described as, variously £3bn. and £400m.

Following this study's refinement of the components of FM, it should be possible to research more accurately the size, in value terms, of the U.K.'s FM market.

## 17.8 CONCLUSION

At the completion of this project it is believed that this work has made a contribution, both to the understanding of the field of study and to the focal theory.

One aim of conducting the project, namely, the personal aim of improving this author's awareness of the research process, has been achieved, but it is for others to decide upon the extent of that achievement.

The parallel aim of the project; i.e. determining the role played by the advantages and disadvantages of contracting-out in influencing Users' resource decision-making, has, it

is believed, also been achieved, albeit without support for the hypothesis. However, the hypothesis did play a fulcrum role in determining the outcome of this study; whilst the propositions put forward, as a consequence to the challenges to the hypothesis, have made a contribution to the subject matter.

The conclusions of this thesis culminate in a realisation that the FM resource decision-making process is more complex than that envisaged by a simple pros. and cons. choice between advantages and disadvantages of contracting-out.

This research has shown that it is unsafe to generalise in the terms of the initial hypothesis; i.e. it does *not* follow that, for a User, the advantages of contracting-out FM services will exceed the disadvantages.

The value of the original hypothesis was that it brought an accurate focus to a complex problem. As a result of this study the process of contracting-out is better understood, enabling the following propositions to be stated with some certainty; i.e. this research has refined an original 'likely to' proposition, now permitting a series of 'will' propositions to be stated, thus:

- (a) Users will find that decision-making concerning the resourcing of FM is assisted by considering *management* and *operational implementation* separately.
- (b) A User's FM resource decision-making process needs to gather information from a wide range of organisation influences, in addition to the input concerning the simple pros. and cons. of contracting-out.
- (c) The pros. and cons. of contracting-out, in an FM context, which need to be considered in resource decision-making, should incorporate the following criteria:

|                                      |                                         |
|--------------------------------------|-----------------------------------------|
| Disadvantages<br>of contracting-out  | Advantages<br>of contracting-out        |
| Advantages of<br>in-house resourcing | Disadvantages of<br>in-house resourcing |

These influences on resources decision-making are variables, with the capability of being perceived differently by different Users; whilst for a given User, they can be perceived differently for different elements of an FM function.

- (d) Most Users will retain the strategic management control of FM services in-house. Where management is contracted-out, a User is progressively more likely to contract-out the tactical, supervisory and monitoring management roles.
- (e) Users will find decision-making concerning FM is assisted by identifying core products and processes, rather than just considering a core and non-core business differentiation.

The influences affecting resource decision-making are variables. To be able to predict an outcome, a broad range of information has to be gathered in accordance with a comprehensive organisational model. The basis of such a model is the proposition that two categories of driving factors direct resource decision-making.

The more powerful influences are those factors which shape the environment a User presents towards contracting-out. The less powerful influences are the pros. and cons. of contracting-out, including the respective merits and disbenefits of resourcing in-house.

This understanding of the process involved in contracting-out decision-making, underscores the proposition that FM is a business *management* concept, which has much more to do with the strategic policies and tactics of an organisation, inter-related with that organisation's core products, than it has to do with a supply-orientated market.

The important message is that the contracting-out decision-making process penetrates deep into the User organisation. It is inevitably a very complex issue, demanding rigorous and extended analysis if optimum solutions, for given organisations, are to be found. It is hoped that this thesis will assist those studying or confronting this important issue.

## APPENDIX I

### DIRECT CONSULTATION NETWORK

# APPENDIX I

## DIRECT CONSULTATION NETWORK

|                 |                                                            |
|-----------------|------------------------------------------------------------|
| J. Avery        | Higher Education Funding Council for England               |
| K. Alexander    | Strathclyde Centre for Facilities Management (CFM)         |
| C. Anderson     | Dumfries and Galloway Health Authority/<br>Strathclyde CFM |
| Prof. F. Becker | Cornell University, Ithaca, USA                            |
| A. Carter       | Ernst & Young                                              |
| H. Channon      | Quadrilect (Principal)                                     |
| J. Crawshaw     | Association of Facilities Management<br>(Director)         |
| Prof. C. Davies | National Health Service                                    |
| B. Davis        | Cornell University, Ithaca (Research Assistant)            |
| J. de Lucy      | Ernst & Young/Olympia & York/PPP                           |
| C. Engert       | Lloyd's of London                                          |
| C. Farren       | Facility Management Worldwide Inc., New York (President)   |
| Dr. G. Gidley   | Association of Facilities Management<br>(Chairman)         |
| S. Grealish     | Procord Limited (Account Manager)                          |
| J. Harrhy       | South Glamorgan Health Authority<br>(Executive Director)   |
| T.F. Hennessy   | Nuffield Hospitals (Director)                              |
| J. Jack         | Procord Limited (Managing Director)                        |
| O. Jones        | Symonds Facilities Management plc<br>(Managing Director)   |
| E. Leake        | Corporate Facility Services, Austin, Texas                 |
| N. Manger       | P & O Total Facilities Management<br>(Managing Director)   |
| G. Perry        | York Health Authority/Guy's Hospital                       |



|             |                                                  |
|-------------|--------------------------------------------------|
| M. Rumball  | AMEY Facilities Management (Managing Director)   |
| M. Standley | Longman Group UK, Director, New Building Project |
| F. Taylor   | British Telecom. International                   |
| A. Thomson  | D.E.G.W. (Director)                              |
| R. Zipeure  | Procord Limited (Commercial Director)            |

## APPENDIX II

### CONFERENCES, SEMINARS AND WORKSHOPS ATTENDED

## APPENDIX II

## CONFERENCES, SEMINARS AND WORKSHOPS ATTENDED

Facilities Management Conference, Olympia, 13-14th June, 1990

Euro FM, Inaugural Meeting, Centre for Facilities Management, Strathclyde, Glasgow, 2nd-4th April, 1990

Facilities Management Exhibition, Olympia, 29th-31st January, 1991

The Move Towards Facilities Management in the NHS, The Institution of Mechanical Engineers, London, 24th January, 1991

Facilities Management - Outsourcing your Information Technology Needs, Management Forum Ltd., London, 28th February, 1991

Effective Facilities Management, IFM Annual Conference, Quadrilect, London, 26-27th February, 1991

Premises and Facilities Management Exhibition, Olympia, London, 19-20th June, 1991\*

Facilities Management for Change, DEGW Seminar at the Premises and Facilities Management Exhibition, Olympia, London, 19th June, 1991

AFM Seminar, London, 18 September, 1991

Hospital and Care Premises Management Conference, NEC, Birmingham, 16-17th October, 1991

Property Management and Property Review (2nd Annual Conference), London, 29th October, 1991

The Changing Workplace, International Conference and Exhibition 1991, AFM, London, 20th-21st November, 1991

Corporate Catering: A Management Challenge Conference, IFM, Lloyd's of London, 25th November, 1991

Estates Capability: the FM Approach, One day conference for the NHS in Scotland, University of Strathclyde, 12th December, 1991

Facilities Management Exhibition, Olympia, 25th-27th February, 1992

Outsourcing Facilities Management - Towards the Total Option Conference, Quadrilect, Lloyd's of London, 11th February, 1992

'F.M. at Canary Wharf and the Office of the Future', RICS Building Surveyors' Division 14th National Briefing, Nottingham, 3rd-5th April, 1992\*

IFMA European Conference on Facilities Management, Brussels, 17-19th May 1992

The Second International Symposium on Facilities Management, AFM, 20th-21st May, 1992\*

Premises and Facilities Management Exhibition, Olympia, London, 17-18th June, 1992

'Building Maintenance Management and the Privatisation of Maintenance Management Services', Hungarian Government/RICS Conference, Budapest, 25-26th June, 1992\*

