

**SWP 9/96 THE CHANGE INITIATIVE DIAMOND: A
FRAMEWORK TO BALANCE BUSINESS
PROCESS REDESIGN WITH OTHER CHANGE
INITIATIVES**

DR. JANET PRICE, ASHLEY BRAGANZA & OSCAR WEISS
Information Systems Research Centre
Cranfield School of Management
Cranfield University
Cranfield
Bedford MK43 0AL

Tel: +44 (0)1234 751122

Fax: +44 (0)1234 751806

The Cranfield School of Management Working Papers Series has been running since 1987, with approximately 415 papers so far from the nine academic groups of the School: Economics; Enterprise; Finance and Accounting; Human Resources; Information Systems; Logistics and Transportation; Marketing; Operations Management; and Strategic Management. Since 1992, papers have been reviewed by senior members of faculty before acceptance into the Series. A list since 1992 is included at the back of this paper.

For copies of papers (up to three free, then £2 per copy, cheques to be made payable to the Cranfield University), please contact Wayne Bulbrook, Assistant Research Administrator, at the address on the back of this booklet.

Copyright: Price, Braganza & Weiss, 1996

ISBN 1 85905 093 X

Business Process Redesign

The Change Initiative Diamond: a framework to balance Business Process Redesign with other Change Initiatives.

Cranfield School of Management
Copyright 1996

Date: 01/11/96

By: Janet Price
Ashley Braganza
Oscar Weiss

Ref: ISRC-BPR-96016

The Information Systems Research Centre
Cranfield School of Management
Cranfield Bedford MK43 0AL UK

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

1. INTRODUCTION

In many organisations radical change towards a process orientation, often termed Business Process Redesign/Re-engineering (BPR), is being undertaken with the aim of achieving very significant improvements in performance. Often scholars and consultants suggest that managers should base their redesign efforts on a 'clean sheet' view of the organisation. There appears to be an implicit assumption that BPR initiatives will take place in organisations where no other changes are in progress. In practice this does not appear to be the case; in many enterprises BPR is instigated against a back-drop of a plethora of change initiatives which have been designed to address previous strategic and tactical issues. The literature deals inadequately with the relationship between BPR and other change initiatives. Hence managers often do not appreciate the way in which these initiatives can contribute, or indeed hinder, the implementation of a major BPR programme. A framework to enable managers gain an overview of initiatives already in place, to ensure that work was not be duplicated and to identify and redeploy resources more efficiently would be of value. In addition, this information would contribute to more effective decision making when managers are called upon to deal with existing change initiatives in parallel with BPR. Janet Price, Ashley Braganza and Oscar Weiss present a framework, the Change Initiative Diamond, which has been developed to classify existing change projects within an organisation or strategic business unit prior to a BPR initiative. The authors present two organisational examples of ways in which the Diamond can be operationalised and provide initial guidelines for managers balancing several projects in tandem with BPR initiatives.

In an effort to increase or retain organisational competitiveness Business Process Redesign/Re-engineering (BPR) appears to be a preferred way of changing a business. The organisational philosophy behind BPR is to question the appropriateness of the existing way of organising work in order to achieve an organisational mission. The assumption for undertaking BPR is that the current processes or procedures do not deliver optimal results.

This change approach has variously been described as business reengineering (Spurr *et al*, 1993), business process redesign or re-engineering (Davenport and Short, 1990) and process innovation (Davenport, 1993). Three characteristics of a BPR initiative have been commonly agreed amongst authors on this topic. Firstly, that such initiatives will encompass an holistic perspective of the organisation hence effecting a large-scale rather than an incremental change (Hammer and Champy, 1993). Secondly, that a BPR initiative will transform the organisation so that it focuses upon its processes rather than functions and departmental activities (Ostroff and Smith, 1992). And thirdly, that a BPR initiative will require managers to change radically the culture of the organisation (Kilmann, 1995).

However, there is little agreement on how redesign or reengineering can be defined. Hammer and Champy (1993) stated that re-engineering was:

"..... the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed".

Janson (1992) and Parker (1993) provide a range of potential interpretations of BPR. Janson defines reengineering in terms of organisations renewing "their commitment to customer service" while according to Parker reengineering can be seen as:

“..... as the analysis and redesign of business and manufacturing processes to eliminate that which adds no value”

In the context of our research into BPR in a wide range of organisations this radical change has been in response to external stakeholder needs; we have therefore chosen to define BPR as:

.....a process oriented change programme which focuses upon an external stakeholder, in the first instance, and from which the organisation will derive substantial performance improvements. Change initiatives which focus upon an internal customer, at the outset, are not BPR. These could be called total quality, process improvement or process engineering projects. Stakeholders are considered to be external if they operate outside the unit being redesigned

This range of definitions serves to illustrate that the focus of reengineering within organisations can be very varied and that it can be designed with many different objectives in mind.

Just as there are many interpretations of business process reengineering and redesign, many methodologies and principles for implementation for BPR have been suggested. Methodologies have been put forward by academics and consultancies, varying from broad guidelines to a fixed step-plans to success (Ruessmann *et al*, 1994; Chait, 1995; Morris and Brandon, 1993; Davenport and Short, 1990; Kaplin and Murdock, 1991; Harrington, 1991). Generally, published methodologies consist of a number of steps, often between five and nine, which are frequently iterative in nature. These steps guide an organisation through creating a vision for the future, identifying and redesigning key processes, small scale testing of the new process, full implementation and assessment of the success of the BPR initiative. However, the wide variety of BPR initiatives probably indicates that no one uniform methodology for BPR is likely to prevail.

The methodologies and principles proposed rarely take account of the organisational context in which BPR takes place. For example, Keidel (1994) lists nine redesign recommendations but does not discuss how these contextual issues should be incorporated into a BPR programme. Hammer (1990) calls upon managers to make fundamental changes to organisations, yet there is an underlying assumption that BPR is the only change initiative taking place in the organisation. Recently a number of authors have begun to recognise that BPR may be one of many change initiatives (Duck, 1993) and that organisations usually start with a 'used sheet' rather than a 'clean sheet' (Davenport, 1993).

Our experience of researching and consulting with managers from a wide range of leading blue-chip enterprises reinforces the view that managers rarely have a 'clean sheet' or 'greenfield' site. In fact, many change initiatives run simultaneously within an organisation. At the outset, each of these initiatives has a clear rationale for improving the operations of the organisation and providing appropriate benefits. However, with time and the influence of rapid environmental changes, some of the initiatives lose their relevance in the overall plan for the business. Frequently, these initiatives have an internal organisational focus. For example, total quality management (TQM) projects are often aimed at improving existing organisational procedures; downsizing initiatives are often the result of the need to reduce the cost base of the business very rapidly; culture change, such as re-grading projects or empowerment programmes may be initiated in response to unsatisfactory employee surveys. Although each of these types of projects may well have an indirect beneficial effect on external stakeholders they are not

usually planned with the needs of those stakeholders as the primary focus. Indeed, some projects, such as downsizing, may have an adverse effect on customers if reduced numbers of staff are unable to maintain an expected level of service. A plethora of projects within an organisation can lead to ineffective use of resources and insufficient co-ordination of objectives. Indeed, co-ordination of initiatives was considered by one major pharmaceutical company in our research to be important in reducing the potential for conflicting messages about change within the organisation.

