

**SWP 19/95 ST.JAMES'S HOSPITAL AND LUCAS
ENGINEERING SYSTEMS LTD - A
PUBLIC/PRIVATE SECTOR COLLABORATION
IN BPR PROJECT A - ELECTIVE ADMISSIONS**

**VALERIE BENCE
Cranfield Centre for Logistics and Transportation
Cranfield University
Cranfield
Bedford MK43 0AL
United Kingdom**

**Tel: +44 (0)1234 751122
Fax: +44 (0)1234 751806**

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ST.JAMES'S HOSPITAL AND LUCAS ENGINEERING SYSTEMS LTD
- A PUBLIC/PRIVATE SECTOR COLLABORATION IN BPR
PROJECT A - ELECTIVE ADMISSIONS

Cranfield Working Paper
Manuscript 12a
Valerie Bence CCLT

This Working Paper is the first in a series of three examining Business Process Re-design (BPR) within the National Health Service (NHS). This paper, together with Manuscript 13, will examine in detail two BPR projects within a particular NHS hospital and will concentrate on the design and implementation of the projects, the problems encountered and lessons learned. The last in the series (Manuscript 14) will draw on these two examples and similar projects, in order to follow the application of BPR to the NHS and investigate differences and/or similarities in its transfer from private to public sector, in the critical success factors or reasons for failure. It will then attempt to conclude whether the problems, processes and outcomes of using BPR are broadly similar within both public and private sector organisations and thus easily transferable, or if there is in fact a distinction to be made between the two sectors in their approach to and use of BPR as a management tool.

This paper illustrates an innovative collaboration between St James's Hospital, Leeds and Lucas Engineering Systems Ltd (LES). It examines how a public sector organisation and a private company worked together to design and implement what are essentially manufacturing methodologies to an NHS hospital already undergoing huge changes. Two BPR projects were undertaken by the joint Lucas/St James's teams and this paper will outline Project A - the redesign of part of the hospital admissions system (Elective admissions directly to Urology) and the formation of a "Natural Group" to implement the new processes, it will outline the rationale behind the collaboration and look at how the final projects were chosen, the design of new processes and their implementation. Manuscript 13 will look at Project B - the rationalisation of Purchasing and Supplies throughout the hospital.

Methodology

Manuscripts 12a and 13 describe and expand on extensive casework carried out by the author within St James's Hospital. Interviews were held with the Director of Operations, Manager of Purchasing and Supplies and a key member of the Admissions project team. Desk research and telephone interviews were also carried out. The case study rationale is used as the original aim of the research was to investigate, document and build on the projects being carried out in the hospital for teaching purposes. This work resulted in two teaching cases, which together won the 1995 Harold Burmeister Scholarship for case writing on the topic of Innovation in Organisational Structures, Systems and Processes from the Centre for Organisational Studies, Barcelona.

The author's role was to research and document the two projects within St James's for use as case study teaching material. The investigative nature of the role and free access to different levels of management allowed an objective approach to be taken in assessing the

project as a whole, the level of success and its place specifically within the particular organisation as well as in a wider context of BPR's place in the public sector. Interest from these BPR projects broadened to include other NHS initiatives and more specifically its ease of transfer, in use, implementation and effectiveness within the public sector.

HISTORICAL CONTEXT

In the past, hospitals have been seen almost as a typical case of the professional organisation ₁ characterised by shifting professional segments - often autonomous of administration layers, or Mintzberg's professional form of organisation ₂ which arises when proficiency is the dominant force. What mattered in these forms of organisations used to be the drive to improve existing skills rather than inventing new ones or undergoing any form of change or innovation.

By the early 1980s the Griffiths Report ₃ prompted the introduction of general management techniques into the NHS, introduced line management from the private sector and fuelled the debate into generic vs sectorally specific management models. Given this and other top down efforts to remodel public sector institutions on a private sector framework of market orientation and competitive tendering, hospitals especially found themselves having to manage organisational, cultural and managerial change whilst meeting financial and performance targets. They also had to strike a balance between customers and stakeholders and cope with system constraints, organisational barriers and functional problems.

More recently pressures for public sector improvements have become almost as severe as in the private sector. Government driven changes in the UK Health Service have seen the development of an internal market for health care and the formation of NHS Trusts (see also Appendix 1). District Health Authorities now purchase health services from a variety of competing sources and provider organisations need to be more cost and quality conscious. Thus the public sector is having to take on some of the persona of the private sector by moving towards market orientation and financial accountability within a competitive environment.

The new language of the internal market (business management, customer care, quality assurance, market segmentation) clearly mimics that of the private sector and many see this as a challenge to deeper values and assumptions. Many public sector employees still defend "old" values (public service or professional) against the new values of business based market orientation - in itself a source of potential conflict and division. This culture change is by necessity a slow process if individuals are to learn the rhetoric of new values and adopt different beliefs. The public sector is also moving in focus from policy to strategy and these external and internal forces mean that radical change is being imposed upon the

health service, the speed of these changes may seem to be out of step with the time required to come to terms with these profound cultural changes.

By definition change will rarely unfold as planned, the process of change within an organisation refers to the actions, reactions and interactions of the various interested parties as they negotiate proposals for change. Each of the interested stakeholders may hold a different view of the process of change or as observed by Pettigrew et al ⁴,

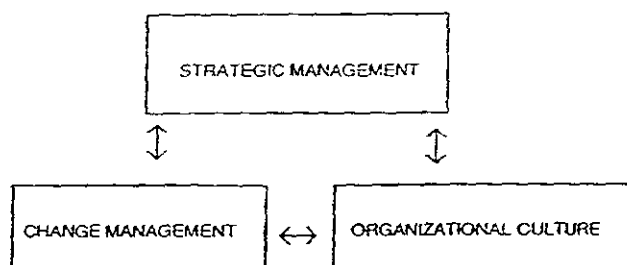
"the What of change is encapsulated under the label "content", much of the Why of change is derived from an analysis of "inner and outer context" and the How of change can be understood from an analysis of "process".

Thus, it quickly becomes apparent that the content, context and process of organisational change will vary with differing institutions. Public sector organisations differ as much as private sector ones and during the 1980s and early 1990s there have been many attempts at cross-fertilisation between the two sectors in terms of organisation and management theory.

Tom Peters ⁵ analysis of threats to US (private sector) business had four components, generic uncertainty of the global economic environment; rapidly changing technology; new competitors; and the changing tastes of purchasers of goods and services. The first two of these can indeed apply to the public sector as much as any other part of the economy, the third now also applies, especially to the NHS as instigated by Government changes. The fourth component could be open to debate regarding health care depending on who is considered to be the customer, patient, purchaser or even Government. Even so the NHS seems to fit Peter's chaotic environment and confirms the need for careful strategic management in the midst of cultural and organisational change.

As none of these elements can be considered in isolation it may be helpful to look at Newman's framework ⁶ which shows the importance of the inter-relationships between strategic management, change management and organisational culture. BPR can be both the driver of or be driven by any of these factors and Manuscript 14 will examine these three elements more closely in the context of the NHS to assess the impact on success or failure of such projects.

Relationship between strategic management, change management and organizational culture.



Most change management literature is predominantly concerned with the private sector (see however Common et al.,1992 7; Pettigrew et al.,1992 4; Pollit., 1990 8; and Harrison 1992 9) and there is extensive literature surrounding BPR, which it is not proposed to review here, but most books make no distinction between public and private sector organisational change. Even the HMSO publication BPR and the Public Sector 10 does not effectively highlight sectoral differences. The case work explored here and the examination of similar projects within the NHS is an attempt to address this issue.

BPR, essentially a private sector "tool", is an approach to bringing about, or facilitating, radical change. It is synonymous with radical transformation, often rejecting conventional thinking and can allow organisations to take new approaches to delivering business output. It is not downsizing, restructuring, automating, TQM, or continuous improvement, although all of these can be part of BPR. BPR can be undertaken by organisations in many ways, from incremental change at one end of the spectrum to complete organisational transformation at the other (see Manuscript 13 pg 18). Manuscript 14 will deal in more detail with the evolution of BPR.

