Business process management: a boundaryless approach to modern competitiveness

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Introduction

The literature on business process re-engineering, benchmarking, continuous improvement and many other approaches of modern management is very abundant. One thing which is noticeable, however, is the growing usage of the word "process" in everyday business language. This suggests that most organizations adopt a process-based approach to managing their operations and that business process management (BPM) is a well-established concept. Is this really what takes place? On examination of the literature which refers to BPM, it soon emerged that the use of this concept is not really pervasive and what in fact has been acknowledged hitherto as prevalent business practice is no more than structural changes, the use of systems such as EN ISO 9000 and the management of individual projects.

What is a process?

A process is an approach for converting inputs into outputs. It is the way in which all the resources of an organization are used in a reliable, repeatable and consistent way to achieve its goals.

Post Office Counters Ltd, for instance, define a process as: "A related series of actions, directed to the achievement of a goal, that transforms a set of inputs into desired outputs, by adding value".

Essentially, there are four key features to any process (*Bulletpoint*, 1996). A process has to have:

(1) predictable and definable inputs;

(2) a linear, logical sequence or flow;

(3) a set of clearly definable tasks or activities;

(4) a predictable and desired outcome or result.

What is business process management?

BPM is a structured approach to analyse and continually improve fundamental activities such as manufacturing, marketing, communications and other major elements of a company's operation.

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Essentially, BPM is concerned with the main aspects of business operations where there is high leverage and a big proportion of added value. BPM has to be governed by the following rules:

- Major activities have to be properly mapped and documented.
- BPM creates a focus on customers through horizontal linkages between key activities.
- BPM relies on systems and documented procedures to ensure discipline, consistency and repeatability of quality performance.
- BPM relies on measurement activity to assess the performance of each individual process, set targets and deliver output levels which can meet corporate objectives.
- BPM has to be based on a continuous approach of optimization through problem solving and reaping out extra benefits.
- BPM has to be inspired by best practice to ensure that superior competitiveness is achieved.
- BPM is an approach for culture change and does not result simply through having good systems and the right structure in place.

The importance of accredited quality systems

Accredited quality assurance systems such as EN ISO 9000 are essential and perhaps not enough by themselves in providing a culture based on process management. Quality systems are widely acknowledged as a starting point and a key element for the implementation of total quality management (TQM) (Oakland and Porter, 1994; Porter and Parker, 1993; Price and Chen, 1993). Various companies have reported the real value of quality assurance systems such as EN ISO 9000:

- Carnaud Metalbox plc found that the ISO 9000 registration process provided the foundation on which a quality culture was built and helped the company move on in developing the total quality process (Oakland and Porter, 1994);
- Tioxide Group Ltd found that the registration programme pushed quality to a much higher profile in the company as everyone was actively involved in the process. In addition, Tioxide saw themselves in a better position to meet the specific requirements of customers (Oakland and Porter, 1994);
- Esso Research Centre (UK) found that the use of the discipline of a recognized industry accreditation such as ISO 9000 helps in the integration of the quality process into the site culture. “The systematic approach as stipulated under the various elements such as calibration and maintenance of laboratory equipment, staff training, and sample

management assist in minimizing errors and increase the incidents of 'right first time'" (Price, 1990; Thiagarajan, 1996).

- Nissan Motors UK, Federal Express and Club Med, view operating standards as an important requirement in the quality stakes. They do not however see the need to have a recognized industry accreditation (Binney, 1992).

In many cases however registration to internationally-recognized quality assurance systems such as ISO 9000 is not done by choice but can be a necessary requirement imposed by the customer's minimal requirements. The common message which seems to be coming out from this discussion is that quality assurance systems can assist in the development of a process-based approach to competitiveness since the former's principles place emphasis on doing the "right things" "right first time" and to continue doing the same in a consistent, repeatable and predictable manner.

The importance of quality structure

Structure is often described as one of the "hard" elements of modern management. Although extremely important in the setting up of a BPM-based culture, structure on its own is incapable of changing the culture of the organization in order to do what the "blue prints" may be recommending. This is an area of great controversy. The proponents of business process re-engineering (BPR) through information technology means have suggested that this is the quickest and most effective way of bringing about change. Referring to their Model of Integrated Management based on the seven Ss, Peters and Waterman (1982) have presented the following analysis:

> In retrospect, what our framework has really done is to remind the world of professional managers that "soft" is hard. It has enabled us to say, in effect, all that … you have been dismissing for so long as intractable, irrational, intuitive, informal organization can be managed. Clearly, it has as much or more to do with the way things work (or don't) around your companies as the formal structures and strategies do.

Further, to make it explicitly clear that focusing on structural changes alone is not enough for inducing an effective process-based culture, Waterman *et al.* (1980) have presented the following justification:

> Our assertion is that productive organization change is not simply a matter of structure, although structure is important. It is not so simple as the interaction between strategy and structure, although strategy is critical, too. Our claim is that effective organizational change is really the relationship between structure, strategy, systems, style, skills, staff, and something we call superordinate goals.