When reflecting upon the data gathered from both case history managers and from comments of other managers involved in other process alignment programmes, it became clear that they do operate in 'used sheet' situations. We have observed that there is often an obscure relationship between on-going change initiatives and the process oriented changes.

Managers tend to use their intuition to assess the relationship between BPR and the other change projects. The basis of more analytical deliberations were not clear as few tools for classifying change initiatives were apparent in the literature. Clearly there are models for classifying a number of factors important to a major organisational change. For example, the examination of the drivers for change within a particular industry (Porter, 1985), the analysis of an organisation's desired strategic direction (Faulkner and Bowman, 1995), the classification of proposed BPR initiatives (Edwards and Braganza, 1994; Edwards and Peppard, 1994) or the assessment of the company culture (Johnson, 1992). However, the existing models do not directly address the issues surrounding on-going change projects when a new BPR initiative is proposed. Hence, it became apparent that it would be useful for an organisation to be able to classify its current change initiatives prior to BPR.

We propose that the Change Initiative Diamond (the Diamond) can be used to classify the relationship between on-going and planned change projects and the proposed BPR initiative. The Diamond can be effective when used at both the organisational and strategic business unit level. In addition, it assists managers to address the issues surrounding the ways in which on-going projects may be managed in tandem with the BPR initiative. In this paper we use the terms project, programme and initiatives interchangeably when referring to the process of change within organisations.

2. CLASSIFYING CHANGE INITIATIVES: THE CHANGE INITIATIVE DIAMOND

2.1 Background to the model

The Diamond was developed as a result of several case studies which investigated the key success factors and best practice in business process redesign. A range of major UK and international organisations from the manufacturing, the private and the public service sectors were represented (see table 1). Taped, semi-structured interviews were carried out with at least four people in each of the selected companies. The interviewees belonged to two broad groups: firstly, business or IS/IT managers who were acting as either executive sponsor, project leader or IS expert and, secondly, BPR team members without direct management responsibilities. This cross-functional approach allowed us to assess the success of the project using the perceived level of success measure (DeLone and McLean, 1992). Information gathered during interviews was validated and augmented using reports and other internal documentation provided by the participating organisations.

| Organisation | Type of organisation | Primary External Stakeholders | BPR Initiative |
|------------------------------|----------------------|-------------------------------|--|
| ABB Rail Vehicles Ltd | Manufacturing | Customers | Redesign of product introduction and product realisation processes |
| CIGNA UK | Insurance | Customers | Redesign of claims and administration processes |
| A Major Government Agency | Public service | Government | Redesign of twenty business units to establish streamlined processes |
| Guardian Royal Exchange Asia | Insurance | Customers | Redesign to establish process orientation and optimise new IT |
| Lilly Research | Manufacturing | Customers | Redesign of product development |
| Lucas Heavy Duty Products | Manufacturing | Customers & Suppliers | Redesign of manufacturing material flow, material planning and control |
| NHS Trust | Healthcare | Government | Redesign of patient care process using new IT |
| Norwich Union | Insurance | Customers | Redesign of product administration processes |
| A Major Government Agency | Public service | Government & Customers | Redesign of local offices and interface with customers |

Table 1: Research Organisations

Analysis of the data confirmed several well-known issues common to many initiatives such as the importance of linking strategy to a BPR programme, the critical role of senior management in actively supporting the change and the difficulty of managing resistance to change. An aspect of this resistance which was revealed by our research was that BPR project champions faced considerable resistance from colleagues running other change projects. This was particularly evident where those colleagues were unsure of how the objectives of their projects

related to those of the BPR initiative. In addition, many organisations were unaware of how, or if, their existing change initiatives could inform the proposed BPR programme.

It was therefore evident that a means of identifying and classifying existing change initiatives would be of benefit in these circumstances. Such a classification model would serve three purposes:

1. It would provide an overview of the initiatives already in place and therefore ensure that work was not be duplicated.
2. It would enable resources to be identified and redeployed more efficiently.
3. It would point managers to appropriate actions which would enable them to manage the existing change initiatives in a more effective manner.

In this work we define a change initiative as:

A project or programme that is being planned or implemented, and to which the management has committed resources with a view to altering the strategic direction or operational aspects of the organisation.

2.2 Elements of the Change Initiative Diamond

The Diamond, shown in figure 1, identifies four categories of change initiatives; affinity, support, inhibitor, and parallel projects. Each has a potential association with a future redesign programme and may facilitate or hinder the progress of that project.

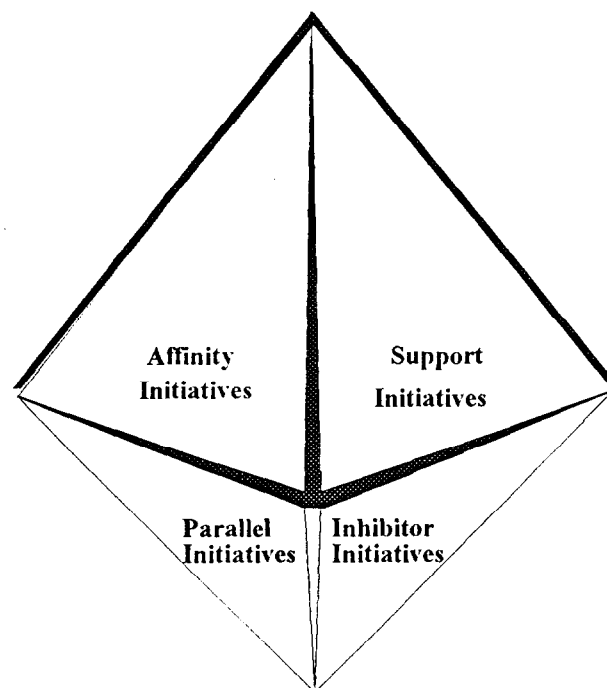


Figure 1: Classifying current change initiatives: the Change Initiative Diamond

Affinity initiatives

Affinity initiatives, the first group in this classification, are those that are most closely related to the future BPR programme. They are most likely to have been established to meet a specific current strategic objective, have an external focus and be directed at improving the way in which the organisation currently operates. These projects will involve a strong element of cross-functional team work and will be capable of providing valuable underpinning information and experience for the BPR programme. For example, the projects could contribute to the overall implementation of the BPR initiative by establishing teamwork as an effective way of working, by encouraging employee involvement and by demonstrating that change can be successful. In short, they act as a back-drop to the central business change programme.

The key objective for BPR managers as far as affinity projects are concerned is to ensure that a sound relationship between the affinity initiatives and the forthcoming BPR programme is established. There is a high probability that the coexistence of affinity projects with BPR initiatives will lead to jockeying for position amongst those managers who have invested time and effort in establishing high profile projects. Links between the on-going projects and BPR, which will be of benefit to both types of initiative, should therefore be forged and help given to limit such political manoeuvring. Forging the links could involve encouraging the affinity project leaders to be actively involved with the BPR initiative, feeding in information and lessons learnt from their own projects, and, where possible, having representatives who sit on both BPR and affinity initiatives teams. Probably the most important aspect of all for managers will be ensuring that affinity project leaders and their teams understand the importance of their contributions to BPR and reward this where appropriate. Affinity initiatives should be reviewed on a regular basis throughout the course of the BPR programme to ensure that the links between the two are still in place and that the benefits are being transferred from one to another.