Outsourcing '92 Conference, Quadrilect, London, 15-16 July, 1992\*

Latest and Best Practice in Facilities Management Conference, Henry Stewart Conference Studies, 14-15th September 1992, London\*

'Looking after the Built Environment', IAAS 31st Annual Conference and Building Exhibition, Weston-Super-Mare, 7-10th October, 1992\*

'Facilities Management - The Way Ahead for Property Managers', Open Lecture held at the School of Building and Estate Management, University of Singapore, 21st October 1992\*

Outsourcing Telecommunications - Threat or Opportunity, Quadrilect, London, 7th December, 1992

National Health Reforms: Changes and Opportunities Conferences, School of Business and Industrial Management, London, 10th December, 1992\*

Property Performance for Facilities Managers Conference, RICS Conferences, The Royal Overseas League, London, 18th February 1993\*

'The Rehabilitation of Property', International Symposium on Resource Management - The Key to Sustainable Development, ISM-CASLE, Kuala Lumpur, 8-10th February 1993\*

Facilities Management Exhibition, Olympia, 23rd-25th February, 1993

'The Feel of the Unconstrained Workplace', RICS Building Surveyors' Division 15th National Briefing, Keele University, 19th-21st March, 1993\*

CEEC/UNTEC Conference, CNIT Building, La Defense, Paris, 17-18th May, 1993\*

'A Contractor's Perspective on Facilities Management',  
Legislative and Development Update RICS Scotland - One Day  
Briefing, Stirling Management Centre, 20th May, 1993\*

Facilities Managers Exchange Project, CEM/APOGEE, London,  
11-12th June, 1993\*

Latest and Best Practice in Facilities Management  
Conference, Henry Stewart Conference Studies, London, 14th  
September, 1993\*

RICS Facilities Management CPD Seminar, Berks. Bucks. and  
Oxon Branch, Reading, 30th September, 1993\*

Series of Five Lectures to P.G. Diploma/MSc. Facilities  
Management course, University of the West of England, 15th  
October to 14th December, 1993\*

RICS Facilities Management CPD Seminar, Central London  
Branch, 5th October, 1993\*

Facilities Management: Today's Challenge, Tomorrow's  
Profession? Conference, RICS in Scotland, Airth Castle, 3rd  
November 1993\*

RICS Facilities Management CPD Seminar, Kent Branch, 10th  
November, 1993\*

National Health Reforms Conference, School of Business and  
Industrial Management, London, 22nd November, 1993\*

RICS Facilities Management CPD Seminar, Joint London  
Branches, 12th January, 1994\*

Advanced Facilities Management Techniques Conference, RICS  
Conferences and AFM & IFM, London, 18th January 1994\*

Note: \* denotes an active role as organiser, speaker or  
chairman

## APPENDIX III

### HISTORY OF IFMA

## A History of IFMA

Eight years ago the average person didn't realize facility management existed. Even worse, some facility managers didn't know it either.... These people were called property managers, office administrators or building managers.

"People would ask me what I did," said Bill Back of Texas Eastern Transmission Corp., Houston, Texas, "and I would say I was a facility manager. 'Facility manager, what's that?' was the usual response. In return, I'd ask them if they knew what a building manager does, then I'd say, 'well I do about 10 times that much!'"

While facility management hasn't become a household word, CEOs are finally taking the profession seriously. That was the primary goal in 1978 when a group of men dreamed of achieving recognition and credibility for the facility management profession. Today, that dream has become a reality through the International Facility Management Association.

"Eight years ago," said George Graves, who is now retired from Texas Eastern Transmission Corp., Houston, Texas, "there was no other association that addressed facility management. The closest thing to it was the Building Owners and Managers Association. But its members were only interested in buildings and their leases whereas we were challenged with office layout, budgets and long-range forecasting just to name a few issues.

"The office was changing, and we were being called on to help change it. We faced problems that we'd never faced before, and we didn't have many solutions. There were none in the schools, and we had no association within which to call on members for their expertise. We needed to get together so we could find solutions to problems, establish the profession and establish credibility within our companies. These were some of the things that brought us together."

December 1978 marked one of the first gatherings of facility managers. Robert Propst of the Herman Miller Research Corp. hosted a conference entitled Facility Influence on Productivity at Herman Miller's Marigold Lodge in Ann Arbor, Mich.

"Propst was trying to bring people like us together," said Graves. "He wasn't trying to form an association but was attempting to establish the Facility Management Institute (FMI). This would serve as an educational and research data-gathering arm of Herman Miller. His idea was to educate us in facility management, to establish a history--a profession!"

During this conference three gentlemen met who would eventually help form IFMA--Graves, Charles Hitch who was with the Manufacturer's Bank of Detroit at that time and Dave Armstrong who was teaching at Michigan State University and would eventually head FMI. They voiced the need for an organization that was not promoted by a vendor but was made up of facility managers from private industries. Yet, the seeds did not take root at that meeting.

In November of the next year, Graves and Hitch hosted a conference for facility management professionals at the Renaissance Center in Detroit. Armstrong was in attendance to discuss the objectives of the new Facility Management Institute. It was hoped that this meeting would lead to the foundation of a private-sector organization dedicated to facility management. However, the conference adjourned with nothing settled.

"I think the organization didn't materialize in Detroit because we didn't have the groundwork laid for it," said Graves. "All we did was get together and talk about it. No concrete steps were taken although everyone there was in favor of it."

The groundwork wouldn't be laid until May of 1980. That year Graves hosted an organizational meeting at Two Houston Center in Houston, Texas with the goal of establishing a formal organizational base from which a facility management association could be built.

"My thought about the meeting in Detroit," said Back, "was that they didn't have a skeleton to hang the meat on. In Houston, we used the constitution from another professional association as a guideline for our own constitution. Then we hung some meat on the bones and started developing our own association."

By the end of that meeting, a new organization known as the National Facility Management Association had a constitution and bylaws, temporary officers and a plan to expand the association nationally. In the following months, Graves served as president, Charles White of Houston Natural Gas as treasurer and Back as secretary. Although he was not present, Charles Hitch was elected as vice president.

Other people in attendance at IFMA's founding were Judy Brady, American Productivity Center; A.C. Brooks, Shell Oil Company; Suzanne Huston, Western Company of North America; Wayne Mills, Pennzoil Company; Andy Pedrazas, Columbia Gulf Transmission; Douglas Sherman, University of Michigan; Robert Snyder, Facility Management Institute; and Melvin Schlitt, Facility Management Institute.

"I think one of the things that helped us expand during our first few months was the fact that Mel Schlitt and Bob Snyder had both been at the meeting in Houston," said Back. "They went back to FMI and started to conduct two seminars a week. Fortunately, they became our pitchmen. They had people attending those seminars from all around the country, and they made a pitch for the association every time. That's when we really started picking up a lot of memberships."

"FMI was very interested in the association, but they really couldn't be organizers of it. They did, however, provide help on a part-time basis," said Graves. "And perhaps the most crucial contribution FMI made to our development was giving us a budget."

Graves said FMI helped promote the association because it also wanted to establish facility management as a profession and build its credibility. Herman



Miller Inc. had to sell its wares to facility managers yet they carried little weight within their companies. "I would also have to say that FMI's founder, Bob Propst, was a most unusual person. It wasn't just business with him. He simply wanted to see the growth of this profession," said Graves.

FMI hosted the first annual meeting of the National Facility Management Association in October of 1980. There were 47 participants at the meeting with 25 of them being direct members of the association. Most of the participants had also attended a seminar which FMI staged for two days prior to the meeting.

NFMA business was conducted for another two days and included presentations concerning facility management as well as ratification of the constitution and election of the following officers: Charles Hitch, president; Richard Arick (who was with Lincoln Life Insurance Co. at the time), vice president, Charles White, treasurer and Judy Brady Farrar (who was with American Productivity Center), secretary.