Most organisations, regardless of sector, are strongly divided along departmental, functional and professional lines, involving different sets of values, cultures and practices. Issues of change management and changing organisational culture will be shown to be crucial to the success or failure of many BPR projects, and affect both public and private sector organisations - but the NHS has had to adjust to radical changes on a macro level whilst simultaneously seeking to improve their internal mechanisms. From this perspective it is perhaps clearer to see why the approach of BPR could be viewed with scepticism by many employees. Ginsberg 11 sums this up,

"The strengths of the forces for change have to be greater than the forces against change to get movement".

It is hoped that following examination of the two projects undertaken at St James's and others within the NHS, some questions regarding the use of BPR in the NHS can be addressed, such as,

- how transferable is BPR from private to public sector
- are the problems encountered inherently the same
- how important is organisational culture as a barrier or an enabler in such projects
- what lessons can be learned from other public sector organisations contemplating using BPR.

INTRODUCTION TO PROJECT A

St James's University Hospital in Leeds is one of the biggest teaching hospitals in Europe and one of the largest acute service units in the NHS. Granted Trust status in April 1991, it employs over 5000 people and sees 450,000 patients a year (see Industry Note in Appendix 1). Operating income from the internal market totalled £125.8 million (93/94) with 70% of the income coming from the contract with Leeds Healthcare. For 1994/95 the Trust has negotiated contracts with 12 Health Authorities and 130 GP Fundholders. St James's provides services both locally and to the wider Yorkshire community against the background of national, regional and local objectives and priorities required to meet the ever changing demand on services. In spite of increases in activity by the hospital, admissions and waiting lists are increasing, reflecting this increasing demand (see below).

	ADMISSIONS		
	1991/2	1992/93	1993/4
IN-PATIENT	17444	17198	15641
DAY CASES	16136	21893	27237
ACUTE	36459	37793	39490
WAITING LIST		8723	8820
TOTAL	70039	76884	82368

(acute admissions increased by 4.5%; day cases increased by 24.5% in 93/94)

Health Authorities want the best value for money service, best use of resources and high patient throughput. In addition the Government wants 2% more activity in the financial year 1994/95 plus a 1% cost improvement programme.

In view of the constraints and demands placed on the hospital and their commitment to improving both quality and value for money, in 1991 St James's began a collaboration with Lucas Engineering Systems Ltd (hereafter LES), the aerospace and automotive group. One approach to change management and BPR is the Systems Intervention Strategy (SIS)¹². This has a technological background and is better understood and more successfully applied by engineers and "hard" systems designers - a "hard" system will have well defined physical boundaries, for example, a manufacturing plant. SIS usually consists of three phases;

- i) Diagnosis. Describing and measuring the current system, identifying objectives and constraints and formulating alternatives.
- ii) Design. Generating and modelling options.
- iii) Implementation. Evaluating against measures, designing implementation strategies and carrying them through.

Because of their background in manufacturing and industry, this was very much the approach taken by LES, and the cross-fertilisation of ideas between the public and private sectors has proved just how many similarities there are, whatever the organisation.

Initial contact between St James's and LES was made during a Working Party on Electronic Data Interchange and the National Health Service. A member of St James's Supplies staff encountered work done by LES, who were keen to investigate the transferability to the public sector, of some of the techniques that have led to increased efficiency in car manufacturing plants. Lucas, a leader in such systems, had developed their methodologies during restructuring in the late 1980s and were now looking beyond the manufacturing sector.

After an initial meeting, good working relations were established and possibilities were discussed of transferring the methods used in industry, to within the hospital organisation in order to improve the efficiency of working processes. LES gave a presentation to St James's at Board level. This overview was not project specific, but did interest the Board enough for LES to be invited back to do a two day workshop for senior hospital managers. This would investigate possible areas for collaboration using the Lucas approach to the management of change (involving Business Process Redesign).

The aims were:-

- * to review LES redesign methodologies,
- * to discuss whether and how these principles could be applied to specific change projects at St James's and/or compliment current initiatives,
- * to discuss relevant case examples of the application of the methodologies in order to identify tangible benefits,
- * to make specific decisions on how to initiate the change programme.

Following the workshop, the Board gave the go-ahead for work with LES and proposals were invited from within the hospital, for possible projects. Careful selection was necessary since there had to be an element of cost saving to pay for the project, which would hopefully go on to generate revenue for St James's. There were also issues surrounding Trust Status (management changes); the Patients Charter (performance measurement); and customer care (quality) to consider.

Selection criteria were developed based around, the need to choose something with a good chance of success; something that would test the thesis that these systems could be transferred from industry; and was health related and financially viable.

It did not take long for a number of potential projects meeting these criteria to be identified. Both partners were learning from each other and whilst in most areas it did appear that manufacturing techniques for process change could be transferred, it was becoming apparent that there were to some extent a "separate set of rules" for the NHS. This was because of the nature of the organisation, internal and external constraints and the pace, extent and speed of change.

Two projects were identified with different objectives. A re-organisation of the Purchasing and Supplies function would hopefully meet the cost saving requirement (see Manuscript 13), whilst a re-appraisal of the admission procedure was more of a cross-functional experiment, but both involved systems investigation and a process approach. Thus the final decision was:-

PROJECT A - Elective admissions (not emergency)

PROJECT B - Purchasing and Supplies - Non pharmaceutical goods.

Two groups of hospital staff were selected (on voluntary secondment) to work full-time on the projects, it was made clear early on what the starting base was, what the aims were and why they were doing it.

The projects began with a weeks off-site training, in order for LES to familiarise St James's staff with the theories and methodologies to be used and for the teams to look at time scales and deadlines. There was a definite date for the projects to end, with well defined milestones, so both teams would have weekly progress meetings with their managers, plus presentations on findings and monthly meetings with the hospital's Director of Organisational Development.

Producing the hospital's Application for Trust Status acted as a catalyst for many changes and part of this involved spelling out how much and how far medical staff would become involved in hospital management. The 15 Clinical Directorates (similar to Business Units) evolved from this and the reorganisation covered all aspects of clinical activity at the hospital. Headed by clinicians, day to day management is undertaken by full-time Operations Managers (see organisational chart in Appendix 2).

Following project selection and staff training, specific process issues were refined in discussion with Clinical Directors. However, it is important to remember that St James's went into the exercise knowing what the particular process problems were but not knowing what the outcomes would be or how the process of change would evolve. Both projects represented a potential risk with large investments committed in time, money and people - and the hard work was just beginning.

PROJECT A - ELECTIVE ADMISSIONS

The main aim of this project was to streamline the patient admissions process. With the hospital in the midst of reforms this was something that had already been identified as needing attention.

As a teaching hospital providing services both locally and regionally, St James's admits patients acutely (through accident and emergency, via GPs or other hospitals) and electively (from GP and hospital referrals) primarily for cases placed on a waiting list in a surgical speciality. The NHS gives national guarantees of a maximum wait of 24 months for any procedure (18 months for hip and knee replacements and cataracts) and St James's aim is to achieve a maximum waiting time of 18 months for all conditions. Although working under cost constraints, St James's were already investigating ways to both cut waiting list time and reduce cancelled operations. There were a number of problems in the waiting list system, key concerns being:-

- * balance of admissions - beds required for elective surgery can often be occupied by other patients, notably overflowing from emergency admissions.
- * links between departments - the process is cross-functional and involves different **central functions**, outpatients, medical records, diagnostic departments, wards, theatres, admissions office etc. This leads to problems in the scheduling and tracking of information.
- * waiting list - waiting list management is critical, not least because of the political dimension.
- * contract delivery - the admission of elective cases is a key concern to the hospital's customers (Health Authorities, GPs and patients themselves) as the hospital is contracted to deliver set numbers of operations in any financial year.
- * quality - many quality issues are tied up in this system, eg cancellation rate, use of operating theatre resources etc. The requirement is for a smooth and efficient admissions system that would improve the service to patients.
- * internal concerns - the issue of elective admissions is a key concern to clinicians and staff within the Hospital, particularly the surgeons.

PROJECT OBJECTIVES

The team developed project objectives which enabled them to decide which aspects of the admissions function to focus on, in order;-

- to improve the process for planned admissions,
- to reduce the steps necessary to procure an admission,
- to ensure that planned admissions are not cancelled,
- to improve communications,
- to make sure the hospital satisfies the internal market and delivers to contract,
- to maximise the effective use of hospital resources.