An example serves to illustrate affinity initiatives. A major international insurance company reviewed its South East Asia operation in the light of best practice in Western Europe. It became clear that a major new IT platform was required to bring the entire South East Asian region up to the standards required to function effectively in this rapidly growing market. This IT programme had been running for about a year when individual territories, Hong Kong and Singapore for example, commissioned customer surveys. These revealed the need to improve significantly their customer service if they were to retain and satisfy their existing client base. A major redesign of the individual territories' customer service was initiated and this was run at the same time as existing IT implementation; the two projects were linked and integrated to establish a new process orientation. In this example, the IT implementation could be seen as an affinity initiative linked with the customer service BPR programme.

Support Initiatives

The next category of projects, support initiatives, are those that focus primarily upon one or two functions; they are not critical to the success of the potential redesign programme but can provide a useful input. These projects can loosen different elements of the organisation by breaking down barriers within one or across two functions. Like the affinity initiatives they can contribute to the overall implementation of the BPR initiative by establishing teamworking in a limited way and employee participation. Often these projects have been put in place as tactical

initiatives which are capable of providing the organisation with quick, though, modest improvements.

When managers classify projects as support initiatives they could review them prior to the start of BPR. The aim would be to examine the scope of the changes expected from these projects, to understand how the expected benefits can be balanced with those of new BPR initiative and to agree the boundary of the support initiatives without jeopardising their outcome. Where possible, some of the resources dedicated to these projects could be reallocated appropriately. In addition, support initiatives should be assessed regularly throughout the duration of the redesign programme to ensure that they are still appropriate to the future needs of the organisation and that they are still making a valuable contribution to the overall objectives of that programme. Indeed, managers may find it useful to discuss ways of integrating certain elements of entire support projects into the BPR initiative.

At the inception of a BPR project within a major book distributor an activity mapping project was in place which was designed to depict the organisation's current state. The purpose of this project was to simplify activities and remove any redundant ones; it was to be carried out across the whole the organisation with each function being mapped in turn. The project had been launched by the managing director who felt that it could deliver efficiency benefits quickly. In the Diamond framework this activity mapping project could be classified as a support initiative. The project was allowed to continue along side the BPR initiative as both the managing director and the BPR team leader agreed that the information could be useful at a later stage, for example, to compare the way tasks were completed under the old procedures with the redesigned systems. The BPR project could, of course, have been implemented without the activity mapping project being in place, but it did provide sound underpinning information and made a contribution to the success of the business redesign. In this example the mapping project and the BPR initiative used separate resources with the exception of the person leading the mapping project; he was a member of the BPR team and reported to both the BPR team leader and the managing director.

Inhibitor Initiatives

The third category, inhibitor initiatives, are those projects which managers perceive could hinder or delay the changes that may need to be made during the BPR initiative. These would tend to be stand alone projects which are likely to reinforce functional boundaries and the status quo. Also included in this class of initiatives are change projects that were once planned to fulfil a previous organisational strategy. As rapidly changing environments lead to changes in strategy and new initiatives existing programmes often continue without their relevance to the organisation's current and future business needs being challenged. Managers invest considerable amounts of political capital in the projects which are viewed as strategically important, often building a significant power-base for themselves and their teams. The arrival on the scene of a new initiative which would deflect from the status of their existing projects will inevitably lead to resistance to any subjective analysis of the role of the established programmes. Indeed, this resistance can lead to the undermining of the success of the new project.

Once inhibitor change initiatives are recognised, the most appropriate course of action could be to terminate them as quickly as possible in order to limit any adverse effects on the new redesign programme. The resources which are being utilised in the inhibitor initiatives may then be reallocated to support other initiatives within the organisation or, indeed, to the BPR

change initiative itself. However, this course of action does require careful management of both the organisational politics and the adverse effect on staff morale associated with the cessation of such established projects.

Two examples serve to illustrate inhibitor initiatives. When a new chief executive was appointed to one of the top ten building societies he found that several major IT development projects were in progress. They were largely functionally driven and it was unclear how these initiatives were linked, if at all. Furthermore, he could not see immediately the relationship between these initiatives and his vision for the future of the company. His aim was to completely shift to a process-driven organisation which required significant planning and co-ordination in order for it to succeed. In this case the chief executive took the decision to suspend temporarily all IT developments until they could be incorporated into the overall scope of the business process redesign which he envisaged.

In another case, the book distributor mentioned above held a major review of all its organisational processes with the aim of understanding what systems were needed to support their entire business. During this review it became clear that the IT system which was planned to run its warehouse and logistics operation would need to be integrated into the new organisation-wide system. Therefore, the logistics IT project was put on hold until the overall review was complete and decisions made about the most appropriate support systems.

Parallel Initiatives

Finally, parallel initiatives are any projects which are likely to have a neutral relationship to the BPR change and would be identified most probably when a review of projects across the organisation is carried out. These could be projects that are beyond the scope of the processes under consideration, or being undertaken in a separate part of the organisation dealing with processes which are focused on different stakeholders. For example, an organisation may be undergoing redesign of manufacturing processes for two very different products destined for different markets. These would have little if any impact on each other although they may be of general interest to the managers of the individual projects.

Typically, initiatives of this type require little action from the managers most closely involved in their implementation. The projects could co-exist and the key players (sponsors, project leaders) would be kept informed of the process plans as they are developed. Managers of BPR initiatives could maintain a watching brief on these projects.

The situation within the book distributor mentioned above illustrates a parallel initiative. This organisation is a subsidiary of a large European multinational company. The parent company needed to reduce the cost base of each of its trading companies significantly and deployed Head Office staff to 'eliminate waste' primarily through head count reductions. In discussions between the managing director of the book distributor and his BPR manager it became clear that the headcount reductions would have to go ahead within the timescale set down by the parent company. Obviously, as knowledge of the likely job losses spread through the book distributor's grapevine the staff would begin to feel uncertainty and fear about their futures. From the BPR manager's point of view it was critical to ensure that the head count reductions were not perceived as being a result of process changes. Hence, all approaches by the Head Office personnel to join the BPR team were politely, but firmly, rejected and the project to reduce head count was kept a clear distance away from the BPR initiative.

Our experience when using the Diamond with managers is that they found it a valuable framework during the early stages of BPR. As part of the typical data gathering phase at the start of a BPR initiative the Change Initiative Diamond could be used to assess whether existing projects enable or inhibit the success of the proposed project. Ideally, several managers would classify the existing projects independently and then discuss and agree the classification and the actions required to balance all the projects. The raw data obtained during this initial phase of a BPR initiative can then be converted to ideas and knowledge which in turn forms the basis for the overall design of BPR.

3. APPLYING THE CHANGE INITIATIVE DIAMOND: TWO CASE STUDIES

This framework is at early stage of its development, however it has already being used to assess recent business situations; its potential as a management tool with very real practical uses is being demonstrated. Two examples of this practical utilisation are reported here.