During that meeting, a commitment was made by the members present from Houston that they would establish the first local chapter and that they would host the second annual national conference in Houston. It took place in October of 1981.

"It was the association's first conference which was actually administered by its members," said Back. "The conference in Ann Arbor was staged primarily by FMI with our name on it....I was pretty scared. My chapter was responsible for the conference in Houston, and at that time, the association was not incorporated. Consequently, if we had not been able to meet our financial obligations, I'd probably, eight years later, still be paying for that sucker!"

Fortunately, the people who committed to the conference showed up. The second annual conference boasted 87 attendees and 21 speakers, and it was at this event that Anne Fallucchi debuted her magazine, *Facilities Design and Management*.

"At some point, if we hadn't said 'come on guys, lets put on our engineers' caps and railroad this baby through' then we'd probably still be talking about it. Sometimes you've just got to grab the bull by the horns and do something before it's all over!" said Back.

According to Graves and Back, it was far from over. Shortly after the conference, the National Facility Management Association became the International Facility Management Association in order to attract Canadian facility managers. Now the organization has affiliations in Great Britain and Japan while national membership continues to grow....

"With FMI's help everything just sort of blossomed," said Graves. "We have grown so fast in so few years, and I think its just scratching the surface. IFMA is an organization on the move!"

## **APPENDIX IV**

### **EXAMPLES OF DEFINITIONS OF FACILITIES MANAGEMENT**

## APPENDIX IV

### EXAMPLES OF DEFINITIONS OF FACILITIES MANAGEMENT

Note: Definitions attributable to an author are referenced in the Bibliography in the normal way.

Definitions attributable to an organisation or institute, etc. have the source shown.

"The deliberate conscious and planned practice as part of organisational design and development." Becker, F., (1990b)

"Facilities Management may be defined, simply, as the efficient and effective control of an organisation's non-core support requirements to complement its strategic objectives in a constantly changing business environment." Symonds Facilities Management Plc, (1992)

"Facility management is defined by the Library of Congress as 'The practice of coordinating the physical workplace with the people and work of the organization; integrates the principles of business administration, architecture and the behavioral and engineering sciences.'" Official Statement on Facility Management I.F.M.A.

"Facilities Management combines programme management practise with the most current technical knowledge to provide humane and effective work environments. It is the business practice of planning, providing and managing productive work environments. The guiding concepts are quality of life and cost-effectiveness. Facility managers have a wide range of job responsibilities commonly grouped in nine function areas: long range planning; annual planning; financial forecasting and budgetting; real estate acquisition and/disposal; interior space/planning; architectural and engineering planning and design; new construction and/or renovation; maintenance and operations management; and telecommunications integration; security and general administrative services." Hahn (1986)

"Facilities Management looks at the entire process of planning, construction, operations and maintenance of the building and its interiors, making sure that the result is conducive to employee productivity. Facilities managers today are responsible for several or all of a long list of items. Some of the categories include:

1. Real estate management - includes buying and selling properties, site selection, maintenance, leasing of space for their corporation and leasing to tenants by their corporation, management of tenants' space (where the corporation is the developer of the building) and financial planning in line with the corporation's strategic plan.
2. Building Maintenance and security - includes compliance with health and safety requirements, security and safety responsibility, day-to-day maintenance and operations.
3. New building programmes - includes supervision of design consultant selection process, supervision of design, general contracts and bids, and construction, creation of progress specifications, financial reporting."

Nydele (1985)

"Fundamental facilities issues include asset management, economics, life cycle costing, space planning, building services, computing and human factors."

Bell (1989)

"While the IFMA definition may appear somewhat limiting, or, at least, not all-inclusive, facility managers are responsible for the planning, construction, and on-going management of billions of square feet throughout the world. What is included in the definition are architecture, building engineering, space planning and design, construction, acoustics, lighting, finance, leasing, maintenance, communication, information management, personal management, purchasing, worker comfort and safety - amongst other categories. Facility Management is therefore, the co-ordination of the people and work of an organisation into the physical workplace. It does not regenerate income for the served organisations, although the rationale is that it potentially saves huge sums of money."

Sena and Teicholz (1986)

"The core management themes are: the business environment; the economics of the individual enterprise; accounting and finance; quantitative methods in management; organisational behaviour and management systems; human law and industrial relations; and law. These disciplines are applied in a strategic way to a variety of practical aspects of facilities management, including the asset base, life cycle cost management, space planning and the maintenance of fabric and services."

University of Reading, (1988)

"The basic functions of Facilities Management are real estate; long range planning; building projects; building administration and office support."

Wilson, S. (1986)

"Facilities management co-ordinates the physical workplace with the people and the work of the organisation. It combines the best management practice with the most current professional and technical knowledge to provide humane and effective working environments."

Sanquist (1987)

"Facility Management is a distinct management function and, as such, involves a well-defined and consistent set of responsibilities. Simply stated, it is management of a vital asset ... the organisation's facilities."

Neyerlin (1990)

#### "Functions of Facilities Management

- \* Management of the organisation
- \* Facility planning and forecasting
- \* Lease administration
- \* Space planning, allocation and management
- \* Architectural/Engineering planning and design
- \* Workplace planning, design and specification
- \* Budgetting, accounting and economic justification
- \* Real estate acquisition and disposal
- \* Construction project management
- \* Alterations, renovation and workplace installation
- \* Operations, maintenance and repair
- \* Telecommunications, data communications, wire and network management
- \* Security and life-safety management
- \* General administration services"

Cotts (1990)

Facilities management "is about managing the technology on behalf of people and managing it by using advance information systems. It is as much about the software as about the hardware and it is a general management function as opposed to a purely technical function. So the definition that we have derived at Strathclyde and partly also in discussion with Ceri Davies in the Health Service is that: it is the process by which an organisation achieves and sustains a quality environment at best cost."

Alexander (1991b)

"Process by which an organisation achieves and sustains a quality working environment at best cost - working environment includes physical/administrative plus social setting together with all the services and systems that support the business operation"

Alexander (1991b)

"Facilities Management is the effective co-ordination through overall management and control of the physical estate, its technical services and equipment with the non-clinical servicing activities. This provides a physically pleasing, technically sound cost control and secured base for patient (care) to be practised in."

Perry (1991)

"The development, co-ordination and control of the non-core specialist ancillary services necessary for an organisation to successfully achieve its principal objectives"

Jones (1992)

"The integrated planning, realisation and management of the housing, services and resources that are to contribute to an effective, efficient, flexible and creative implementation of the goals of the organisation in a changing environment"

Briffett (1990) quoting Regterschot (1990)

"Facilities Management is concerned with the provision, management and maintenance of work, leisure and social environments so that people maximise their contribution to the success and well-being of the enterprise."

Gidley, G., in conversation 19.6.91

"Facilities management is the practice of co-ordinating the physical workplace with the people and the work of the organisation. It integrates the principles of business administration, architecture and the behavioural and engineering sciences."

Gidley (1992)

"In the Netherlands, we are defining Facility Management as in the integral planning, realisation and management of the housing, the services and the means that should contribute to an effective, efficient and flexible realisation of an organisation's objectives in changing environment."

Bleker and Regterschot, (1988)

"Facility management combines proven management practices with the most current technical knowledge to provide humane and effective work environments. It is the business practice of planning, providing, and managing productive work environments. Strong central threads of 'quality of life' and 'cost effectiveness' run through the technical components of the profession. In most cases, facility managers are the 'generalists' that manage a variety of 'specialists'. The 'specialists' are either consultants, or in-house staff, who perform the job responsibilities of facility management."

Official Statement on Facility Management  
I.F.M.A.