Maximising resource use should result in reduced waiting list times, improved customer satisfaction and speed of throughput. The project was to be revenue neutral with the aim not to save money, but to improve the quality of service to patients by cutting down on cancelled admissions and operations. Dismantling the central admissions function in order to change the system hospital wide was impossible, so it was decided to focus initially on one department (Urology) of one Directorate (General Surgery). This Clinical Director was in favour of changes and agreeable to taking the next steps, the Operations Manager was a key player but was not part of the task force as such.

The project team consisted of:-

- a full-time leader (a Nursing Sister)
- 3 full-time members of St James's staff (*medical records, theatre and path labs*)
- 2 Lucas engineers,

They were allocated a Seminar room off the Urology ward for 3 months and worked under considerable time pressure.

One early recommendation of the project team was that all Urology patients should be co-located onto a single ward, rather than be split over two. This was actually achieved during the project which had acted as a catalyst, but was initiated by the Operations Manager as a separate issue. Previously, Urology patients had been located on two different wards (Wards 8 and 14) - one for 5 day Urology patients (with patients from other surgical specialities) and one for the main 7 day acute patients plus 14 day Oncology patients. A single ward (14) was set up prior to implementation of the main project. This was moved to Lincoln Wing, which would also house the new "Natural Group" (Consultants secretaries and administration staff) as well as all Urology patients in -

- 8 x 5 day beds and approx 20 x 7 or more day beds.

One early problem was over measurement and evaluation - what and how to measure, in order to test whether things did in fact improve. A paradox emerged - the "better you are the worse you get", since making the hospital more efficient brings waiting lists down, this in turn leads to more referrals, more patients, therefore longer waiting lists. Eventually the proposed measurements were; length of patient stay; theatre utilisation; and cancelled operations (both before and after admission). For example in 1991 - 585 patients were admitted to the Urology ward - 12% of these had their operations cancelled after admission (no available theatre time) plus a further 300 were cancelled before admission.

As a result up to one-third of patients for non-urgent surgery found their appointments/operations were being cancelled. During the Diagnosis Phase, the team discovered that one of the reasons for this was that between a consultant saying a person needed an operation and their arriving at the operating theatre, responsibility for each patient changed hands 59 times as it passed through 10 departments!

The team endeavoured to find their way through this maze of handovers and found that one of the main reasons for cancellations under the old system was that no bed became available at the last minute, due to a lack of communication between admissions and theatre scheduling. Admissions were sending for twice as many patients as they could cope with as around 50% would be cancelled or unable to come in. The project team aimed to improve these figures by investigating process changes and they began work on a three phase project:-

PHASE 1. DIAGNOSIS (approx 6 weeks)

The project team were conscious all the time of having to work within the Patient's Charter, ie they had to make sure that the hospital continued to perform within certain guaranteed measures such as the maximum waiting list time. Bearing this in mind, the admissions process as it stood had to be identified. Elective admissions only were investigated, as this was the only case with control over numbers. Details of the present system and operational objectives were studied and the team drafted many questions and interviewed relevant managers and staff in order to plot current processes and identify constraints and problem areas. For example, many GPs referred only to specific consultants (for various reasons) and this resulted in persistent over and underloading. There were also several versions of the waiting list, one in central admissions, the consultants own list and the Urology department's - the link being the consultant's secretary.

Processes were mapped and handover points identified (see Appendix 3), the team now had a grasp of what the problem areas were and ideas on how to tackle them. They reported

back to the Clinical Director and St James's management with their ideas on the way forward.

PHASE 2. DESIGN

Having collected interview and statistical data, including what benchmarks they could, the team worked their ideas into a detailed proposal. With key issues identified and recommendations made for the areas to be addressed, they could now begin the task of designing new processes.

The aim was for a more efficient use of two major resources - beds and theatres. The new processes would involve planning ward admissions in parallel with the planning of operation theatre bookings. This had never happened before. Previously someone would look at the empty beds for the next day, say 6, and send for maybe 10 patients. Not all would be able to come in and some would be cancelled, there was no communication or co-ordination with theatre operating slots before admission. The team hoped to arrive at a new process which would allow for co-ordination between these two departments.

The recommendation to be looked at in detail is the formation of a "Natural Group" for Urology admissions. This would establish a self-contained admissions process for the Urology Department with the Group controlling their own outpatients, admissions and ward processes. This was based on LES's previous experience of forming "cells" or groups in manufacturing, to operate new systems. By physically removing sufficient resource (individuals, raw materials etc) they became generic to the system rather than purely functional - in this case, they would become the Urology Admissions Natural Group.

Previously Urology's admissions had been administered by the relevant central functions eg central admissions, outpatients and theatre. Within the admissions office Urology had been the responsibility of a member of staff dealing with all kinds of general surgery admissions. The formation of a Natural Group meant that members of staff had to be moved (physically) from their existing posts to new locations. This led to much negotiation over changing roles, both for them and for those remaining within the central function; hours, responsibilities etc.

The Natural Group concept was accepted by the Clinical Director who already wanted to overcome existing barriers, but other managers (mainly administration) identified a number of implementation difficulties. For example, over contract information - within the central functions all information is gathered in one place for invoicing etc, this could pose problems if it was to become spread over the Directorates.

However, it was hoped that the formation of this Natural Group, which would concentrate on the process as a whole rather than on individual functions, would fulfil the main aims of the project: shorter waiting list time; shorter stay on wards; fewer cancelled operations.

PHASE 3. IMPLEMENTATION

Implementation of the recommendations took another 3 months, with one member of the project team (from St James's) on hand full-time to advise during the overlap period. The Natural Group was to be located in the Urology block next to the ward, and would consist of:-

- an Office Manager
- 3 medical secretaries (including the consultants secretary)
- 2 Urology specific admissions/clinic clerks (relocated from central admissions and outpatients).

Their training was based on the Lucas 5* plan (again adapted from industry) which designs individual training schedules and helps develop multiskilling for new team members. New processes were identified to eliminate handoff points (see Appendix 3). This involved constant negotiations with the central functions, the changing of individual job responsibilities and close liaising with all process managers (who had previously dealt only with central functions). Measurements for data collection were put into place so that performance could be monitored.

Changeover took place on 2 September 1992, when all patients to the Urology ward were admitted under the new system with new jobs, processes and responsibilities. From this date the Natural Group controlled all Urology admissions, ie keeping records; planning operations; ensuring theatre and bed availability; calling patients in. The 59 handover points were reduced to 20 and by November 1992, only 11 out of 326 operations were cancelled on the day (3%). The aim was still for continuous improvement.

So within the boundaries set, the redesigned procedures for Urology admissions were successful and have had tangible benefits. This part of the system has been "undone" to such an extent that going back to the old procedure is not an option - the point had been reached for decisions to be made on the next step:

- * to stay where they were (new systems in place in one area only).....or
- * rollout the new system within the whole admissions function.....or
- * rollout the new system within the Directorate including Urology.....or
- * investigate other areas within the hospital that could be tackled in the same way, ie initiate new projects using the expertise gained by the teams.

PROBLEMS ENCOUNTERED IN RUNNING/IMPLEMENTING THE ADMISSIONS PROJECT

During and following implementation of the new processes, several issues were identified that had caused problems or delays. These form important learning points for other organisations undergoing similar projects and do not appear to be public sector specific.

1. INFORMATION

The initial brief was to improve the admissions process. The team firstly had to define all processes in order to set realistic targets, they had to have a basic understanding of what the problems were. Therefore initial benchmarking and gathering of information (ie numbers of cancelled admissions/operations) was essential. However, it proved very difficult to obtain accurate information with regard to patient activity, most numbers had to be obtained by manual extraction from informal sources such as Ward sister's registers/diaries, secretary's notes or by word of mouth.

Maintaining the gathering of figures/statistics post-implementation became another problem area. The new team became so involved in the day to day running of the new system that this often got overlooked.

The monitoring systems set up were not robust enough, when difficulties became apparent operationally (over staffing post-implementation) - self-monitoring was the first thing to suffer giving rise to problems over measurement and evaluation.

LESSON - Continuous benchmarking (both before and after) could have been done better.

2. COMMUNICATION

Senior managers of all processes encompassed by the project were involved early on, but there needed to be closer interaction with middle managers who also perceived themselves to be directly affected. Employees below line manager level - those who would actually be implementing the new systems - should have been included in the planning process.

This is a real chicken and egg situation, an initial team looks at the issues - but until these are identified it is not apparent whether the right people are on the team to tackle these problems.