3.1 Case Study 1

The first example is that of a South African insurance company (SAI). SAI is owned jointly by two parent companies; a leading international insurance company based in the UK and a South African life assurance organisation. The partnership is successful with good relationships between the partners. In 1995 the turnover of SAI was £143m with pre tax profits of £13m; this represented 5% of the UK parent company's group income. SAI employed 928 people and was the fourth largest insurance company in South Africa with an approximately 12% market share. At this time (1995) the South African insurance market was growing rapidly at around 15% per annum; this was in the face of a much slower growth in GDP of approximately 0.6% per annum over each of the previous five years. SAI itself was growing at 22% per year with the most significant development seen in personal lines insurance products. The rapid growth of the insurance market generally is partly due to rising crime rates in South African which have led to an increased need for personal and property insurance.

For SAI there were two key drivers which led to their decision to embark on a Business Process Redesign initiative. Firstly, the rapid growth of the company meant that there was a need to improve the efficiency of their business. Secondly, SAI had set a strategic objective to become the second largest insurance company in South Africa by 1998; this meant gaining a 16% market share. The key to achieving this significant growth lay in increasing the market share for personal lines insurance from 4% to 8% over the three year period; a challenging target for the business. During late 1995 a task force, established to analyse how market share growth could be achieved, then developed an action plan which recommended a mixture of radical change and continuous improvement. This became the basis for the BPR initiative which, at the time of writing, is in a detailed planning stage.

As part of the work undertaken in planning the BPR initiative the existing change projects were classified using the Diamond; a total of eight projects of significance were identified and a summary is shown in figure 2.

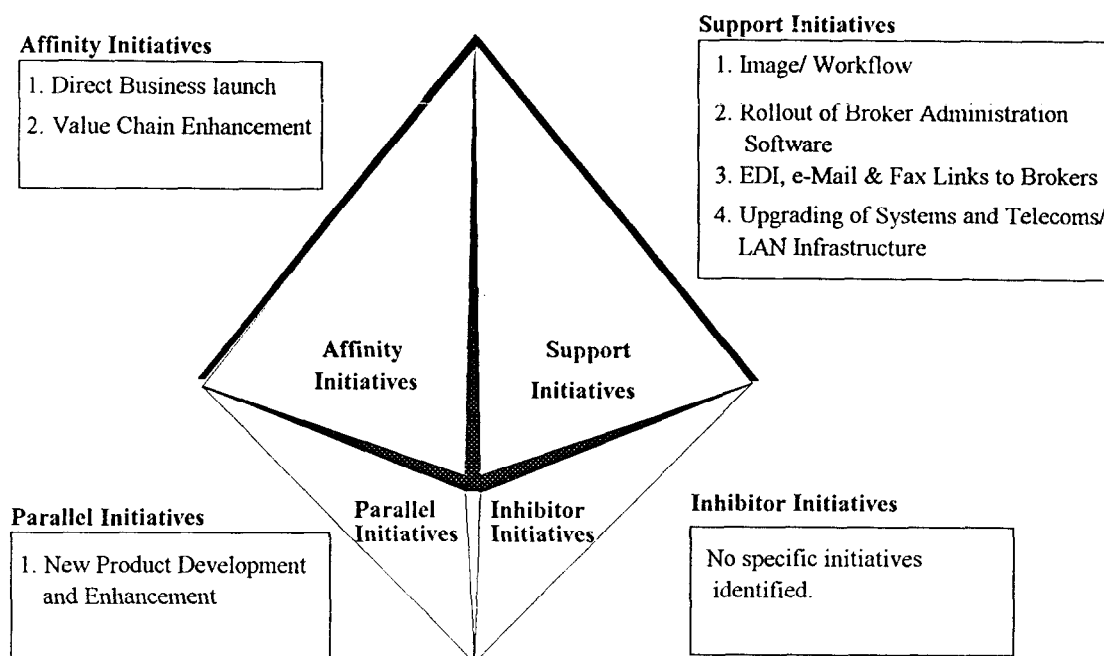


Figure 2: The Change Initiative Diamond applied to SAI, a South African Insurance company

Two projects were seen as meeting a specific strategic need and were therefore classified as affinity initiatives. These were the launch of a direct insurance business and a value chain enhancement project. In the first instance, the launch of a direct insurance business was triggered by the strategic objective to grow the market share. The project involved incorporating a model of best practice for direct insurance business into the South African organisation. The model was taken from the UK parent company which has an established competence in developing and transferring this type of business to other group members.

Value chain enhancement is part of an on-going programme to develop process links with brokers; the aim being to develop close long-term relationships, brokers being an important distribution channel for insurance. These links were fostered several years ago when SAI began developing, marketing and supporting broker administration software in the market place. They are now being reinforced by developing EDI links with brokers.

The support initiatives shown in figure 2 are technology projects which enable value chain enhancement across both the insurance company's and the broker's business processes. The main objectives are to attain effective communication with brokers followed by efficient management of the resulting workflow within SAI. Insurers will achieve this by implementing e-mail and fax-to-PC links with brokers. All information relating to claims is captured directly into a workflow management system where it is handled, processed and stored electronically. Any correspondence which arrives by post or fax is scanned into the workflow system and managed in the same way as electronically transmitted documents. Claims account for a large proportion of the communication between broker and insurer. The claims process is both technically and procedurally quite complex and is one of the most important areas of competition for the insurance industry.

The projects are resulting in productivity and quality improvements in the claims process and are reducing the elapsed time taken to settle a claim. As these projects are an essential pre-

requisite for redesign of all the main business processes within SAI they were placed under the direction of the BPR manager to ensure effective coordination. At the time the classification was done the rollout of the technology to all SAI branches had just begun. This followed the completion of a successful pilot in a single branch. The branch rollout is expected to be finished by the end of 1996.

The implementation has benefited from the positioning of the BPR manager within the IT department. This enabled close coordination of the delivery of both hardware and software with implementation of the workflow solution and the necessary training of personnel. This approach has helped to ensure rapid resolution of technical problems and maintenance of project timescales. The effective management of the projects needed to support the new processes has encouraged enthusiastic business responses to the change in working practices and has assured employee acceptance of these new methods.

The final support initiative, up-grading systems and telecommunications ran continuously within the organisation and essentially ensured that, wherever possible, the business had the most appropriate technology for its needs. This would provide a background against which BPR could take place.

The projects identified as support initiatives were tactical in the sense that they resulted in immediate incremental improvements to the business.. However, their strategic contribution is also recognised as they provide a technical infrastructure which will support significant change across the insurance value chain.

A factor which was identified as a potential inhibitor to change was an aspect of organisational culture rather than a specific project. Within SAI it was expected that everyone should work within the lowest budget possible. Clearly this is a sound business objective but within SAI it was felt that the strong focus on expense reduction would make it difficult to obtain the right level resource for successful radical change.

