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From benchmarking to business process re-engineering: a case study

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Introduction

The major means of improving quality has been the use of a systematic quality programme. In manufacturing, a great deal of literature has been written on total quality management (TQM), and the achievements of a number of Japanese companies undoubtedly confirm the value of this philosophy. Benchmarking, as a tool of TQM, has received growing concern from quality aware managers. Benchmarking originated in the US and the existing literature on benchmarking has been almost exclusively US-oriented. Europe lags behind the US in implementing benchmarking. For example, it was not until 1990 that Oak Business Developer conducted the first survey into the use of benchmarking in UK companies and found that there was a lack of awareness of benchmarking and ignorance of how to start the benchmarking process. Since 1991 conferences on benchmarking have increased in number. A survey conducted by the Confederation of British Industry (CBI/DTI, 1996) and Coopers & Lybrand revealed that more than two-thirds of the 105 respondents claimed to be benchmarking, with 82% intending to increase investment in benchmarking in the next 5 years. The importance of benchmarking was further highlighted with the formation of Benchmarking Centre Limited in 1991. Awareness of benchmarking in the UK was assisted to some extent by the use of BS 7850, the TQM 'standard' produced by the British Standards Institute (1993). However, it was not until the launch of the European Quality Award in 1992 and the UK Quality Award in 1994 that benchmarking gained further prominence in the UK.

Business process re-engineering (BPR) was developed in the late 1980s as a way of radically changing the way processes were carried out in organizations. That is, fundamental rethinking, radical redesign of business processes and radical operational changes were made to achieve dramatic improvements in important measures of performance, such as cost, quality, service and speed (Hammer & Champy, 1993; O'Neill & Sohal, 1998). The origins of BPR lie in the development and application of advanced information technology systems in business. Recently, business process management (BPM) has become popular (DeToro & McCabe, 1997; Fries, 1995).

This paper reports on the reasons for attempting and eventually abandoning benchmarking in favour of BPR and the development of BPR in Boots the Chemist (BTC) (a division of the Boots Company) (Kondouli, 1998). The study covers a period from the beginning of internal benchmarking in 1994 to implementation of the results in 1996 (Sykes *et al.*, 1997; Wai, 1996), evaluation and review in 1997 and the development of BPR to 1998 (Kondouli, 1998).

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Methodology

The theory of benchmarking, BPR and BPM were investigated via a literature survey. Primary data were collected via structured interviews with senior managers within BTC. This study examines the origins of both benchmarking in 1994 and BPR in 1997. At the first interview it was known that BTC had a TQM programme and that benchmarking was actively being practised (Wai, 1996). In 1998 it was known that benchmarking had been abandoned in favour of BPR. It was important to establish the reasons for this change of practice, so further interviews were carried out (Kondouli, 1998). Secondary data were collected in the form of annual reports and other data provided by the company on their benchmarking and BPR efforts.

Theory

The theory of benchmarking and BPR are covered elsewhere (Codling, 1992; Hammer & Champy, 1993; O'Neill & Sohal, 1998). However, some basic definitions are given here with a brief comparison of BPR, benchmarking and BPM.

Benchmarking

A definition of benchmarking developed at American Productivity & Quality Centre (APQC) in 1992 represents a consensus among some 100 US companies:

> Benchmarking is a systematic and continuous measurement process; a process of continuously measuring and comparing an organisation's business process against business process leaders anywhere in the world to gain information which will help the organisation take action to improve its performance (APQC, 1993).

Many benchmarking models have been used in the past, the most famous being the Xerox 10-step benchmarking process. Many companies have developed their own model to suit their own particular requirements (Sykes *et al.*, 1997). There are many types of benchmarking that can be employed and these can be categorized from the point of view of sophistication and time to complete. The spectrum from the easiest and quickest to carry out to the hardest and most sophisticated is, according to Watson (1993): reverse engineering, internal benchmarking, competitive benchmarking, generic benchmarking, strategic benchmarking and, the most difficult, global benchmarking.

BPR

BPR has been greatly analysed in the 1990s and aims at radical breakthroughs in performance. Hammer and Champy (1993) define BPR as follows:

> Re-engineering involves the fundamental re-thinking and radical re-design of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed.

Hammer (1990) and Ashayeri *et al.*(1998) give a definition of BPR as:

> This fundamentally or radically redesigns processes (through the application of enabling technology) to gain drastic improvements in critical contemporary measures of performance, inspired from a new mission, such as cost, process efficiency, effectiveness, productivity and quality.