- so, after problem analysis do you disband the team, and begin again with another team comprised of those more directly affected,

- or proceed with the existing team who have done all the hard work in identifying the problem areas but may not be the best people to arrive at solutions?

Once problem areas have been identified it is necessary to try to make time to decide who else needs to be involved - at all levels.

Even at the implementation stage there was still a basic lack of understanding of the project by other staff - directly and indirectly involved, even though the team had tried very hard to involve others (eg by newsletter). Basically those not directly affected had no real interest or understanding of the new processes/systems, the reasons behind them, or why things were changing.

LESSON - more involvement for the "coal face workers" - below line management level, who were not consulted early enough. The workers themselves were only really included at implementation stage rather than at the design stage. They were not deliberately excluded, it was more because;- "You don't know who is involved in a solution until you have defined the problem". Director of Operations.

3. TIMING AND TRAINING

There were deferrals of schedule due to non-fulfilment of agreements by others, especially over IT delay on the PAS installation (Patient Admissions System) in Lincoln Wing. The linking of this network system to the central function was essential and its delayed installation meant that members of the Natural Group were not as fully trained on the system as they should have been at implementation.

Failure to release staff from existing commitments to retrain was another problem area. Agreements were made with the relevant managers but often abandoned due to more immediate staffing problems or a compromise of service provision.

- LESSONS -
- i) Guaranteed retraining time before implementation.
 - ii) More input was needed from the whole project team during implementation. It was not feasible or sufficient for one team member to remain to cover all aspects of the changeover and make running alterations when necessary. Ideally the whole team should have been on hand during this period to oversee the Natural Group's take up of the new systems.
 - iii) Better co-ordination of IT.

4. DEVOLUTION

Reaction to the project ranged from inertia to "How can we do that?". The initial success of the new Admissions system showed what was possible and soon generated enthusiasm. With rollout to other departments planned but not actioned others saw the success of the pilot and began to "cherry pick"; ie;

- devolution of plastic surgery outpatients,
- devolution of paediatric outpatients,
- establishment of an admissions office in Beckett Wing.

But it is not possible to "dabble" in BPR, it merely complicates the issues - since processes were not being redesigned but were running in parallel and thus did not add any value. With departments beginning to alter their processes without the rigour of BPR training or process analysis it became necessary to inhibit people from taking short cuts and control unmanaged devolution.

PARADOX - too many projects only serve to complicate the system that they set out to simplify.

"It is not possible to create and sustain service excellence without fundamentally re-designing operational processes." Project Excellence, Leicester Royal Infirmary 1994.

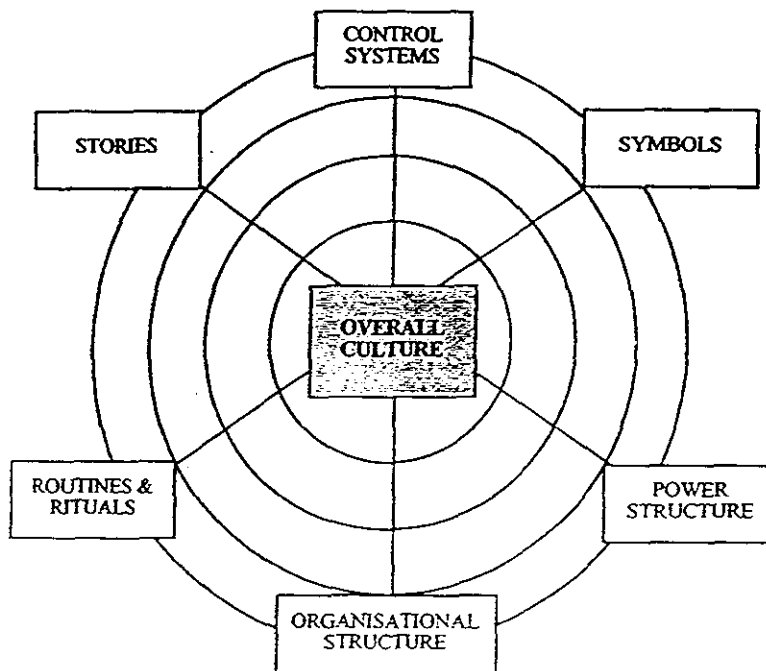
5. CULTURE

One important aspect of managing change is the changing culture of the organisation. In common with other public sector organisations, close inspection of systems and work processes will often reveal a mismatch of culture and management styles. The NHS for example had evolved established working practices based on years of operating in a stable environment. It exhibits some of the classic symptoms of large and ageing organisations as described by Mintzberg ¹³ eg "the older the organisation, the more formalised its behaviour".

As with any mismatch, one or both must change if the organisation is to move forward in a co-ordinated way. Managing the key issues of cultural change is essential for the development of new values and priorities. The Industry Note in Appendix 1 outlines the drivers for this cultural change, Appendix 4 shows some of the other forces (internal and external) at work within the NHS and Manuscript 14 will further explore the changing organisational culture of the NHS.

Figure 1 (overleaf) shows the Cultural Web ¹⁴ which illustrates the importance of organisational culture and its impact on change management outcomes.

FIGURE 1



Source: Boyett, I & Finlay, D.

Addressing the various strands of this web, facilitates a comparison of the old with the new, for example, within Organisational Structure the following parallels can be drawn;-

OLD	NEW
Low morale	Improved staff morale and enthusiasm
Established systems	Move to new processes and systems
Unapproachable and hidden management	Open management style
Traditional hierarchical structure	Flatter organisational structure

The culture of the NHS is trying to move from "command" to "demand" (Oakley and Greaves 15) from the command style of centralised bureaucracy to the demand led style of a more consumer responsive service industry. BPR addresses this issue of organisational culture, as by definition it is about radical change, when managed well there should be a series of positive cultural outcomes, eg;

- removal of inertia and resistance to change,
- raising of staff morale and motivation,
- idea generation at all levels,
- aim for continual improvement in performance.

This last point shows that the whole process must be ongoing, it cannot stop at the end of a BPR project.

6. THE MANAGEMENT OF CHANGE

This is without doubt the most important area of difficulty and one that must be tackled as an integral part of any BPR project. Earl and Khan ¹⁶ stress that "Business Process Redesign is intimately bound up with change management".

Anxiety over a BPR pilot, especially within the public sector, has to be seen within the context of the massive changes already taking place in the NHS (re Trust status, government requirements, mergers etc). Thus, the management of change is fundamental.

A BPR project was just something else to worry about for most managers and it should be remembered that management styles could be very different pre-Trust and post-Trust. Post-Trust many levels of NHS managers were suddenly expected to have acquired business/entrepreneurial skills, and expectations altered as changes were imposed. New managers coming in at this time knew what they had to achieve but the changes did pose problems for existing staff who had to cope with rapid change being imposed upon them - initially with little training. A certain amount of resistance to change is perceived as normal and expected - this is very individual, some people will always be keen to move on to new things whilst others will resist. Individuals have different attitudes to change based upon their social interactions, what has gone before (experiences), and the nature of the change itself. These all converge to produce an attitude to change - giving an individual response. But with BPR projects working to deadlines and budgets, it is very difficult to take all this into account in the time available, they are rarely able to allow for overviews and discussions over fears, threats, attitudes etc.

If BPR is to be implemented successfully it must involve managing the change process. Literature on this area stresses ¹²; the importance of involvement in decision making, consensus for the decisions made, and commitment to the actions resulting amongst those affected by the change.

With the staff at St James's "I do it this way because its always been done this way" was a common attitude and illustrates resistance to change. Most people could see nothing wrong with the way they did things, this led to a negative attitude amongst staff which had to be overcome - the "it will never work" syndrome. Some senior managers knew of previous projects try to change or improve things which had been abandoned part way through, leaving a mess and some had experience of similar projects in other hospitals which had failed. The result was a lack of respect for the project - it was seen as a flash in the pan.

LESSON - Constant review and communication is the ideal, management of the WHOLE process.

BARRIERS TO ROLLOUT

With the project's recommendations successfully implemented in Urology (just one department of one Directorate - General Surgery) the next logical step seemed to be to expand the new system within that Directorate. One of team's final proposals was that the new system should be used as a model and rolled-out to other departments.