Finally, one project, new product development and enhancement, was classified as a parallel initiative. This was a continuous procedure which was needed in order to maintain a competitive position in the market and which currently was sufficiently well structured to meet the strategic needs of the company. It was felt that although new product development was focused on a key stakeholder, the customer, the anticipated scope of the BPR would not address this process. However, it was important that managers responsible for new product development were kept well informed about the progress of BPR so that if in future its redesign was seen as necessary managers would be familiar with changes achieved by BPR.

3.2 Case Study 2

The second example is that of a major international non-profit distributing organisation (NPDO) with a turnover of £45m (1995 figures). NPDO, which is based in the UK, consists of four major divisions; one of which, Quality Assurance (QA), is currently planning a BPR initiative. QA is responsible for the assessment and certification of international standards and employs about 700 people in the UK.

The proposed BPR initiative has been driven by two main factors: firstly, by the need for greater business efficiency in the face of a significant increase in international competition and, secondly, by a rapidly changing market place. This is represented by the growth in

international standards, for example environmental or health and safety standards, which all require a recognised body to oversee certification. UK Government sponsored initiatives, such as Chartermark, could also provide NPDO with new areas where they could exploit their expertise.

A series of strategy workshops were held during the second half of 1995. These identified that a fundamental redesign of service delivery and service resourcing in QA was the first major step in the BPR initiative which would be required to improve NPDO's performance in the light of market and competitive pressures. IT was seen as being a key enabler in this redesign.

Within NPDO a total of ten projects of significance were identified and a summary is shown in figure 3. Three projects, assessment documentation, skill classification and register of licences, were seen as meeting a specific strategic need; they were therefore classified as affinity initiatives. Two of these, assessment documentation and register of licences, were seen as being prerequisites to the development of new service delivery processes. In the assessment documentation project a system for reviewing information gathered during client visits was being implemented. New IT was a key element in this, enabling the collation of client data and the production of a report which could be customised to meet the individual client's needs. The register of licences project involved using the client database to generate publications of successful client certification. Internal and external publications of such client registers provided both clients and NPDO with important marketing tools for their businesses.

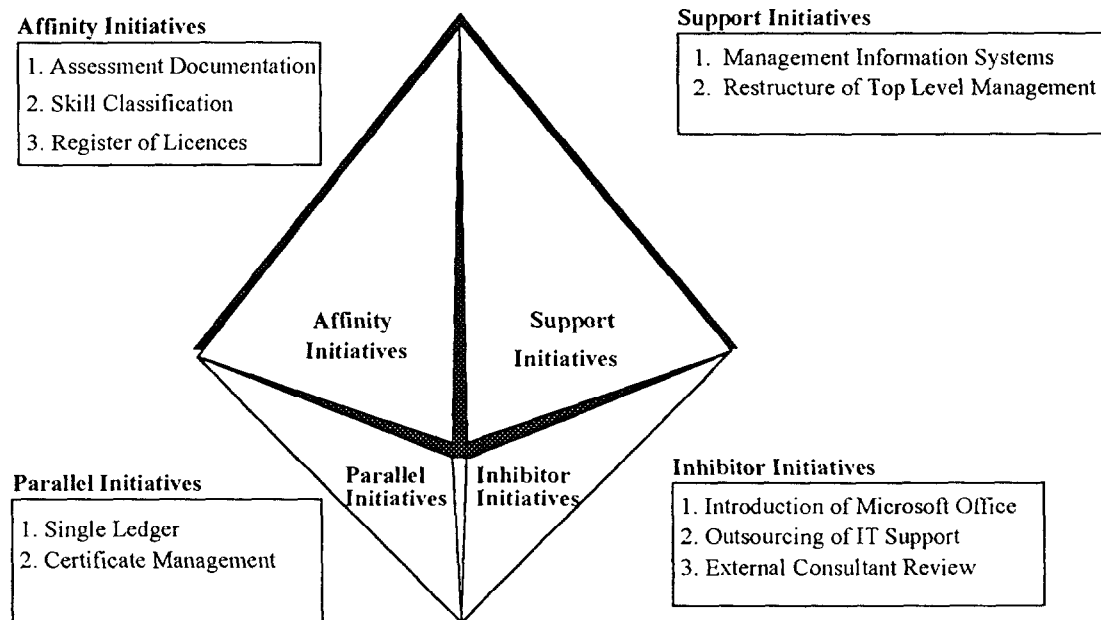


Figure 3: The Change Initiative Diamond applied to a major international non-profit distributing organisation

The skill classification project was linked to the need to improve service resourcing in that it involved audits of existing organisational skills and matching those to the current and future needs of NPDO. Where skills mis-matches were identified appropriate training programmes were instigated.

The classification of these as affinity initiatives meant that communication between BPR managers and the project managers of these initiatives could be formalised. This would ensure that all managers had the information required to co-ordinate BPR with the on-going affinity projects.

The next group, support initiatives, comprised two projects. The first one, management information systems, was identified as a support initiative because it provided the organisation with a rapid improvement in procedures. This was done by developing a system where client data was available from the database in a form which met the end-user needs. This was particularly significant where job-costing information was required; previously these had been unwieldy to handle and lead to an inefficient costing procedure. This project was seen as providing a valuable contribution to the proposed initiative and no change was made to its scope or overall objectives.

The second support initiative was the restructuring of top level management. Here the emphasis of senior management roles were changed so that they were now aligned to key business objectives. Individual senior managers were, therefore, clearly responsible for the delivery of their assigned objectives in a way which not been the case previously. Although this project was complete when the classification of the on-going projects was done it was still seen as being supportive to the future BPR initiative by providing increased focus to the overall business.

Three on-going projects were seen as significant inhibitor initiatives. The introduction of Microsoft Office was identified as inhibitory because it had not been driven by a specific business need but had been imposed by the corporate IT function. Managers felt that this project did not necessarily address to the administrative needs of the organisation and the benefits of introducing this package were difficult to quantify.

The perception of the second inhibitor initiative within NPDO was that the out-sourcing of IT support had made its control more difficult resulting in increased cost and decreased business efficiency. In addition, communication with the external support had become difficult.

Finally, the external consultants' review of the organisation was seen as inhibitory because planning of the BPR initiative had been suspended temporarily until the full consultants' report was available. Progress on BPR was therefore held up and the doubts about the extent of the proposed change were raised in people's minds.

For internal political reasons it was not possible to end any of the inhibitor initiatives; however, the recognition that they could have a detrimental effect on the future success of BPR was important. It meant that managers became aware of the importance of managing the interface between these projects and BPR with care. This was particularly true when it came to resistance to the implementation of Microsoft Office; it was important that this should not prevent the maintenance of a sound relationship with the corporate IT group who would be essential to the successful implementation of any new infrastructure.

The last group, parallel initiatives, was composed of two projects; neither of them were considered to have any direct impact on the success of the proposed BPR initiative. The single ledger project was an organisational-wide initiative which was designed to develop and implement a central register of client accounts. This was considered to be primarily for internal financial purposes rather than producing any immediate client benefit. The second project,

certificate management, was a continuous improvement project which automated production of certificates. This automation reduced transcription errors and improved business efficiency.

For these parallel initiatives it was considered that the project plans should be co-ordinated with the future plans for BPR. This would ensure that any bottlenecks could be averted and implementation of central register and the certificate production would not have any adverse effect on the outcome of the BPR initiative.