"The provision of a specialist management capability to plan, organise, control and supply the full range of technical and non-core support services which are essential to running any building activity. It is a people and support services discipline."  
Jackson (1992)

"Facility Management refers to buildings in use, to the planning, design and management of occupied buildings and their associated building systems, equipment, and furnishings to enable to enhance the organisation's ability to meet its business or programmatic objectives and thus refers to organisational effectiveness."  
Becker, F. (1990a)

"Facilities Management concerns the implementation of organisational property objectives with specific relevance to the occupational and physical aspects of the portfolio. It is primarily concerned with the immediate administration and operation of individual premises within the portfolio, but also with the establishment of strategy and standards for the whole portfolio."  
Oxford Brookes University and The University of Reading,  
(1993)

"The provision, protection and operation of property assets and related company services to meet the evaluated needs of a business at optimum cost. Strategically, a balance between providing a framework for operational support of a business on the one hand with the maximisation of the value of real estate assets to the business on the other."  
AYH Partnership (1991)

"The discipline of planning, designing, constructing and managing space in every type of structure from office buildings to process plants. It involves developing corporate facilities policy, long-range forecast, real estate, space inventories, projects (through design, construction and renovation), building operation and maintenance plans, and furniture and equipment inventories."

Engineering News-Record (1985)

"The systematic method of inventorying, planning, designing, allocating and maintaining space, equipment, and furniture for general and special purpose facilities that are subject to a need to be flexible to accommodate change."

Hamer (1988) quoting Jim Steinmann

"The process of planning, implementing, maintaining and accounting for appropriate physical spaces and services for an organisation, while simultaneously seeking to reduce the associated total cost."

Hamer (1987)

"Facility Managers have responsibility for planning, providing, and operating an organisation's sites, buildings and interior components. In other words, they are responsible for providing the physical work conditions which enable employees to perform specific jobs."

Lindquist (1988)

"Facility Management, a term I use to encompass the activities in planning, designing and managing complex facilities such as offices, hospitals and schools, differs from architecture and interior design, at least as they have been practised historically, in the following way: Facility Management refers to buildings in use, to the planning, design, and management of occupied buildings and their associated building systems, equipment and furniture to enable and (one hopes) to enhance the organisation's ability to meet its business or programmatic objectives. Facility Management thus refers to organisational effectiveness."

Becker, F. (1990a)

"Facilities Management can be defined as the development, co-ordination and control of the non-core specialist services necessary for an organisation to successfully achieve its principal objectives."

Becker and Hillyard (1991)



"Comprehensive management of all facilities and associated services and resources which support the primary purpose of the organisation."

Garside (1991)

"... the management of premises as buildings together with the facilities services and people contained therein; this has implication in respect of the initial design, the maintenance, the day-to-day administration and control of manpower, energy and related resources."

Association of Facilities Management (1986)

RESEARCH PROJECT PLAN  
AND EMBEDDED PROTOCOLS

FOR CONDUCTING CASE STUDIES TO INVESTIGATE THE  
ADVANTAGES AND DISADVANTAGES OF CONTRACTING-OUT AS  
EXPERIENCED BY USER ORGANISATIONS; AND THE INFLUENCE SUCH  
FACTORS PLAY IN DETERMINING WHETHER FACILITIES MANAGEMENT  
SERVICES ARE RESOURCED IN-HOUSE

Researcher : D.D. Owen

Department : Department of Surveying  
University of Salford

Draft 3: July 1991  
Superseding Draft 2  
May 1991

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  - 2.3 Definition of Principal Terms
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## 1.0 INTRODUCTION

### 1.1 PURPOSE OF RESEARCH PROJECT PLAN (RPP)

The purpose of this RPP is to:

- (i) provide a statement about the project;
- (ii) record its purpose;
- (iii) stipulate how the project will be conducted;
- (iv) co-ordinate the individual case study protocols.

### 1.2 PROCESS OF RESEARCH PROJECT PLAN

By means of this 'operational' plan the process of the case study design will follow the sequence:-

- \* To position Facilities Management as the field of study.
- \* To progressively focus down onto the issues relating to contracting-out Facilities Management Services and the relative advantages and disadvantages to a User organisation.
- \* To define the principal terms employed.
- \* To describe the approach to data collection via case study strategy.
- \* To outline the field procedures.
- \* To schedule the protocol questions (self-interrogatory for the researcher).
- \* To reflect the iterative nature of the research strategy design.

The protocol for the individual case studies will:-

- \* summarise the subject matter of the case study;
- \* identify the scope of the case study;
- \* recognise the potential problems (problem anticipation);

- \* provide modus operandi to overcome problems (problem solution).

### 1.3 AUDIENCE RECOGNITION

1.3.1 This research project plan describes the framework for collecting evidence by case study for the PhD thesis. The primary audience for this research work is consequently the University of Salford, its Senate, the Board of Faculty, the University Supervisor and the External and Internal Examiners.

1.3.2 This research project plan may also be required for reference by the informants, respondents and other interested parties, as a working document during evidence collection.

## 2.0 BACKGROUND TO PROJECT

The following encapsulates the project and is for use as a reference during data collection exercises.

### 2.1 BACKGROUND THEORY

The field of study for this research project is Facilities Management, which is a management function that has grown in recognition over the last fifteen to twenty years, and concerns three inter-related aspects of a business's organisation, viz:-

- \* Premises, including buildings-in-use and the asset management of property.
- \* Support services
- \* I.T.

## 2.2 FOCAL THEORY

The focus for this project is a management tactic, much utilised by Facilities Management, namely contracting-out. The contracting-out of Facilities Management Services, by User organisations to second party organisations, purportedly provides the User with operating benefits. This project seeks to confirm the existence of these benefits, to recognise potential disbenefits and attempts to ascertain whether there is generalisation achievable for benefits between different Users.

## 2.3 DEFINITION OF PRINCIPAL TERMS

Data is to be collected concerning the following terms:-

- \* Core business
- \* Facilities Management
- \* Contracting-out
- \* User
- \* Supplier

## 3.0 APPROACH

### 3.1 GENERAL

The project will be conducted by adopting a multi-strategy for data collection, including case study strategy, which will incorporate a multi-method approach to the collection of data from six cases.

The methodology for case studies will include:-

- \* Indepth interviews:
  - ° open-ended
  - ° focused
- \* Document and records search



- \* Observation
- \* Informal discussions

'Informal discussions' are to include:-

- (a) oral communications, direct or by telephone with a range of possible informants; including principal informant, RA's, various staff members, contract workers, consultants (professional services), who are familiar with case study organisations, etc.;
- (b) in the written form; e.g. in memos, hand-written notes, etc.

Over-arching the project is a process adopted throughout the thesis, entailing the use of a sounding-board network of key informants, whose various views are sought and incorporated into the research design on an iterative referral basis.

### 3.2 PILOT CASE STUDY ORGANISATION (PCSO)

A pilot case study will be carried out to test and, if necessary, retest techniques and methods of data collection. These tests will be completed at each stage before work on other cases commence.

The parameters of the pilot case study (PCS) are set out in Section 4.0 below. The Organisation, of which the PCSO is a part (PCSO), is to be used as a primary sounding-board during this project, with the Group Facilities Manager as the principal key informant.

The PCSO was chosen for the following reasons:

- \* The principal informant was supportive of the project.
- \* Because of recent evolutionary changes in the FM structure at the PCSO, it was considered a 'target-rich environment' for evidence collection.
- \* The principal informant's office was accessible.
- \* PCSO is a provider in the Health Sector. The vast

majority of data relating to FM comes from Office User sources. It was considered that a different user source from the norm. was likely to assist in highlighting key findings.

In the formative stages of the research the PCSO will be used for conceptual clarification both of the issues concerned in the field of study and with the focal theory. The PCSO will be used to refine the structure of the case study protocol and the case study questions by assuming the role of the laboratory, and by the researcher adopting a high level of personal contact with the principal informant, with the intention of using various communication forms to evolve and upgrade the case study protocol.