This was a very difficult decision point for the organisation. The rollout plan was not implemented, since even though it worked for Urology, it could not be assumed that it would be transferable to other departments. Other Clinical Directors were keen, as it put the whole process in one room with more control, but there were worries that the standard of performance could vary between departments and of problems surrounding the removal and collation of information from the central functions, for the preparation of invoices in order to get paid.

Complete rollout of the new system, would in effect mean dismantling the central admissions function, and this would be too radical a move. Many people were already having to change their perception of how and where they fitted into the organisation.

Following BPR (and to some extent other changes taking place) they would need to focus on the patient (product) and see themselves as part of a process, the end result being the successful admission of a patient for an operation - instead of, for example, their loyalty being to the smooth running of a particular function eg medical records. There would have to be a change of loyalty from being function focussed to becoming product/customer focussed (ie part of a team). Slevin and Colvin ¹⁷ outline differences in these two organisational approaches in Figure 2 below.

FIGURE 2

ELEMENT	FUNCTIONAL APPROACH	PROCESS APPROACH
Channels of communication	Highly structured, controlled information flows.	Open, free flow of information
Operations	Uniform and restricted	Vary from business unit to business unit.
Authority for decisions	Taken within formal line-management position.	Taken by empowered individuals with relevant expertise.
Adaptability	Slow and reluctant, even when circumstances require change.	Changes as needed in line with continuous improvement.
Work emphasis	Formal procedures handed down	Devise own effective processes.
Control	Tight, through strict formal systems.	Devise own measurements in line with fulfilling process role.
Behaviour	Contained by need to follow job description.	Role and responsibilities evolve to meet needs of process.
Participation	Very little - information is handed up, decisions down.	Team working with co-operation between teams.
	COMMANDS AND CONTROLS	EMPOWERS, ENABLES, MOTIVATES

There was also the problem of space, ie accommodation for co-locating admin teams onto wards was very limited. More Natural Groups would mean more space required near to the relevant wards and on a crowded campus with mainly older hospital buildings like St James's, this would prove a limiting factor. Although top management were enthusiastic, financial and resource implications (human and physical) were proving difficult to work through. Not all Directorates had "neat" divisions which would facilitate a Natural Group set up.

Moving everything out to Directorates would not be workable since it would mean a loss of overall control and no central holding of information. For example, part of the central function would have to remain to cope with acute/emergency admissions for all departments. The fact that the Urology Natural Group could be moved to a self-contained area was one of the reasons that the new system worked.

WHAT IS THE CURRENT STATUS OF THE PROJECT

Were the aims met?

There are still difficulties over evaluation in order to know this. Most problems will never be apparent until a new system is up and running and addressing these implementation problems takes the focus from evaluating how successful the project has been/is being.

The two projects examined (see also Manuscript 13 Purchasing and Supplies) had a very different feel, even though they were within the same organisation (thus the same culture) and both had LES as the adviser. Project B is ongoing and very successful, with almost all hospital purchases being made under the new system.

The admissions project, however, has not been universally accepted and there is some diversion of opinion. It appears to be working in theory but not in practice. Some would say that it is operating successfully as the Urology Natural Group and early figures point to a fall in cancelled admissions and operations. But others, including members of the original project team are concerned that the original aims have been lost, due mainly to staff changes and lack of a team leader at a crucial stage.

The Group leader left very shortly after implementation and was not replaced for a considerable time. This led to problems over correct waiting list management, booked operations and collection of statistics. There is now a new Office Manager, all the secretaries, except one, have changed and one of the admin clerks has been seconded to Seacroft, so a different team is now in place, without the background of how and why the changes were instigated.

One of the benefits of re-engineering is that it creates teams of staff built around a common purpose, instead of isolated departments working to their own agendas. Putting together multi-disciplinary, multi-skilled teams can be highly effective but is in itself a risk, since loss of those staff means a lack of commitment from new people and demotivation from those that remain. The loss of team identity was very important for this project - when staff changes took place (post implementation), new staff, who had not played any part in the change from "old" procedures to the "new", did appear to be less committed to the project. This appears to be a contributory factor, important to the success or failure of BPR projects.

Following a period of early success, few of the original intentions are still working - there is little parallel bed/theatre planning and patients are still being cancelled. The waiting list has regressed, due to neglect.

Work suffers during absences because multi-skilling has not been achieved ie ward returns are left for days if the person concerned is off work. From central admissions's perspective it appears not to be working as it was hoped, there is little real benefit to be seen, ward returns are no better than any other departments, sometimes worse, they are behind in collating information and are haphazard on acute admissions.

Communication with the central functions is not good. There is a perceived danger of "fragmenting back" to the old ways and this would be seen as a self-fulfilling prophecy to those who doubted it could be done.

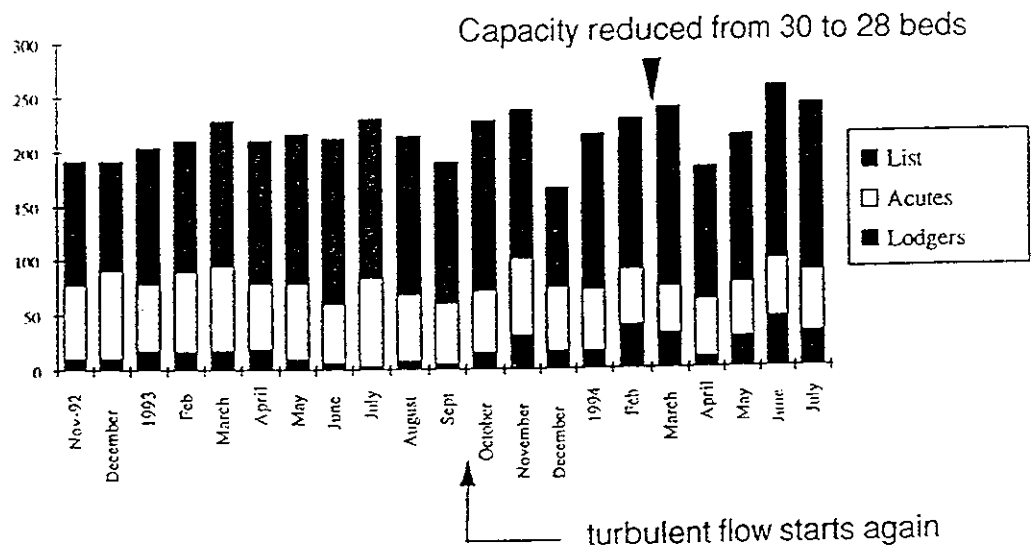
The root cause of this would seem to be staff changes, new team members had no sense of "history" as to why and how the changes were taking place. Many of the systems put in place were not robust enough to withstand such (staff) changes (ie benchmarks and "movement of patient" numbers were not collected due to the long absence of a manager). It is difficult to know how far multiskilling was part of the training programme for new staff, ideally this should have led to team members covering for each other and overcoming the information and communication problems.

Two other problems have again become apparent;-

- a) Outpatient Clinic management. The balance between old patients and new referrals is not being correctly managed and waiting time has gone up from 5 weeks (31/12/92) to 12 weeks (31/12/94) for a new appointment. It is difficult to isolate how far this is a process problem against a natural increase in patient numbers, but the feeling is that again the system is slipping.

b) Problems over lodgers on the Urology ward. If an acute surgical admission needs a bed and there is one on the Urology ward then it is given. This means that in turn there are less beds for Urology admissions (booked or acute) who become lodgers on other wards, this then affects the Urology waiting list. In order to overcome this, it is necessary from time to time to "ring fence" Ward 14, ie to move long waiters in order to comply with the Patients Charter. Figure 3 shows numbers and types of patients admitted to the Urology ward from 1992.

FIGURE 3 Breakdown of types of Patients admitted to the Urology Ward.



Source: St James's Hospital.