Managers in both SAI and NPDO indicated strongly that the Change Initiative Diamond enabled them to focus on inherent conditions within their organisations. They gained an increased awareness of factors which could jeopardise the successful implementation of BPR. Another group of managers presented with the Diamond expressed the wish that it had been developed earlier; they could then have used it to sift through the more than two hundred projects that were in progress in their organisation prior to a BPR initiative.

4. SUMMARY AND CONCLUDING REMARKS

In the field of BPR planning and implementation it is becoming increasingly clear that these change initiatives are not taking place in isolation. Organisations often undertake BPR programmes while other change projects are in progress. To date it has been difficult to identify any models which would enable managers to classify their existing commitments to change and assess their relevance to a proposed BPR initiative.

In this paper we have presented a framework which would fulfil the need to classify on-going change projects prior to the instigation of a BPR programme. We have proposed that use of this framework, the Change Initiative Diamond, will provide managers with an overview of the initiatives already in place and point them to appropriate actions they would need to take when managing existing change initiatives in tandem with BPR initiatives. These actions could include termination of some projects or incorporation of others into the BPR programme. The clearer view of existing circumstances and resource allocation within an organisation provided by the Change Initiative Diamond can contribute to the more effective use of those resources in subsequent projects. Additionally, awareness of the political issues surrounding current projects can facilitate the management of changes in the status of those initiatives during the BPR programme. However, managers have cautioned that, without sensitive management, the use of this framework could be detrimental to the successful progress of BPR. Managers not directly involved with BPR could perceive the use of this framework as being a means of enabling the BPR initiative to dictate the fate of other projects without appropriate consultation and agreement.

The further development of this model is in progress; however, early empirical data reported here has demonstrated that use of the Change Initiative Diamond can provide managers with valuable new insights into the context in which they are plan to carry out business process redesign.

5. REFERENCES

- Chait, P.L and Lynch, A.J. (1995). Reengineering Revisited: Achieving Seamlessness. *Prism*, Second Quarter, 23-29.
- Davenport, T.H and Short, J.E. (1990). The New Industrial Engineering: Information Technology and Business Process Redesign. *Sloan Management Review*, Summer, 11-27.
- Davenport, T.H., (1993). *Process Innovation: Reengineering Work Through Information Technology*. Boston: Harvard Business School Press.
- DeLone, W.H. and McLean, E.R. (1992). Information Systems Success: The Quest for the Dependent Variable, *Information Systems Research*, **3(1)**, 60-95.
- Duck, J.D. (1993). Managing Change: The Art of Balancing. *Harvard Business Review*, November-December, 109-118.
- Edwards C. and Braganza, A. (1994). The Business Process Redesign Web: A Framework to Classify BPR Initiatives and Plan their Implementation, *Cranfield Working Papers*, Series no. 13/94, 1-20.
- Edwards, C. and Peppard, J. (1994). Forging a Link Between Business Strategy and Business Reengineering, *European Management Journal*, **12(4)**, 407-416.
- Faulkner, D. and Bowman, C. (1995). *The Essence of Competitive Strategy* (pp. 7-38). London: Prentice Hall.
- Hammer, M. (1990). Reengineering Work: Don't Automate, Obliterate, *Harvard Business Review*, July-August, 104-112.
- Hammer, M. and Champy, J. (1993). *Reengineering the Corporation: A Manifesto for Business Revolution*. London: Nicholas Brealy Publishing.
- Harrington, H.J. (1991). *Business Process Improvement*. New York: McGraw-Hill.
- Janson (1992). How Reengineering Transforms Organisations to Satisfy Customers, *National Productivity Review*, **Winter 1992/1993**, 45-53
- Johnson, G. (1992). Managing Strategic Change - Strategy, Culture and Action, *Long Range Planning*, **25(1)**, 28-36.
- Kaplin, R.B. and Murdock, L. (1991) Rethinking the Corporation: Core Process Redesign. *The McKinsey Quarterly*, **2**, 27-43.
- Keidel, R.W. (1994). Rethinking Organisational Design, *Academy of Management Executive*, **8(4)**, 12-30.
- Kilmann, R. (1995). A Holistic Program and Critical Success Factors of Corporate Transformation, *European Management Journal*, **13(2)**, 175-186.

Morris, D. and Brandon, J. (1993). *Reengineering your Business*. New York: McGraw-Hill.

Ostroff, F. And Smith, D.K., The Horizontal Organisation, *McKinsey Quarterly*, Spring, 148-168

Parker, K. (1993). *Reengineering the auto industry*, *Manufacturing Systems* , January

Porter, M.E. (1985). *Competitive Advantage*. New York: The Free Press.

Ruessmann, T., Preece, I. and Peppard, J. (1994). Tools and Methods in Business Process Redesign, *Information Systems Research Centre Working Paper*, Cranfield University School of Management.

Spurr, K., Layzell, P., Jennison, L. and Richards, N. (1993) *Software Assistance for Business Reengineering*. Chichester: John Wiley.

**CRANFIELD SCHOOL OF MANAGEMENT
WORKING PAPER SERIES
List No 6, 1992**

- SWP 1/92 Mike Sweeney
"How to Perform Simultaneous Process Engineering"
- SWP 2/92 Paul Burns
"The Management of General Practice"
- SWP 3/92 Paul Burns
"Management in General Practice: A Selection of Articles"
- SWP 4/92 Simon Knox & David Walker
"Consumer Involvement with Grocery Brands"
- SWP 5/92 Deborah Helman & Adrian Payne
"Internal Marketing: Myth versus Reality?"
- SWP 6/92 Leslie de Chernatony & Simon Knox
"Brand Price Recall and the Implications for Pricing Research"
- SWP 7/92 Shai Vyakarnam
"Social Responsibility in the UK Top 100 Companies"
- SWP 8/92 Susan Baker, Simon Knox & Leslie de Chernatony
"Product Attributes and Personal Values: A Review of Means-End Theory and Consumer Behaviour"
- SWP 9/92 Mark Jenkins
"Making Sense of Markets: A Proposed Research Agenda"
- SWP 10/92 Mike Sweeney & Ian Oram
"Information Technology for Management Education: The Benefits and Barriers"
- SWP 11/92 Keith Thompson (Silsoe College)
"International Competitiveness and British Industry post-1992. With Special Reference to the Food Industry"
- SWP 12/92 Keith Thompson (Silsoe College)
"The Response of British Supermarket Companies to the Internationalisation of the Retail Grocery Industry"
- SWP 13/92 Richard Kay
"The Metaphors of the Voluntary/Non-Profit Sector Organising"
- SWP 14/92 Robert Brown & Philip Poh
"Aniko Jewellers Private Limited - Case Study and Teaching Notes"
- SWP 15/92 Mark Jenkins & Gerry Johnson
"Representing Managerial Cognition: The Case for an Integrated Approach"
- SWP 16/92 Paul Burns
"Training across Europe: A Survey of Small and Medium-Sized Companies in Five European Countries"
- SWP 17/92 Chris Brewster & Henrik Holt Larsen
"Human Resource Management in Europe - Evidence from Ten Countries"
- SWP 18/92 Lawrence Cummings
"Customer Demand for 'Total Logistics Management' - Myth or Reality?"
- SWP 19/92 Ariane Hegewisch & Irene Bruegel
"Flexibilisation and Part-time Work in Europe"
- SWP 20/92 Kevin Daniels & Andrew Guppy
"Control, Information Seeking Preference, Occupational Stressors and Psychological Well-being"
- SWP 21/92 Kevin Daniels & Andrew Guppy
"Stress and Well-Being in British University Staff"
- SWP 22/92 Colin Armistead & Graham Clark
"The Value Chain in Service Operations Strategy"
- SWP 23/92 David Parker
"Nationalisation, Privatisation, and Agency Status within Government: Testing for the Importance of Ownership"
- SWP 24/92 John Ward
"Assessing and Managing the Risks of IS/IT Investments"
- SWP 25/92 Robert Brown
"Stapleford Park: Case Study and Teaching Notes"
- SWP 26/92 Paul Burns & Jean Harrison
"Management in General Practice - 2"
- SWP 27/92 Paul Burns & Jean Harrison
"Management in General Practice - 3"