Ongoing soundings of the PCSO, by looping basis, will be undertaken in conjunction with the ongoing review of relevant literature.

N.B.: Whilst the design of the case study strategy will benefit from the iterative approach to the PCS, the evidence obtained from the PCS itself will stand as a case study for cross-analysis at the conclusion of the project.

### 3.3 FIELD PROCEDURES

- (i) Determine if anonymity required by:
  - \* User?
  - \* Informant?
- (ii) Schedule probable sources of primary evidence
- (iii) Schedule probable sources of secondary/back-up evidence
- (iv) Determine level of accessibility to key informants

- (v) Give consideration to problems likely to be forthcoming for each case. For example:-

*Problem Anticipation:*

- \* Withdrawal of permission to use Organisation as a case study
- \* Change in management of Case Study Organisation
- \* Change in personnel amongst informants
- \* Restriction of evidence
- \* Period necessary to complete case study
- \* Change in CSO's policy toward FM

*Problem Solution:*

Give consideration to solutions to be encountered for each case:-

- \* Carry out data collection on more organisations than intending to use for analysis
- \* Obtaining written permission to carry out study from existing senior management and include senior management in verification of findings.
- \* Maintain close links with informants to encourage continuity should a personnel change occur
- \* Offer anonymity to overcome security/sensitivity issues
- \* Build a 'float' period into the data collection stage of the programme
- \* Encompass change as part of the evidence

- (vi) Select main informant, e.g.: Director or Head of Department

- (vii) Select Case Study Organisation:

General meeting first to establish parameters:-

- \* Whether in fact likely to be a suitable source of evidence, i.e. availability

- \* Whether evidence accessible:
  - staff
  - documentary
  - historical
  - strategic/tactical/operational/decision-making

### 3.4 CASE STUDIES

Case studies to be targeted are provisionally listed as:-

- \* Pilot Case Study (PCS) : Hotel services of private hospital group
- \* Case Study Two : Autoclave maintenance of private hospital group
- \* Case Study Three : Estates surveying services of a public sector user
- \* Case Study Four : Estates services of a private hospital group
- \* Case Study Five : Catering services of multi-site office user
- \* Case Study Six : Specialist FM service of a large HQ office user
- \* Reserve Cases:
  - (i) Case Study : Management of Facilities at an Office User Organisation
  - (ii) Case Study : Catering services of 'High Street' bank group
  - (iii) Case Study : Specialist FM service of 'High Street' bank group

## 4.0 CASE STUDY PROTOCOL

### 4.1 PILOT CASE STUDY PROTOCOL

The pilot case study is targeted as the Hotel Services of PCSO, a private hospital group comprising 32 hospital sites throughout England and Scotland.

#### 4.1.1 Choice of Study

Prior to confirmation of PCS subject, consider the following:-

- (i) Why PCSO for this study?
- (ii) Why Hotel Services? (HS)
- (iii) Benefits to the project?
- (iv) Availability of, and access to, suitable evidence?
- (v) Continuity likely in order to complete study?

#### 4.1.2 Protocol Questions (Self-Interrogatory)

Question prompts for researcher:

What is the main business activity of the PCSO?

How is PCSO organised?

How is FM organised in the PCSO?

How does HS fit into FM in PCSO?

What constitutes HS?

How is HS resourced?

Are resource decisions driven by cost?

- (i) How are hotel services organised within the PCSO:
  - \* Pre-1988
  - \* Currently
  - On an in-house basis?
  - On a contracted-out basis?
  - On a mixed basis?

- (ii) How and why was the strategy decision made to adopt the current procedure?
- (iii) What advantages/disadvantages of contracting-out were considered and which of these influenced the strategy decision? (Researcher's note: This question was excluded because it was considered a leading question and therefore encouraged bias).
- (iv) Who made the decisions regarding contracting-out?
- (v) How have these advantages/disadvantages compared with the expected performance? (Researcher's note: ditto)
- (vi) How will you change the strategy for the future.

#### 4.1.3 Source of Data

Ascertain if information would be available from:-

- \* Group Facilities Manager
- \* Deputy Chief Executive
- \* Other FM staff - specify
- \* Hospital Manager
- \* Hotel Services Manager
- \* Contractor/s
- \* Organisational charts - specify
- \* Job descriptions - specify
- \* Facilities Management manual - specify
- \* Documentation - specify
- \* Empirical evidence collected by:
  - ° Participant observation
  - ° Direct observation
- \* Identify number of User's sites available for investigation - specify including contact names, telephone and fax numbers, etc.
- \* Identify other sources of data - specify

#### 4.1.4 Evidence Collecting Strategy

- \* Agree timetable for study
- \* Agree timetable for interviews
- \* Documents to be made available, e.g.:
  - Organisation's chart
  - Computer spreadsheets
  - List number of staff: In-house/out
  - Geographic spread
- \* Agree method of verifying evidence

### 4.2 CASE STUDY TWO PROTOCOL

#### 4.2.1 Subject of Study

CS2 is intended to be the method of resourcing the maintenance of PCSO's autoclaves.

#### 4.2.2 Choice of Study

Prior to confirmation of Case Study Two unit of analysis, consider the following:-

- (i) Why PCSO for this study?
- (ii) Why autoclave maintenance?
- (iii) Benefits to the Project?
- (iv) Availability of, and access to, suitable evidence?
- (v) Continuity likely, in order to complete study?

#### 4.2.3 Protocol Questions (Self-Interrogatory)

Question prompts for researcher:

What is an autoclave?

How does an autoclave work?

What governs autoclave maintenance policy generally?

How are autoclaves maintained in PCSO?

How is the autoclave maintenance resourced in PCSO?

In-house or out-house?

Why is the maintenance resourced in this manner?

- (i) How is autoclave maintenance currently organised within the PCSO:
  - \* Pre-1988?
  - \* Currently?
  - On an in-house basis?
  - On a contracted-out basis?
  - On a mixed basis?
- (ii) How and why was the strategy decision made to adopt the current procedure?
- (iii) Who made the decision?
- (iv) How will you change the strategy for the future?
- (v) How and why was the strategy decision made to adopt the current procedure?

#### 4.2.4 Sources of Data

Targets:-

- \* Group Facilities Manager
- \* Deputy Chief Executive
- \* Other FM staff - specify
- \* Hospital Manager
- \* Autoclave maintenance engineer
- \* Contractor/s
- \* Organisational charts
- \* Job descriptions
- \* Facilities Management manual
- \* Documentation
- \* Engineering manuals

#### 4.2.5 Evidence Collecting Strategy

- \* Agree timetable for study
- \* Agree timetable for interviews
- \* Documents to be made available, e.g.:
  - Organisation's chart
  - Computer spreadsheets
  - List number of staff: In-house/out
  - Geographic spread
- \* Agree method of verifying evidence



### 4.3 CASE STUDY THREE PROTOCOL

#### 4.3.1 Subject of Study

Estates Surveying Services (ESS) in public sector User.

#### 4.3.2 Choice of Study

Prior to confirmation of the unit of analysis for CS3, consider the following:-

- (i) Why 'CS03' for this study?
- (ii) Why Estates Surveying Services?
- (iii) Benefits to the project?
- (iv) Availability of, and access to, suitable evidence? Query confidentiality problems?
- (v) Continuity likely in order to complete study?

#### 4.3.3 Protocol Questions (Self-Interrogatory)

How is FM organised in CS03?

How is ESS organised within the FM function?

What is the function of ESS?

Why is ESS resourced in this way?

What are the benefits and disbenefits?