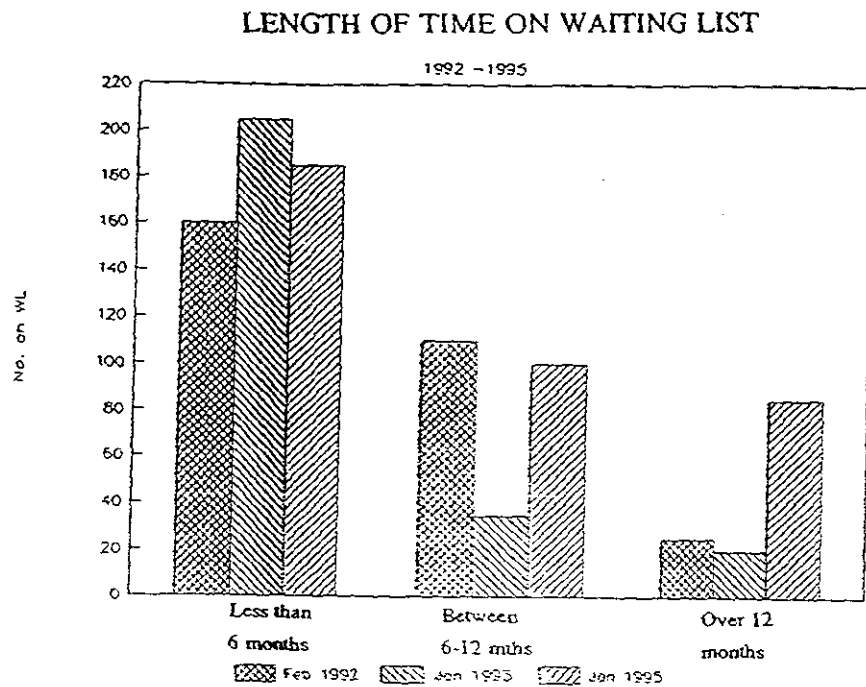
Data collected at ward level shows the improved throughput of Urology patients from the waiting list. However in the Autumn 1993 the flow became turbulent. A bottle-neck appeared in the system with an increase in patients admitted to this ward from other clinical specialities.

Waiting list admissions were affected by acutes, or emergencies (which are never predictable) and these lodgers - with slower and less predictable flow rates these were in effect "blocking Urology beds". As early as December 1992 the team had begun to lose control of the flow in the ward, Urology lodgers peaked in March 1994 and June 1994. This could be for various reasons:-

- the demand for beds was due to poor management on other wards,
- an increase in patient numbers,
- Urology Group staff changes meant that the new system was not working.

Whatever the reason, and not enough data is available to be certain, waiting list time was affected. Figure 4 overleaf shows a marked increase in the length of wait in 1995 but again this could be due to increased patient numbers.

FIGURE 4



Source: St James Hospital

It would seem that an impasse had been reached - the new admissions system has not been rolled out - due to a perceived loss of control plus the reasons outlined above. But devolution could not be allowed to take on its own momentum as it would lead to fragmentation. Thus, St James has decided to take a new approach. They are to investigate the application of principles learnt from the project to other opportunities as they arise.

The aim is for a process manual (a set of written model procedures) which will be used to audit practices in all clinical areas, in order to investigate what is actually being done against standards required by the hospital. All departments, wards and clinics will have their processes looked at against these models and fixed points and targets will be set (with some flexibility). It should pinpoint areas/opportunities for change, identify mismatches and suggest future action (if any). One Directorate has agreed to act as pilot.

Although this does not take such a radical approach as the Urology project, it is a very real attempt to change things for the right reasons, build on what has been learnt and use the enthusiasm generated internally to eliminate non-value added activities in order to get the basics right.

LUCAS AUDIT

LES returned to audit the project during Autumn 1994. The following three sections are their views as distinct from problem areas identified by the author and St James's staff.

a) The significance of the Urology Admissions Project.

It unravelled elective Urology patients from the centralised admissions system so that:-

- * the flow of patients followed the Urology clinical pathway not the bureaucratic pathways
- * it gave ownership and control to those involved in the care and treatment, not to those unconnected with the patients
- * it allowed the Urology team to monitor and control their own clinical and managerial performance with up to date information,
- * it allowed the Urology team to provide senior management with the information they required regarding contracts and budgets.

b) Negative effects of the Project.

- * Increased throughput of patients caused increased work for the ward staff.
- * Problems over management of acute admissions from other specialities, no protected beds for Urology cases.
- * Alienation of Urology staff particularly at ward, clerical and secretarial level by central admissions and records staff.
- * No office manager in Urology meant that there was no impetus for the positive aspects of the project to be kept going, processes began to slide back to "the bad old ways".

c) How could the Project have been improved?

- * Slow start as LES needed to understand the medical processes involved - it would have been helpful to have a doctor on the team.
- * It took a long time for those actually doing the work (secretaries, clerks, nurses) to become involved. Lots of talk generated lots of anxiety and a lack of commitment.
- * Delays caused misunderstandings at senior management level.
- * Previous focus on "cost reduction" obscured the "value for money" initiative of the projects.
- * Cost implications for multiskilling (ie training and IT) were ignored and implementation was delayed as a result.
- * Poor information from centralised collection of data resulted in confusion. Senior management feared loss of control if the project was rolled out.
- * Loss of momentum through delays and misunderstandings prevented rollout, despite the tangible potential benefits.
- * The project should have been audited earlier.

Most of these areas had already been identified prior to the LES audit in September 1994.

NB. It was noted that at no point did there appear to be any reference to obtaining patient feedback on the new system; their perceptions of an improved service; ways to further improve the process. Other projects have shown that there is much to be gained by talking to the end users directly. This could have been done by random interviews, short questionnaires or focus/discussion groups.

SUMMARY

Since this has been an illustration of a specific project it is only possible to summarise accordingly, Figure 5 shows it's objectives and achievements, as well as what remains to be done.

FIGURE 5

REVIEW OF LUCAS PROJECT - PROJECT A

OBJECTIVE	ACTION ACHIEVED	ACTION TO BE TAKEN
Reduce steps necessary to procure an admission	Formed Natural Group and reduced steps in process from 59 to 20	Further clarification on mechanism for central information flow and monitoring
Improve efficiency of processes	Significant evidence from medical, nursing and clerical staff of clarified roles and simplified processes	Continual training and induction for new staff. ?? patient survey
Ensure planned cases are not cancelled	Reduction in cancellation rate from 42% to 8%.	Continuous improvement
Improve communications	Evidence from staff of improvement in new processes (initially?)	Continuous improvement
Maximise use of resources	Evidence of increased activity within current resources.	Continuous improvement
Deliver to surgical contract	Overachieved for Out-Patients, In-patients and day cases.	Continued improvement in performance levels.

Source: St James's Hospital

Finally these quotes seem to sum up the projects;-

"I believe that the Lucas Project was the most significant thing to have been done at this hospital for years".

"The Lucas Project was brilliant. Even though I had my doubts about it in the beginning, now I have seen the effects....it gave us control over what we were trying to do for the patients".

Even though there were teething problems and difficulties it would seem that St James's will continue to use many of the ideas generated in this collaboration for years to come and there can be little doubt that those involved have found the whole exercise a valuable learning experience.

Manuscript 13 examines Project B - the rationalisation of Purchasing and Supplies. As outlined in the introduction to this paper Manuscript 14 will track other BPR projects within the NHS, investigate the transferability from private to public sector and attempt to answer the questions posed on page 4.

APPENDIX 1

INDUSTRY NOTE

The 1979 election victory by the Conservative Party in the UK has had a profound impact upon the structure and culture of public sector organisations. Many profitable state industries were privatised whilst a new strategy was adopted for public sector services (previously run around the welfare ethos) based on the creation of "internal markets"; budgetary devolution and competitive tendering (internal and external). These new markets are best illustrated by the health and education sectors and the UK public sector is now characterised by a competitive contract system and devolved responsibility for performance at individual business unit level (hospital, Health Authority, school).