SWP 28/92 Kevin Daniels, Leslie de Chernatony & Gerry Johnson
"Theoretical and Methodological Issues concerning Managers' Mental Models of Competitive Industry Structures"

SWP 29/92 Malcolm Harper & Alison Rieple
"Ex-Offenders and Enterprise"

SWP 30/92 Colin Armistead & Graham Clark
"Service Quality: The Role of Capacity Management"

SWP 31/92 Kevin Daniels & Andrew Guppy
"Stress, Social Support and Psychological Well-Being in British Chartered Accountants"

SWP 32/92 Kevin Daniels & Andrew Guppy
"The Dimensionality and Well-Being Correlates of Work Locus of Control"

SWP 33/92 David Ballantyne, Martin Christopher, Adrian Payne and Moira Clark
"The Changing Face of Service Quality Management"

SWP 34/92 Chris Brewster
"Choosing to Adjust: UK and Swedish Expatriates in Sweden and the UK"

SWP 35/92 Robert Brown
"Goldsmiths Fine Foods - Case Study and Teaching Notes"

SWP 36/92 Mike Sweeney
"Strategic Manufacturing Management: Restructuring Wasteful Production to World Class"

SWP 37/92 Andy Bailey & Gerry Johnson
"An Integrated Exploration of Strategic Decision-Making"

SWP 38/92 Chris Brewster
"European Human Resource Management: Reflection of, or Challenge to, the American Concept"

SWP 39/92 Ute Hanel, Kurt Volker, Ariane Hegewisch & Chris Brewster
"Personnel Management in East Germany"

SWP 40/92 Lawrence Cummings
"Logistics goes Global - The Role of Providers and Users"

SWP 41/92 Roger Seaton & Martin Cordey-Hayes
"Interactive Models of Industrial Technology Transfer: A Process Approach"

SWP 42/92 Susan Segal-Horn
"The Logic of International Growth for Service Firms"

SWP 43/92 Mike Sweeney
"Benchmarking for Strategic Manufacturing Management"

SWP 44/92 Paul Burns
"Financing SMEs in Europe: A Five Country Study"

SWP 45/92 Robert Brown
"The Graduate Enterprise Programme - Has it been Worthwhile?"

CRANFIELD WORKING PAPERS List No 7, 1993

SWP 1/93 John Mapes
"The Effect of Limited Production Capacity on Safety Stock Requirements for Periodic Review Inventory Systems"

SWP 2/93 Shai Vyakarnam & Alison Rieple
"Corporate Entrepreneurship: A Review"

SWP 3/93 Cliff Bowman & David Faulkner
"Pushing on a String: Uncertain Outcomes from Intended Competitive Strategies"

SWP 4/93 Susan Baker & Mark Jenkins
"The Role of Values in the Design and Conduct of Management Research: Perspectives on Managerial and Consumer Cognition"

SWP 5/93 Kevin Daniels, Leslie de Chernatony & Gerry Johnson
"Validating a Method for Mapping Managers' Mental Models of Competitive Industry Structures"

SWP 6/93 Kevin Daniels & Andrew Guppy
"Occupational Stress, Social Support, Job Control and Psychological Well-Being"

SWP 7/93 Colin Fletcher, Ruth Higginbotham & Peter Norris
"The Inter-Relationships of Managers' Work Time and Personal Time"

SWP 8/93 Mike Sweeney
"A Framework for the Strategic Management of both Service and Manufacturing Operations"

- SWP 9/93 Colin Armistead & Graham Clark
"The 'Coping' Capacity Management Strategy in Services and the Influence on Quality Performance"
- SWP 10/93 Ariane Hegewisch
"Equal Opportunities Policies and Developments in Human Resource Management: A Comparative European Analysis"
- SWP 11/93 Paula Stanley
"Service to the Courts: The Offender's Perspective"
- SWP 12/93 Mark Jenkins
"Thinking about Growth: A Cognitive Mapping Approach to Understanding Small Business Development"
- SWP 13/93 Mike Clarke
"Metro-Freight: The Automation of Freight Transportation"
- SWP 14/93 John Hailey
"Growing Competitiveness of Corporations from the Developing World: Evidence from the South"
- SWP 15/93 Noeleen Doherty, Shaun Tyson & Claire Viney
"A Positive Policy? Corporate Perspectives on Redundancy and Outplacement"
- SWP 16/93 Shai Vyakarnam
"Business Plans or Plans for Business"
- SWP 17/93 Mark Jenkins, Eric le Cerf & Thomas Cole
"Defining the Market: An Exploration of Marketing Managers' Cognitive Frameworks"
- SWP 18/93 John Hailey
"Localisation and Expatriation: The Continuing Role of Expatriates in Developing Countries"
- SWP 19/93 Kevin Daniels & Andrew Guppy
"Reversing the Occupational Stress Process: Some Consequences of Employee Psychological Well-Being"
- SWP 20/93 Paul Burns, Andrew Myers & Andy Bailey
"Cultural Stereotypes and Barriers to the Single Market"
- SWP 21/93 Terry Lockhart & Andrew Myers
"The Social Charter: Implications for Personnel Managers"
- SWP 22/93 Kevin Daniels, Gerry Johnson & Leslie de Chernatony
"Differences in Cognitive Models of Buyers and Sellers"
- SWP 23/93 Peter Boey & Richard Saw
"Evaluation of Automated Warehousing Policies: Total Systems Approach"
- SWP 24/93 John Hailey
"Training for Entrepreneurs: International Perspectives on the Design of Enterprise Development Programmes"
- SWP 25/93 Tim Denison & Simon Knox
"Pocketing the Change from Loyal Shoppers: The Double Indemnity Effect"
- SWP 26/93 Simon Knox
"Consumers and Grocery Brands: Searching for Attitudes - Behaviour Correspondence at the Category Level"
- SWP 27/93 Simon Knox
"Processing Ideas for Innovation: The Benefits of a Market-Facing Approach"
- SWP 28/93 Joe Nellis
"The Changing Structure and Role of Building Societies in the UK Financial Services Sector"
- SWP 29/93 Kevin Daniels, Gerry Johnson & Leslie de Chernatony
"Similarity or Understanding: Differences in the Cognitive Models of Buyers and Sellers. A Paper outlining Issues in Mapping and Homogeneity"
- SWP 30/93 Habte Selassie & Roy Hill
"The Joint Venture Formation Environment in a Sub-Saharan African Country: A Case Study of Government Policy and Host Partner Capability"
- SWP 31/93 Colin Armistead, Graham Clark and Paula Stanley
"Managing Service Recovery"
- SWP 32/93 Mike Sweeney
"The Strategic Management of International Manufacturing and Sourcing"
- SWP 33/93 Julia Newton
"An Integrated Perspective on Strategic Change"
- SWP 34/93 Robert Brown
"The Graduate Enterprise Programme: Attempting to Measure the Effectiveness of Small Business Training"