#### 4.3.4 Sources of Data

##### (i) *Indepth Interviews*

##### North-West Region

Managing Director

Operations Director

Finance Director

Senior Manager in charge of Design

Commercial and Strategic Planning Director

Operational staff

##### Eastern Region

Managing Director

Operations Director

Operations Manager (South)

Operational staff

\* Group Manager

\* Works Officers

**South-West Region**

Operations Director

Finance Director

Operational staff at local offices:

- \* Works Officers

**Southern Region**

Operations Director

**London Region**

Operations Director

**Headquarters Staff**

Head of Agency and Property Management

- \* Finance Director
- \* Managing Director (Southern)
- \* Managing Directors of two sister companies

**(ii) *Informal Interviews***

Informal interviews/discussions with a range of staff in order to gain an understanding of the background to the issues.

**(iii) *Observations***

All the relevant interviews will be carried out at premises of CS03. The time spent in their offices is to be used to observe and record working practices. These observations are to be recorded and used to compare with the evidence from other sources.

**(iv) *Documentation***

Documentation to be sought should include:

- \* FM Department's documents covering:
  - \* Services
  - \* Planned maintenance and engineering services
  - \* Building management
- \* Business development plans for all nine regions of the FM Department

- \* Departmental Operational Instructions
- \* Documents covering operations of sister companies

#### 4.3.5 Evidence Collecting Strategy

- \* Agree timetable for study
- \* Agree timetable for interviews + at each Regional Office
- \* Documents including 'in confidence' documentation to be made available?, e.g.:
  - Organisation's chart
  - Computer spreadsheets
  - List number of staff: In-house/out
  - Geographic spread

### 4.4 CASE STUDY FOUR PROTOCOL

#### 4.4.1 Subject of Study

Estates Services of a private hospital group

#### 4.4.2 Choice of Study

Prior to confirmation of the Unit of Analysis for CS4, consider the following:-

- (i) Why PCSO for this study?
- (ii) Why Estates Services (ES)?
- (iii) How well does ES replicate CS3?
- (iv) What is the likely availability of, and access to, evidence?
- (v) Continuity likely in order to complete study?

#### 4.4.3 Protocol Questions (Self-Interrogatory)

How is the Estates Services function undertaken in PCSO?

How does this relate to the FM function?

What do PCSO recognise as comprising estates services?

What resources are possessed in-house to fulfil the Estates Services function?

To be developed further

#### 4.4.4 Sources of Data

Targets:-

- \* Group Facilities Manager
- \* Deputy Chief Executive
- \* Other FM staff - specify
- \* Hospital Manager
- \* Estates Services Manager?
- \* Organisational charts
- \* To be developed further

#### 4.4.5 Evidence Collecting Strategy

To be developed

### 4.5 CASE STUDY FIVE PROTOCOL

#### 4.5.1 Subject of Study

Catering services of a multi-site office User

#### 4.5.2 Choice of Study

Prior to confirmation of the Unit of Analysis of CS5, consider the following:-

- (i) Why CS05 for this study?
- (ii) Why catering services as unit of analysis?
- (iii) Will this replicate embedded study from PCS?
- (iv) How is FM organised in CS05?
- (v) What is the likely availability of, and access to, data?

#### 4.5.3 Protocol Questions (Self-Interrogatory)

What is the primary business activity of CS05?

How is CS05 organised?

How is FM organised in CS05?

How is the catering service undertaken in the London locations of CS05?

#### 4.5.4 Sources of Data

- \* Director of Administration
- \* Catering Managers?
- \* Organisation charts
- \* To be developed further

#### 4.5.5 Evidence Collecting Strategy

To be developed further

### 4.6 CASE STUDY SIX PROTOCOL

#### 4.6.1 Subject of Study

Management of FM service of a large H.Q. office User

#### 4.6.2 Choice of Study

To be selected

#### 4.6.3 Protocol Questions (Self-Interrogatory)

Did the contracting-out of FM services via a management contractor meet the performance expectations/requirements of the User?

What was the primary business activity of CS06?

Which FM services were contracted-out?

What was the basis of the contract?

How was the management contractor (MC) organised?

How did the MC structure its resources for CS06?

Why did CS06 utilise contracting-out of FM services as a business strategy?

#### 4.6.4 Sources of Data

- \* CEO?
- \* MD of Management Contractor?
- \* On-site manager?

#### 4.6.5 Evidence Collecting Strategy

To be developed

### 4.7 CASE STUDY SEVEN PROTOCOL (Reserve Study)

#### 4.7.1 Subject of Study

Management of Facilities Services at an office User

#### 4.7.2 Choice of Study

Why?:

- \* To obtain data from a Supplier source as opposed to a User source.
- \* A market leader (ref. Harris, D. (1993), 'Instant Facts on Costs', *The Times*, p.30, 18th August
- \* 'Hard Data (available) from More than Too Large Offices' (Harris, D. (1993))
- \* Direct experience of outsourcing

Benefits : t.b.c.

Scope : t.b.c.

#### 4.7.3 Protocol Questions (Self-Interrogatory)

Did the contracting-out of FM services via a management contractor meet the performance expectations/requirements of the User?

What was the primary business activity of CS06?

Which FM services were contracted-out?

What was the basis of the contract?

How was the management contractor (MC) organised?

How did the MC structure its resources for CS06?

Why did CS06 utilise contracting-out of FM services as a business strategy?

#### 4.7.4 Sources of Data

- \* Director of Commercial Development
- \* Research Consultant
- \* Account Manager
- \* Facilities Manager/knowledgeable interface at User organisation

#### Sample Strategies:

- \* Interview: Director of Commercial Development - open-ended, more than one
- \* Interview: Research Consultant - focused, open-ended
- \* Interview: Account Manager - focused, open-ended
- \* Interview: Facilities Manager - focused, open-ended
- \* Spreadsheets from User before contracting-out
- \* Spreadsheets from User after contracting-out
- \* Spreadsheets from CS07 Limited after contracting-out covering budgets, actual performance measures, achievements against performance measures.

#### 4.7.5 Evidence Collecting Strategy

#### 4.8 CASE STUDY EIGHT PROTOCOL (Reserve Study)

##### 4.8.1 Subject of Study

Specialist FM Service of a 'High Street' bank group

##### 4.8.2 Choice of Study

t.b.c.

##### 4.8.3 Protocol Questions (Self-Interrogatory)

t.b.c.

##### 4.8.4 Sources of Data

t.b.c.

##### 4.8.5 Evidence Collecting Strategy

t.b.c.

#### 5.0 CASE STUDY : INDEPTH INTERVIEW OF KEY INFORMANT: DRAFT OF QUESTIONS

##### 5.1 SCENE SETTING QUESTIONS

Q: What is the scope and responsibility of the FM function within your Organisation?

\* Please refer to the attached list showing indicative scope and add or amend as required.

\* Recognise the difference between PSS and Implementation?

Q: Which of these functions do you contract-out?

Q: Which of these functions do you retain in-house?



Q: Which of these functions are not relevant?

- \* To show trends, please indicate the position in 1989 and the position in 1992.

## 5.2 VALIDATING QUESTIONS

Q: Which of the following benefits or advantages of contracting-out Facilities Management Services would you concur with?:

- \* List to be generated by Research Review.

Q: Which of the following disbenefits or disadvantages of contracting-out Facilities Management Services would you concur with?:

- \* List to be generated by Research Review.

Q: Do you believe contracting-out, as a management strategy or tactic, is a trend currently in vogue (i.e. at one end of a pendulum swing); or is it here to stay?

Q: How much does legislation affect your decision to contract-out?:

- \* Cite cases, e.g. compulsory competitive tendering.

Q: How much does geography play a part in your decision to contract-out; e.g. because of:

- \* Local labour rates
- \* Local labour availability
- \* Local labour skills

Q: How much does the current state of the economy affect your decisions as to whether to contract-out?

### 5.3 REASONS FOR NOT CONTRACTING-OUT IN WHOLE OR PART

Q: (i) Which of the following policy statements does your organisation concur with?: t.b.c.