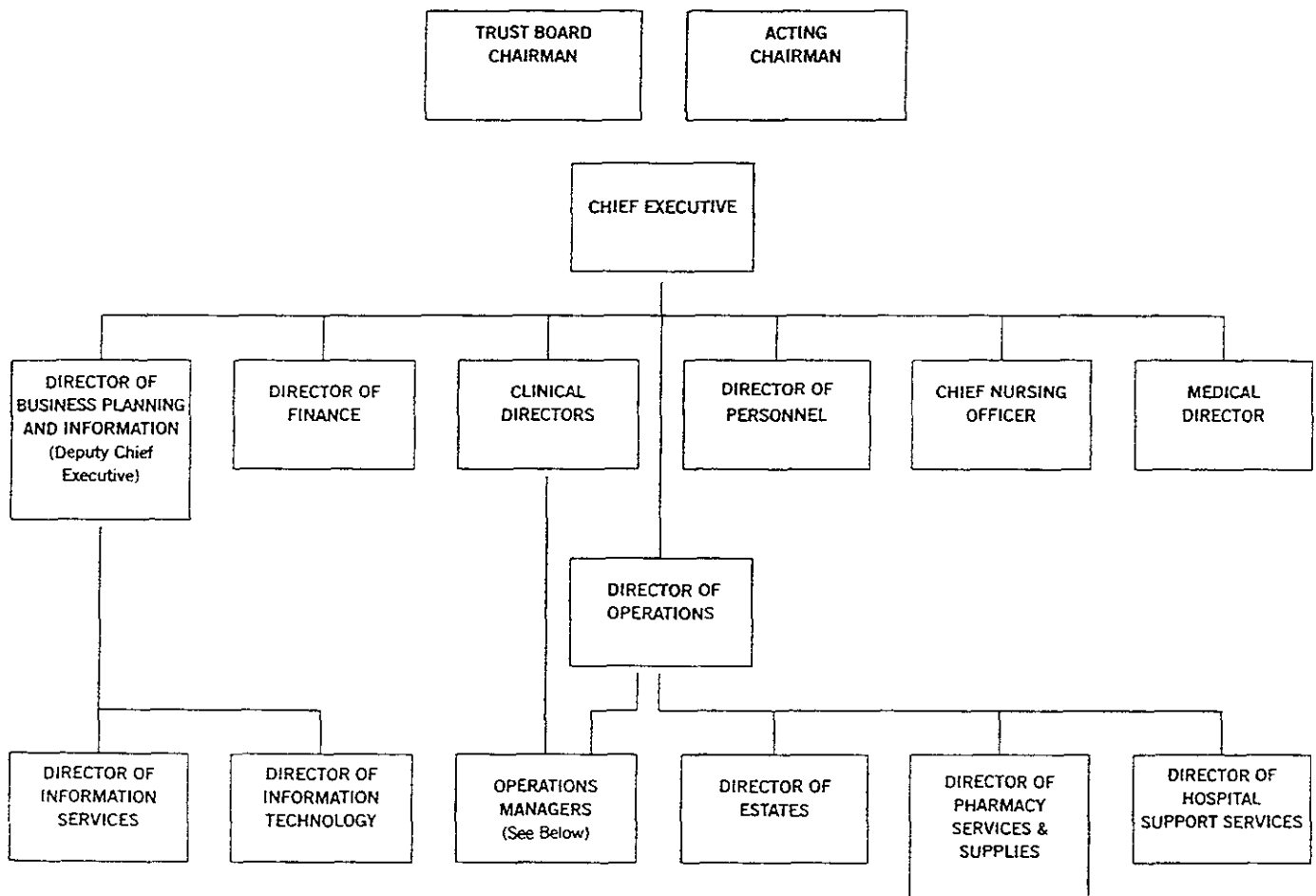
The State remains the primary source of funding, thus the UK Government gives Local/Regional Health Authorities funds to purchase or commission health care on behalf of their population. Health Authorities then commission hospitals or Trusts to fulfil a series of contracts, delivering set amounts of operations/admissions over a given time, eg 1993 St James's was contracted by Leeds HA to provide 4695 in-patient episodes of general surgery, a set number of maternity deliveries etc.

Local Health Authorities are the customers and patients are seen both as customers and the "products" of the system. The waiting list represents the order book - and the objective is "order fulfilment" - a successful admission and operation for patient, giving customer satisfaction and fulfilling contractual obligations for the LHA. Therefore, since processes influence the order book, if they are not carried out correctly or efficiently, people could go and buy the "product" elsewhere. The hospital needs to ensure that its processes are as effective as possible so that all customers (General Practitioners, Health Authorities and patients) are happy with the product.

It is important to remember this background, especially the funding implications (which are fairly new to the NHS) when considering this case. The modern NHS, like all other businesses, has many financial constraints; income generation, budget performance, return on assets and contract targets (see example overleaf). It must also strike a balance between its customers and other stakeholders. Over the past 4 years the organisation has had to undergo major changes in moving towards market orientation. Project B as outlined in the case, sits more easily into this culture, since the hospital still needs to be able to gather and collate information for contracts and costs, this would be impossible if the central functions were dismantled. Projects such as A, if it were extended, would fragment the organisation and information for purchasers, patients and Local Health Authorities would be spread over up to 15 Directorates. This was not a potential problem for Project B and may have contributed to its success.

ST JAMES'S UNIVERSITY HOSPITAL TRUST

Corporate Management Structure July 1994



CLINICAL DIRECTORS

- Accident & Emergency
- Anaesthetics
- Children's Services
- Elderly Services
- General Medicine
- General Surgery
- Intensive Care
- Orthopaedic Surgery
- Pathology
- Radiology
- Renal Services
- Plastic Surgery
- Special Surgery
- Theatres
- Women's Services

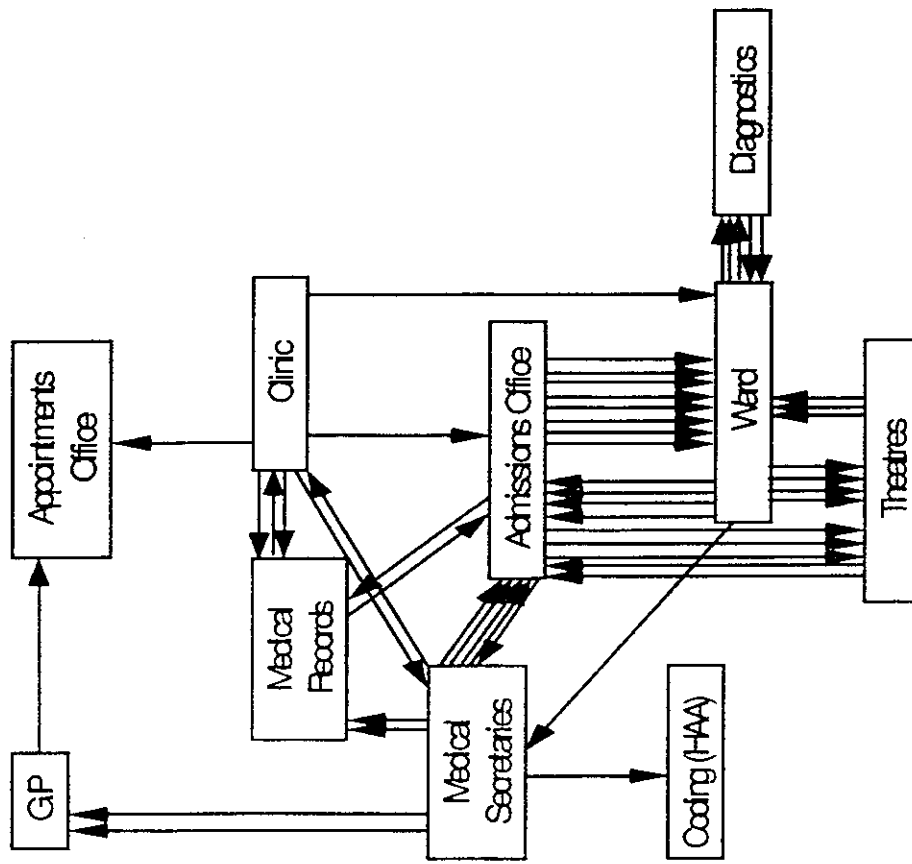
OPERATIONS MANAGERS

- Children's Services
- Elderly Services
- General Surgery
- Medical Services
- Operating Theatres
- Renal Services
- Special Surgical Services
- Women's Services