Table 1. *Scope of TQM and BPR (Earl & Khan, 1994)*

	TQM	BPR
Change	Incremental	Radical
Focus	Current practice	Start again
Frequency	Continuous	One shot
Scope	Narrow, within functions	Broad, cross-functional
Participation	Bottom up	Top down
Risk and rewards	Low to moderate	High
Role of IT	Incidental	Major enabler
Aids	Ideas and suggestions	Methods and tools
Type of change	Work design	Structure, culture roles

The basic reasons for BPR are described by Chan and Peel (1998) and are classified into two categories: (1) external factors, which involve pressures on the organization from outside sources such as customers, competitors, changing industry and market conditions, governmental regulations or political pressures; and (2) internal factors, which involve pressures which occur within an organization such as the need to improve technology or automate, the need to increase efficiency, the need to reduce cost and the need to define or redefine strategic focus.

The basic premise of BPR is that the rapid redesign of critical core processes of a company will generate breakthrough improvements on the performance of the company and create the competitive advantage in the global market-place (Povey, 1998). BPR is supported by many authors and practitioners, while companies that have applied BPR have claimed dramatic gains as a result (Chan & Peel, 1998).

A Comparison of BPR and benchmarking

A comparison of the scope of BPR and TQM is given in Table 1 (adapted from Earl & Khan, 1994).

BPM

BPM is a management concept that combines elements of culture change, BPR and continuous process improvement (Fries, 1995). According to DeToro and McCabe (1997):

> BPM presents a more comprehensive array of improvement options and can help organisations avoid the tendency to fall prey to the hype of a new management fad.

Although the literature on BPM is limited, the following are useful definitions of BPM:

> A systematic, structured approach to analyse, improve, control and manage processes with the aim of improving the quality of products and services (Elzinga *et al.*, 1995).

> A structured approach to analyse and continually improve fundamental activities such as manufacturing, marketing, communications and other major elements of a company's operations (Zairi, 1995).

The main features of these definitions show that BPM is a structured, analytical process that is based on cross-functional teamwork and strives for continuous improvement of the core processes of the organization. Lee and Dale (1998) say that the core process owner and

team should continually monitor performance, assess results and look for improvement opportunities. This is, in effect, a Deming cycle or plan-do-check-act (PDCA) cycle. However, benchmarking can be used for the identification and improvement of these processes. It is unclear to us how, or if, BPM differs from good operations management or if BPM will provide better results than BPR in the future.

Case study: BTC, Nottingham

The Boots Company is over 100 years old and is a major retailing business. Other business areas include the manufacturing and marketing of health and personal care products and the management of retail property. BTC is a division of the Boots Company. Since our initial contacts in 1996 some divisions of the Boots Company, such as FADS and Do-It-All, have been sold, while the company has recently acquired a dental business. BTC, on the other hand, has diversified into new areas, including insurance and home shopping (via catalogue). The company has expanded its portfolio of stores overseas into the Republic of Ireland, Holland, Thailand and Japan (in conjunction with Mitsubishi).

Since 1996, the external environment has also changed. The approach of EMU has provided a focus for the company, since many suppliers and stores operate in countries which will be part of the 'first wave', such as the Republic of Ireland. As a result, BTC is working closely with the government and other retailers to determine what needs to be changed and to accommodate such fundamental changes to the way business is conducted. Competition from other retailers has also intensified.

Benchmarking at Boots the Chemist

In our earlier work (Sykes *et al.*, 1997; Wai, 1996), benchmarking of the promotion of the new merchandise line was studied. This project was an internal benchmarking study between the 1200 stores and was started in 1994. The project was brought about by the need for continuous improvement and was devised by the Operations Improvement Department. This department works to make sure that BTC stores operate in the most effective and efficient way. After a 2-year study by the quality manager of the Operations Improvement Department the best practices of each store were identified. The top 10 ideas were adopted from the best stores, targets were set and information sent to the rest of the stores. At this stage the store managers had the autonomy to judge and decide whether the ideas, targets and procedures were applicable, and it was the responsibility of the store manager to take any appropriate action if they wished. In BTC, benchmarking was only for internal use and a few competitive comparisons. BTC did not look at generic or best practice benchmarking.

Review of benchmarking at BTC

In July 1997 the evaluation and review of benchmarking led to two major findings. These were:

(1) Owing to the complexity of the business, it was impossible to determine which improvements in performance (usually measured as sales) were the direct result of changes derived from the benchmarking exercise. It was not possible for BTC to measure accurately the effect the recommended best practices had on the performance of the stores.
(2) Other more value-creating projects needed to be carried out and these were to take precedence over benchmarking. The BPR programme was one of these projects that

had been decided by top management. The scope of the business process redesign had increased and was being pushed by senior management. The decision to drop the promotion of the new merchandise line benchmarking project was taken by the Operations Improvement Department. In their opinion, benchmarking seemed to have run its course and there were not many benchmarking projects to be done. The only step that was taken was to communicate to the relevant stakeholders that, due to the approach of the cross-functional BPR work, further development of benchmarking would be halted. At no time did the Operations Improvement Department make any recommendation for implementing BPR, but simply dropped the benchmarking project.