(ii) Can you add further policy statements?

It is our policy not to contract-out Facilities Management functions where:

- \* the contractor/s would not be able to deal with confidential issues.
- \* the contractor/s would not be able to provide the service level we require.
- \* consequential redundancy levels would be unacceptable.
- \* retained in-house staff would see the contractor as a threat.
- \* Other (t.b.c.)

Q: Which of the following reasons (as opposed to policy statements) would prevent your organisation from contracting-out? Give examples.

- \* The existing in-house resource performed satisfactorily.
- \* There is no competitive alternative out-house resource because of:
  - ° specialism
  - ° geography
  - ° market capacity
- \* Once the decision to contract-out had been made, that decision could not be reversible.
- \* The size of the budget would not warrant contracting-out because it is:
  - ° too small
  - ° too large
- \* Current in-house technology provides a competitive edge.

## APPENDIX VI

### MASTER PROGRAMME



**STAGES PROGRAMME**

**DRAFT ONE: JANUARY 1991**

| YEAR ONE<br>1991                                                                                                                                                               |                                                                  |                                                     | YEAR TWO    | YEAR THREE   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|-------------|--------------|
| JAN-APRIL                                                                                                                                                                      | MAY-AUGUST                                                       | SEPT-DECEMBER                                       |             |              |
| FIELD OF INTEREST                                                                                                                                                              | POSSIBLE TOPICS                                                  | THESIS PROPOSAL                                     |             |              |
| BACKGROUND THEORY                                                                                                                                                              |                                                                  | FOCAL THEORY                                        | DATA THEORY | CONTRIBUTION |
| * Collecting and collating historical current and state of the art data<br>Review and evaluation                                                                               | * Research ideas<br>* Shortlist topics<br>* Working up shortlist | Define research topic<br>Reasons - further research |             |              |
| Writing up evaluation of importance of analysis and thesis. The effect of the thesis on the focal and background theory.<br>Limitations<br>Way forward - future research needs |                                                                  |                                                     |             |              |

## APPENDIX VII

### EXAMPLES OF RESEARCH REVIEW REFERENCES

ADVANTAGES1. Reduced Costs/Economies of Scale

- 1.1 Organisations are primarily driven towards outsourcing by a desire for cost rationalisation  
Takac  
P.26
- 1.2 The fundamental incentive to outsource IT and communications services lies in the achievement of economies of scale and operation efficiencies (See Takac 2.1)
- 1.3 The increasing cost and complexity (see Takac 8.1) of purchasing, maintaining, operating (see Takac 2.2) and integrating technology have driven an increasing number of organisations to consider the viability of outsourcing.  
P.29
- 1.4 Given these high levels of MIS expenditure, it is not surprising that institutions are keen to examine different, more cost effective ways of handling their technology needs  
P.31
- 1.5 From the user's perspective, the main advantages lie (sic) in cost savings and operational efficiencies (see 2.3)  
P.33
- 1.6 Users with less than efficient data processing or networking operations view outsourcing as a way to increase their efficiency (see 2.4) and, at the same time, cut costs.  
P.34
- 1.7 Cash payments for assets (note: referring to strict outsourcing, i.e. payment for assets transferred - rationale:- this will reduce costs).

## Mills

- 1.1 Reduce overall costs
- 1.2 Savings achieved by economies of scale

## Becker &amp; Hillyard

- 1.1 Competitive pressures force attention on overheads, ... costs, affordability

## Kell

- 1.1 Reasons for changing the resourcing method to include cost saving on existing services - requirement to reduce facilities department space/resourcing consumption (see also Kell 3.2)

## Farren

- 1.1 See Farren 2.1 - keep costs down
- 1.2 Frequently a large corporation will outsource services it feels it can get for less on the outside
- 1.3 See Farren 16.1 ... too expensive to have in-house
- 1.4 See Farren 3.1 ... saving additional personnel costs

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#### 4. Career Path/Development

Takac P.34

- 4.1 See Takac 6.2 ... best ... technicians

Mills

- 4.1 See Mills 8.1 ... develop my own people into bigger roles
- 4.2 Stabilise non-regular staff - career path in FM contract

Drucker

- 4.1 Productivity of support work is not likely to go up until it is possible to be into senior management for doing a good job ...?

Farren

- 4.1 Since these companies specialise in a particular field, the worker who is dedicated and capable can move up within the firm and will have enthusiasm to perform well.

Cloudsdale

- 4.1 Company usually cannot offer a career path for FM staff (in-house)
- 4.2 See Cloudsdale 11.1. Motivated, well-trained staff: employees of contract FM firms are well-trained, motivated, have incentive to excel, are confident in delivery services and have the ability to move up within their company

Hytch

- 4.1 Better career progression for staff  
She quotes Drucker, Wall Street, 1989 'sell the mail room'.  
The productivity of support work is not likely to go up until it is possible to be promoted into senior management.

Lancaster

- 4.1 Employees who work for outsourcing firms know that good performance leads to career advancement and much deserved respect. Hardworking ... employees in outsourcing companies are regularly promoted and can easily find themselves on the management track

Bird

- 4.1 The people (from CAA) who went to EDS have all since done rather better in their careers than they would have done if they had stayed at the CAA ... large outsourcing suppliers can generally offer IT professional considerably more varied and advanced career prospects.

Judkins 1992

- 4.1 'Few organisations can offer careers to more than a minority'

Zickerman

- 4.1 Opportunities for staff (post outsourcing) have improved because our FM supplier can offer far more career development potential to professionals in IT than is available within the health service



-11-

Gillett

- 6.1 Enhanced critical skills (large organisations in recession couldn't hire new skills - outsourcer could) See also 15.1
- 6.2 (the outsourcer) is able to hire additional skills that are becoming more important in the future

## 7. No Operational Headaches

Farren

- 7.1 Outsourcing satisfies the major concern of staffing without a hassle.

Hytch

- 7.1 Legal requirements of catering e.g. hygiene regulations (responsibility of catering contractor)

Lancaster

- 7.1 See 12.1

Bird

- 7.1 Quoting Brett, R. of CAA: 'It's (contracting-out) wonderful. All our IT needs are taken care of. If there are any problems, I don't see or hear anything of them.'

## 8. One-Stop-Shopping/Complexity of Purchasing/Outsourcing Acts as Screen between User and Vendors/One Invoice

Takac

- 8.1 See Takac 1.3 - complexity of purchasing maintaining ...

Mills

- 8.1 For it (contracting-out) will always be an opportunity. An opportunity to develop my own people into bigger roles (see also Mills 4.1) an opportunity to get the most recent industry experience (see also Mills 6.1) in all areas and an opportunity to call on any discipline (see also Mills 13.1) at any time through one point of contact.
- 8.2 Benefit: towards total FM

Kell

- 8.1 Total service supplied by a third party company

Farren

- 8.1 - the corp. only has one monthly bill with which to concern itself.

Hytch

- 8.1 Few invoices and accounts to process

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19. ASSIST USER OBTAIN COMPETITIVE ADVANTAGE IN THE MARKET PLACE

Mills

19.1 Savings achieved by supplier initiatives

Cloudsdale

19.1 Enables a company to differentiate itself from the competition

Lancaster

19.1 After all, you give your competitors an advantage anytime you continue to produce in-house what can be produced more effectively and efficiently out of house.

Ketler & Walstrom

19.1 Outsourcing ... (could) provide the company with the opportunity of increasing productivity and competitiveness. See also 2.2

Cant

19.1 Outsourcing can and must assist an organisation in obtaining competitive advantage in the market place.

Kerry

19.1 Topicality is a bad reason but significant because it causes the growth of competitive markets.

Gillett

19.1 Commercially competitive service

20.

TAX

(Note disadvantage No. 14 - ?contradicts?)