CRANFIELD WORKING PAPERS
List No 8, 1994

- SWP 1/94 Keith Goffin
"Repertory Grids in Market Research: An Example"
- SWP 2/94 Mark Jenkins
"A Methodology for Creating and Comparing Strategic Causal Maps"
- SWP 3/94 Simon Knox
"Re-engineering the Brand"
- SWP 4/94 Robert Brown
Encouraging Rural Enterprise in Great Britain - Britain's "Venturecash" Competition
- SWP 5/94 Andy Bytheway, Bernard Dyer & Ashley Braganza
"Beyond the Value Chain: A New Framework for Business Modelling"
- SWP 6/94 Joe Nellis
"Challenges and Prospects for the European Financial Services Industry"
- SWP 7/94 Keith Thompson, Panagiotis Alekos & Nikolaos Haziris
"Reasoned Action Theory applied to the Prediction of Olive Oil Usage"
- SWP 8/94 Sanjoy Mukherjee & Ashley Braganza
"Core Process Redesign in the Public Sector"
- SWP 9/94 Mike Sweeney
"A Methodology for the Strategic Management of International Manufacturing and Sourcing"
- SWP 10/94 Ariane Hegewisch & Henrik Holt Larsen
"European Developments in Public Sector Human Resource Management"
- SWP 11/94 Valerie Bence
"Telepoint: Lessons in High Technology Product Marketing"
- SWP 12/94 Andy Bytheway
"Seeking Business Improvement: A Systematic Approach"
- SWP 13/94 Chris Edwards & Ashley Braganza
"Classifying and Planning BPR Initiatives: The BPR Web"
- SWP 14/94 Mark Jenkins & Malcolm McDonald
"Defining and Segmenting Markets: Archetypes and Research Agendas"

SWP 15/94 Chris Edwards & Joe Peppard
"Forging a Link between Business Strategy and Business Re-engineering"

SWP 16/94 Andrew Myers, Andrew Kakabadse, Colin Gordon & Siobhan Alderson
"Effectiveness of French Management: Analysis of the Behaviour, Attitudes and Business Impact of Top Managers"

SWP 17/94 Malcolm Harper
Micro-Credit - The Benign Paradox

CRANFIELD WORKING PAPERS
List No 9, 1995

- SWP 1/95 Andy Bytheway
"Information in the Supply Chain: Measuring Supply Chain Performance"
- SWP 2/95 John Ward & Joe Peppard
"Reconciling the IT/Business Relationship: A Troubled Marriage in Need of Guidance"
- SWP 3/95 Kevin Daniels, Gerry Johnson, & Leslie de Chernatony
"Collective Frames of Reference, Recognition, and Managers' Mental Models of Competition: A Test of Two Industries"
- SWP 4/95 Alison Rieple
"Staffing as a Lever of Strategic Change - The Influence of Managerial Experience, Behaviour and Values"
- SWP 5/95 Grafton Whyte & Andy Bytheway
"Factors Affecting Information Systems Success"
- SWP 6/95 Andy Bailey & Gerry Johnson
"The Processes of Strategy Development"
- SWP 7/95 Valerie Bence
"The Changing Market for Distribution: Implications for Exel Logistics"
- SWP 8/95 Valerie Bence
"The Evolution of a Distribution Brand: The Case of Exel Logistics"
- SWP 9/95 Andy Bytheway
"A Review of EDI Research"
- SWP 10/95 Andy Bytheway
"A Review of Current Logistics Practice"
- SWP 11/95 Joe Peppard
"Broadening Visions of BPR: The Imperative of Strategic Integration"

- SWP 12/95 Simon Knox & David Walker
 "Empirical Developments in the Measurement of Involvement, Brand Loyalty and their Structural Relationships in Grocery Markets"
- SWP 13/95 Ashley Braganza & Andrew Myers
 "Issues and Dilemmas Facing Public and Private Sector Organisations in the Effective Implementation of BPR"
- SWP 14/95 John Mapes
 "Compatibility and Trade-Off Between Performance: An Alternative View"
- SWP 15/95 Mike Sweeney & Marek Szwajczewski
 "Manufacturing Standards of Performance for Success"
- SWP 16/95 Keith Thompson, Nicholas Thompson & Roy Hill
 "The Role of Attitudinal, Normative and Control Beliefs in Drink Choice Behaviour"
- SWP 17/95 Andy Bytheway
 "Information Modelling for Management"
- SWP 18/95 Mike Sweeney & Marek Szwajczewski
 "Manufacturing Strategy and Performance: A Study of the UK Engineering Industry"
- SWP 19/95 Valerie Bence
 "St. James's Hospital and Lucas Engineering Systems Ltd - A Public/Private Sector Collaboration in BPR Project A - Elective Admissions"
- SWP 20/95 Valerie Bence
 "St. James's Hospital and Lucas Engineering Systems Ltd - A Public/Private Sector Collaboration in BPR Project B - The Re-Organisation of Purchasing and Supplies"
- SWP 21/95 Simon Knox & David Walker
 "New Empirical Perspectives on Brand Loyalty: Implications for Segmentation Strategy and Equity"
- SWP 3/96 Kim James, Michael Jarrett & Donna Lucas
 "Psychological Dynamics and Organisational Learning: from the Dysfunctional Organisation to the Healthy Organisation"
- SWP 4/96 Mike Sweeney & Marek Szwajczewski
 "The Search for Generic Manufacturing Strategies in the UK Engineering Industry"
- SWP 5/96 John Baker
 "Agility and Flexibility: What's the Difference"
- SWP 6/96 Stephen Adamson, Noeleen Doherty & Claire Viney
 "30 Years On - What Have We Learned About Careers?"
- SWP 7/96 Keith Goffin, Marek Szwajczewski & Colin New
 "Supplier Base Management: An Empirical Investigation"
- SWP 8/96 Keith Goffin
 "Operations Management Teaching on European MBA Programmes"
- SWP 9/96 Janet Price, Ashley Braganza & Oscar Weiss
 "The Change Initiative Diamond: A Framework to Balance Business Process Redesign with other Change Initiatives"

CRANFIELD WORKING PAPERS
List No 10, 1996

- SWP 1/96 Andy Bailey & Gerry Johnson
 "Patterns of Strategy Development"
- SWP 2/96 Simon Knox & David Walker
 "Understanding Consumer Decision Making in Grocery Markets: New Evidence from the Fishbein Model"