Nevertheless, the benchmarking project received a great deal of positive feedback. The best practices that were circulated to stores were well received and often used. Surveys in some of the stores showed that the ideas were good, and the store managers had implemented some of them and saved time in setting promotional schemes. In some cases, it was felt that the service provided to customers had improved, despite reductions in staff resources at the time. The advantage of this project was that best practices came from BTC's own stores and could be accepted by the store managers, rather than being developed on a theoretical basis at head office. The problem was BTC could not categorically say that the increase in sales was due to benchmarking.

BPR: the new approach

BPR was applied to the company from the top. Senior managers felt that if BTC was to win as a retailer, it had to be more open and honest within different departments. An external consultant was also appointed to assist in the project application, during which BTC was taught about getting people together and about breaking barriers down. A lot of time was spent on team-building and, before workshops took place, employees from different functions had to get to know each other.

The idea was to take a fundamental look at the internal operations and to determine how BTC could improve the way it operated. This work involved groups of people from around the business working together to analyse every retail process and look for opportunities to remove, simplify or automate them. Part of this work was to include a detailed study of other retailers and how they had undertaken the same process and whether BTC could learn anything from them. BTC has decided to forge links with other retailers, most notably Sainsbury's. BTC has built up a relationship with other retailers by joint store visits and contributed to other retailer's projects on improving store operations. This approach sounds rather similar to external or competitive benchmarking in practice, but we are assured this is the variant of BPR adopted. Some of the processes that BTC have reviewed with BPR in the last 18 months are:

- how to manage the promotional campaigns;
- how to utilize in-store space to the most profitable effect;
- how to set up new product details and get them on to shelves in the stores;
- how to operate the in-store warehouses;
- how to forecast demand and place orders with suppliers;
- how to manage suppliers;
- how to use internal accounting systems.

BPR in BTC is claimed to have been a great success in making everybody in the business

feel included in the way the business operates. Hundreds of individuals have played a major part in BPR workshops and have had a direct say in how the company could operate more effectively. It is claimed that BPR is a more inclusive methodology which came about as the natural successor of benchmarking. We find similarities here between this approach and that of teamworking, empowerment and suggestion schemes. The company invests a lot of time and effort in BPR and no other improvement project is being carried out at present.

Results and discussion

BTC is about to apply the BPR ideas generated so far and implement them over the next 2 years. At that time it will be possible to see whether this process has been successful. One senior manager commented:

> . . . BPR came along at the right time. Commitment and top downwards sponsorship were the two elements that changed the culture of the company. If benchmarking was to be applied again, it would be done in the BPR way.

Benchmarking has ceased to be part of the BTC language. However, the principles of benchmarking continue to be applied as the company is always looking to improve its performance by comparing itself with other retailers, sharing the learning with each other and within BTC stores. One part of the BPR methodology involves searching for and applying best practices and the initial efforts with benchmarking have made this much easier to apply.

With benchmarking, the Operations Improvement Department within BTC had control over the scope of the approach taken, the process and type of benchmarking used and the information provided to the stores. The benchmarking project was less intrusive on the culture and operation of the company. With BPR, which is run by top management not the Operations Improvement Department, the scope has increased enormously and includes all departments within BTC, all processes, all the stores and head office. The BPR approach used was advocated by the external consultant, and the changes, which appear to have helped BTC to change its culture and attitudes within the business, were more wide-ranging and dramatic. However, the company needs to be cautious and not underestimate the difficulty in making radical changes in such a large organization.

Although the company does not have a project called benchmarking in place, it seems that the principles of the term are still in use under BPR practice. Common in both practices is the understanding of the need for improvements and more efficient working practices.

Two factors seem to have been catalytic for this change: (1) top management commitment and support of the BPR project was the main cause of the organization accepting the new idea; (2) the use of external consultants assisted in spreading the ideas and principles of BPR to the whole organization. BPR involves all processes. Detailed analysis and sharing of experiences is taking place and assists in determining the changes needed and the expected results. BTC benefits from BPR mainly in terms of communications improvement and the cross-functional teamworking. Table 2 compares the benchmarking and BPR approaches used at BTC.

Conclusions

This study shows how benchmarking has been superseded by BPR and how top management commitment is now present, whereas it was not present with benchmarking. This reinforces the views from the literature that incremental changes obtained through quality improvement programmes and benchmarking are not supported by top management, whereas 'big fix'

Table 2. *Comparison between benchmarking and BPR in BTC*

Issue/approach	Benchmarking	BPR
Direction	Continuous improvement, project by project	Radical changes
Scope	Operation Improvement Department	The whole organization
Training	In-house	External consultant
Organization and implementation	Operations Improvement Department and store managers	Senior management (top-down)
Focus	Operations in stores	Processes
Comparison	Internal and some limited competitive benchmarking	Competitive
Benefits	Improved communication between stores	Improved communications throughout the organization Employee involvement

radical changes are. The type of BPR described by the company seems to us to be more like BPM in that a number of features such as teamworking and employee suggestions are used to generate ideas for changes and that other techniques are also applied.

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