Admissions Natural Group

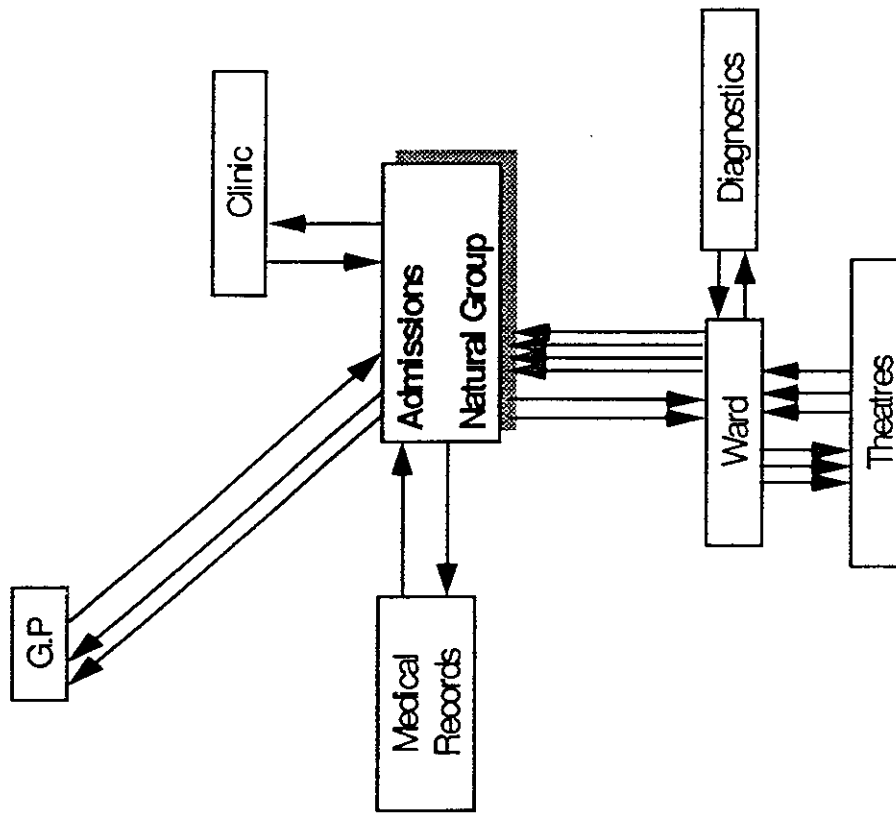
ORIGINAL ADMISSIONS PROCESS

(59 Changes of Ownership)

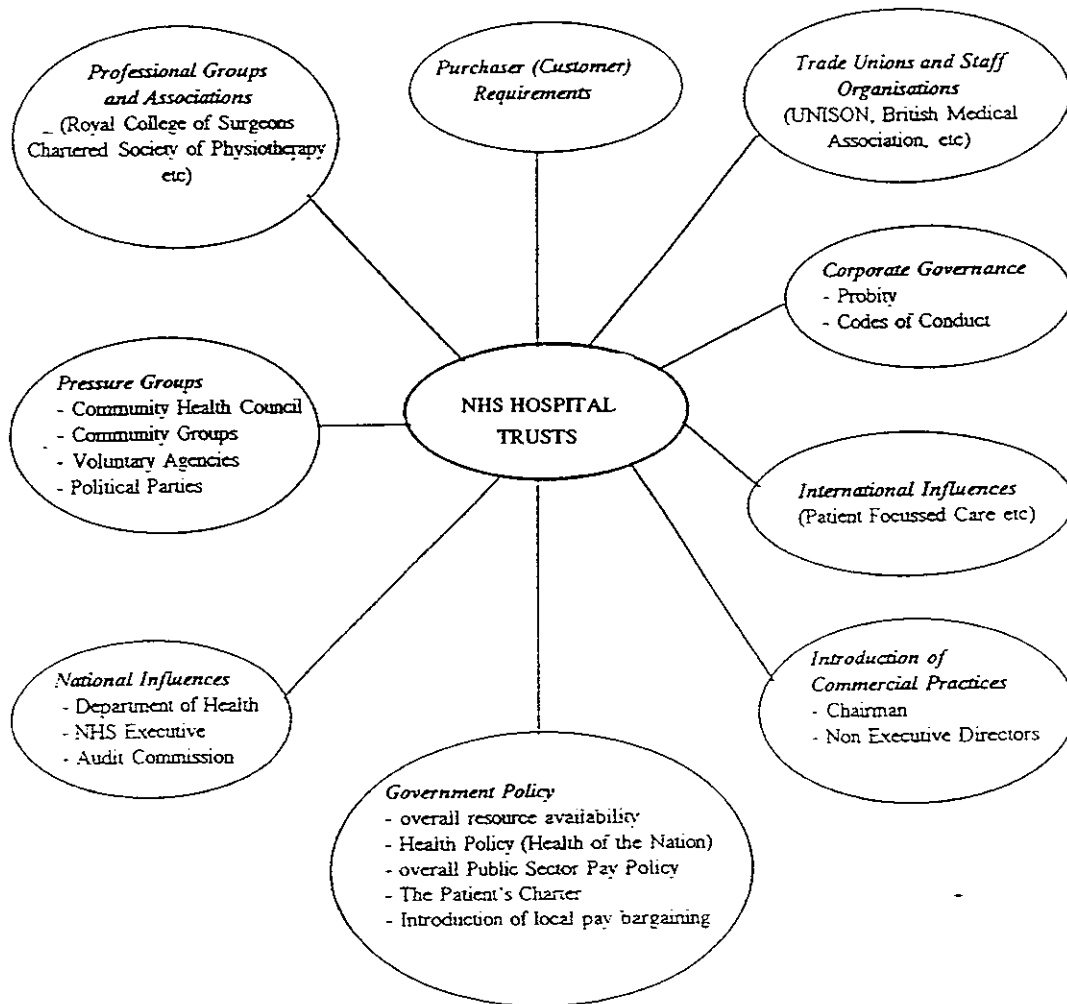


PROPOSED ADMISSIONS PROCESS

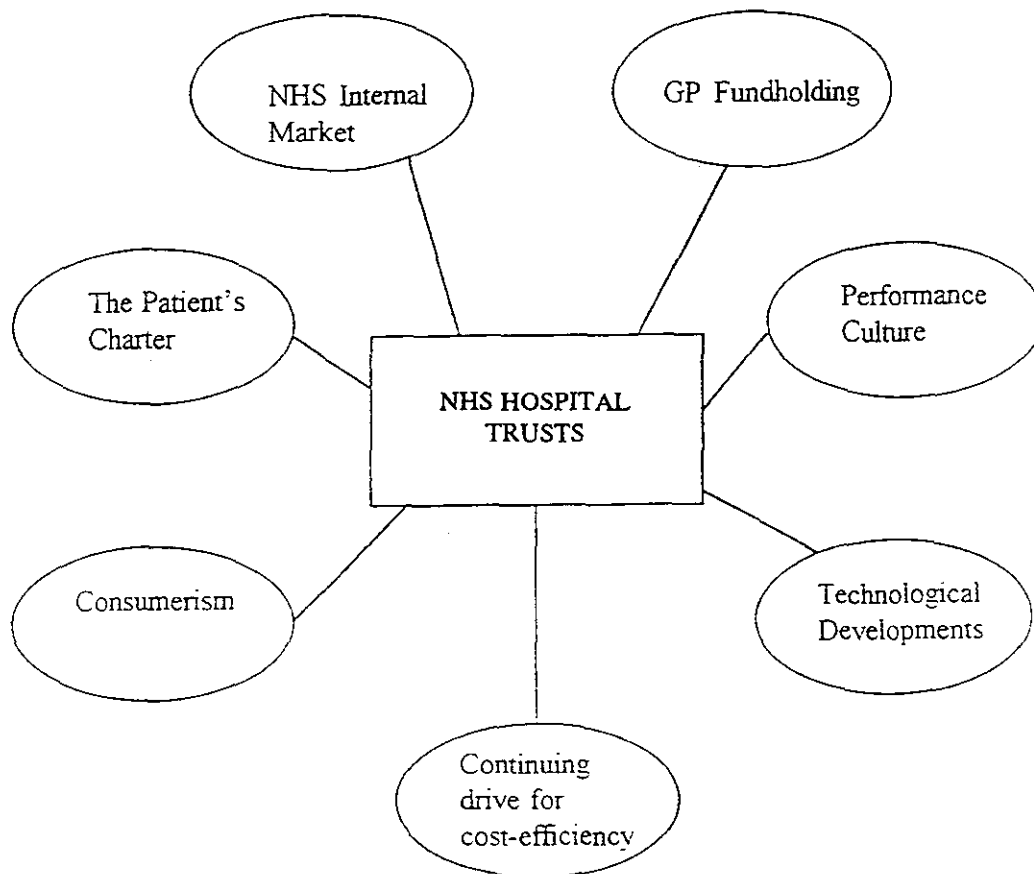
(20 Changes of Ownership)



THE POLITICAL CONTEXT FOR CHANGE



THE IMPETUS FOR CHANGE



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