Takac P.34

20.1 Users can gain tax benefits through outsourcing. Whilst hardware must be depreciated over, normally, three to five years, outsourcing fees are tax deductible as a current business expense.

Ketler & Walstrom

20.1 Another cost (saving) issue related to outsourcing is this shift in expenditure from capital budget to the operating budget. This affects tax liability since hardware (capital) unlike outsourcing fees can be depreciated - to disadvantage 14.1

DISADVANTAGES (RISKS)1. Broken Egg/Vasectomy/Exiting/Reversion

Takac P.34

- 1.1 Changing conditions or strategic focus could make the relationship outmoded (see 2.1)

Hytch

- 1.1 tied to the contractor for a specific (notice) period

Eliot

- 1.1 One issue that immediately comes to mind is the 'broken egg' argument. If a firm sells off the bulk of its IS function and then later decides to regain it, can the IS function be put back together again ... can you repair the broken egg?

Ketler &amp; Walstrom

- 1.1 The issues relating to exiting the contract are more difficult due to the uncertainty of the future

Bird (b)

- 1.1 ... (losing in-house expertise) ... makes it ... almost impossible to bring the ... operation ... back in-house at some future date.
- 1.2 One manager who changed back from outsourcing to running IT internally described it as 'rather like a vasectomy - extremely difficult and painful to reverse'.

Zickerman

- 1.1 It is a trap that almost caught the NHS.

Nix

- 1.1 Outsourcing is not irreversible - but don't expect the incumbent service provider to make it easy for you.

Whale

- 1.1 If nothing else, make sure you can cope if it comes to divorce, as has happened.

Kerry

- 1.1 The cost of change-back ... would be too large to risk.

2. Worst Strategic Focus

Takac P.34 Table 4

- 2.1 ... strategic focus (see 1.1)

Lancaster

- 2.1 ... managers who lose control over strategic planning ... it is the outsourcer who often takes the lead in developing and planning for the company's future support service needs. See also 6.2

-2-

Bird

- 2.1 Quoting Otter, G. CSE Index  
'the main problem is that managers see outsourcing as abdicating responsibility ... they see themselves as having got ride of a problem ... left to themselves suppliers (of IT equipment) will allow technology to lead development rather than business need.

Jones

- 2.1 A temptation to buy an off-the-peg package that includes irrelevant extras as opposed to buying what is really needed.

Eliot

- 2.1 Can a firm have better or worse strategic focus on IS due to outsourcing?

Ketler &amp; Walstrom

- 2.1 Outsourcing critical segments (of IS) may put the livelihood of the organisation in question.

Kerry

- 2.1 You can (may not be able to) separate strategic from operational elements.

3. Are claimed savings merely forecasted hopes; not always cost effective

Takac P.34 Table IV

- 3.1 High cost of conversion to outsourcing (see 15.1)  
3.2 Assumptions may quickly become invalid

Mills

- 3.1 There is also risk in the area of financial delegation (see also 6.2)

Becker &amp; Hillyard

- 3.1 Reasons against procuring contract support ... cost/affordability - effective procurement against market transaction cost.

Cloudsdale

- 3.1 Management only route: disadvantage is mostly in cost. Managers' fees for this option can be very expensive, in addition to charges for the number of employees being managed.  
3.2 Combination of in-house staff and contract FMS: a large in-house staff is typically maintained and administrative costs can be high.

Hytch

- 3.1 Delay in obtaining results  
3.2 Hidden costs not shown in tender  
3.3 Who pays for the contractor's errors and mis-management?  
See also 8.1  
3.4 (may be) cheaper to buy direct rather than bulk purchase discounting (because) profit centres in their own right.

-7-

# 11. Long-Term Fixed Contracts

Bird

- 11.1 Quoting Otter, G. GSC Index  
'Remember the outsourcing company is negotiating contracts every day and it gets smart. Users are being led up all sorts of blind alleys, unknowingly, particularly over the financial structure of the deal ... Many contracts last for seven years. If you make a mistake, you are locked in.

Jones

- 11.1 Becoming locked into a strictured contract that is not designed to respond to changing business circumstances.

Ketler &amp; Walstrom

- 11.1 Outsourcing may be the solution of today's problems but not tomorrow's.

Weir

- 11.1 See 3.1

Whale

- 11.1 You should also crawl all over the contract and make sure it is not an entree to them (outsourcer) taking over everything.

# 12. Personnel: Shift from Organisation to Supplier, Those Leaving. Those Staying; Unions/Redundancy (? separate)

Becker &amp; Hillyard

- 12.1 Disadvantages of contracting-out possible union reaction requiring management attention (See Becker & H 13.1 & 24.1)  
12.2 Disadvantages of contracting-out ... threat to existing employees ... effect on in-house morale (See Becker & H 13.2)  
12.3 Reasons against procuring contract support - internal industrial relations

Hytch

- 12.1 Potential problems with your unions  
Note - why not made more of - see article re. Government redundancy - may scupper market-testing: quote PSA BM, etc.  
12.2 Redundancy payments and settlements to catering staff could nullify savings. See also 3.5

Lancaster

- 12.1 Probably one of the biggest barriers preventing outsourcing becoming widely accepted ... the fear or drawback that certain outsourcing situations can eliminate the need for some middle management.  
12.2 Outsourcing can eliminate jobs. Long-time employees may suddenly find themselves without employment.  
12.3 ... employees who remain may harbour ill-feeling towards the outsourcer and the company

-10-

16. Against Culture of Organisation

Lancaster

- 16.1 Perhaps the biggest fear is whether or not the outsourcer's employees will fit into the company's corporate culture ... or will it always be a 'us versus them' mentality.

Grigsby

- 16.1 Mr. John Hall, Director-General of the Cleaning and Support Services Assoc. said that the decision had made it clear that TUPE would apply to a considerable proportion of the Government's programme of competitive tendering. He said: '... where TUPE applies savings of the order of 20-30% will no longer be achieved.'

Kerry

- 16.1 (outsourcing may be resisted) because of the culture of the User.

17. Ignores In-house Solution

Ketler &amp; Walstrom

- 17.1 (of the 15% saving through outsourcing) 4-5% can be attributed to downsizing (e.g. Avon Products have reduced IS cost by \$3m in 1990 by consolidating - downsizing - without outsourcing).

Weir

- 17.1 Most (companies) can cut the cost of an in-house (IS) operation by 40-60% simply by rethinking the way things are done. The client is effectively handing the outsourcer vendor the extra cost which could have been kept in-house if the operation had been redesigned from within. See also 3.2

Kerry

- 17.1 You are satisfied with the cost of the internal source.

18. Lose In-house Expertise/Compatibility

Takac P.34 Table IV

- 18.1 Loss of skills and resources

Hytch

- 18.1 Third party (the contractor) purchasing on your behalf - therefore lose contacts.

Eliot

- 18.1 The disruption caused by discarding many career-pursuing IS systems personnel may so badly scar the firm that few would venture back.

Bird (b)

- 18.1 Another danger for clients is losing expertise. Once you have transferred your staff and handed over equipment, there may be nobody left within your organisation who understands what the outsourcing vendor is being asked to do.

-13-

27                    Slower Response Time

Hytch

27.1                Slower response to problems.

Bird

27.1                See also 6.1

28.                   Hidden Costs

Hytch

28.1                Hidden costs not shown in tender ('administration fee may be an on cost'). See also 3.2

28.2                Although terms as free, they are profit centres in their own right ('it may be cheaper to buy direct rather than so-called bulk purchasing')

Ketler &amp; Walstrom

28.1                The option to lay-off employees contains some hidden costs - may be entitled to costly severance packages.

29.                   Lack of Flexibility

Bird

29.1                The biggest problem is usually deciding whether or not additional services are covered by the original terms of the contract.

29.2                See 3.1

## APPENDIX VIII

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