The seven Ss model is sometimes referred to as the "happy atom". It reflects the following characteristics:

- multiplicity of factors – all influence how organizations behave;
- interconnectedness of variables – progress can be achieved by giving attention to all areas;

- all seven variables act as a driving force – at particular points in time, one or more of the seven Ss will emerge as the most critical variable(s).

In the process of implementing TQM, the type, role and usefulness of structure was found to vary from organization to organization (Black, 1993). It has also been suggested that differences in structural approaches may reflect cultural differences (Smith, 1994). Structure is a sub-servant of strategy and has to be assessed and reviewed in line with corporate objectives:

- In BP Chemicals the structure which served the purpose of introducing TQM has been dismantled and changed as the programme moved from the planning to educational, to the implementation phase (Stark, 1990).
- In Thomas Cork SML, the high-powered quality council set up at the outset to oversee the introduction of total quality, was disbanded and its functions taken over by the management committee once the quality initiatives got off the ground (Oakland and Porter, 1994).

The importance of strategy

The achievement of a BPM culture depends very much on the establishment of total alignment to corporate goals and having every employee's efforts focused on adding value to the end customer. This is acknowledged by many authors (Olian and Rynes, 1991) and all quality gurus. Deming (1986), for instance, through the first of his 14 points, "strive for consistency of purpose", stresses the need to link quality efforts within an organization to a larger sense of corporate purpose. The objectives of an organization are best communicated to all employees through a formal process of policy and strategy development and deployment. In fact many strategies fail to deliver because what is planned and what is implemented are not the same (Zairi, 1995; Easton, 1993). It is acknowledged very widely that policy deployment and implementation processes are difficult ones (Groocock, 1986).

Examples of effective management of strategic processes have a lot in common:

- When Rank Xerox Corp. made the commitment to adopt TQM back in 1984, their first step was to articulate a simple and direct quality policy and to communicate it to all employees (Coleman, 1991).
- Grundos have ensured that a quality policy is central to their efforts to win a sustainable competitive edge (Binney, 1992). Typically, it is found that the quality policy, strategy, goals, vision/mission and values are contained within the larger quality policy.
- At Procter and Gamble, through their CEO, strategic planning is management leadership's job (Bemowski, 1992; Davidson, 1995).
- Mitel Telecom Ltd UK views the publishing of its quality policy as the first evidence of its commitment to quality improvement (Boyer, 1990).

- Southern Pacific Airlines, in implementing continuous quality improvement, have emphasized that a strong and clear leadership statement of mission and strategy is essential. This statement must make clear that quality is the strategy.
- World Class organizations, such as Procter and Gamble, NEC Japan, Komatsu, Unilever Hewlett Packard, Rank Xerox, Florida Power and Light, in the process of ensuring success in developing, communicating and reviewing strategic plans at all levels, have heavily depended on a structured planning process termed: quality policy deployment (Zairi, 1994). The latter is defined at Rank Xerox as: "A key process which Rank Xerox can articulate and communicate the Vision, Mission, Goals and Vital Few Programmes to all employees. It provides answers to the two questions: What do we need to do? And how are we going to do it?" (Zairi, 1994).
- At NEC Japan, the quality policy deployment process (called *Hosin Kanri*) starts with the CEO first by setting the long-term policy in line with the aims and philosophy of the corporation (Smith, 1994).

The importance of process management

Kanji argues that most, if not all, organizational activities are considered as processes which cut across traditional functional boundaries. The functional approach creates barriers to achieving customer satisfaction. It allows control points between departments to be vulnerable to organizational "noise" (Edson and Shannahan, 1991) such as "turf protection" and poor communication. In contrast, however, the process-based approach improves customer focus and avoids the limitations of managing by vertical functions (McAdam, 1996).

Best in class organizations have recognized the need to move away from the traditional functionally-based approach to managing through a set of clearly defined customer-driven processes. This is certainly the case of Rank Xerox (Coleman, 1991), IBM (Snowden, 1995), ICL and Shell Chemicals UK (Sinclair, 1994).

The following are examples or world-class organizations where a radical change from a functionally driven to a process-based approach took place.

Elida Fabergé Ltd

Elida Fabergé is a leader in personal products, part of Unilever plc, with famous brands such as Sure, Lynx, Brut, Impulse, Organics, Timotei, Ponds, Vaseline, Mentadent, Signal.

Elida Fabergé Ltd relies very much on TQM principles in the running of its operations. Numerous benefits were achieved from the use of TQM, such as:

- reduction in changeover time;
- improved teamwork;
- reduction in NPD cycle time.

The driving themes of Total Quality are:

- continuous improvement;
- the importance of the customer;
- empowerment of employees;
- business activities as processes.

Elida Fabergé decided to undergo a radical change for the creation of a business process management culture, driven by the following factors:

- a number of key challenges which started to face company A, during the 1990s, such as the need to improve its service to retain customers;
- the need to move to a European manufacturing centre;
- the need to move to a European then global innovation centre for deodorant/fragrance products;
- the need to "right size" the company, to improve productivity and competitiveness.

Three cross-functional teams were created, each led by a director, and facilitation was provided by a consultant. The results led to the creation of:

- new organization based on five core processes, including business planning/strategy as one of core processes (Figure 1);

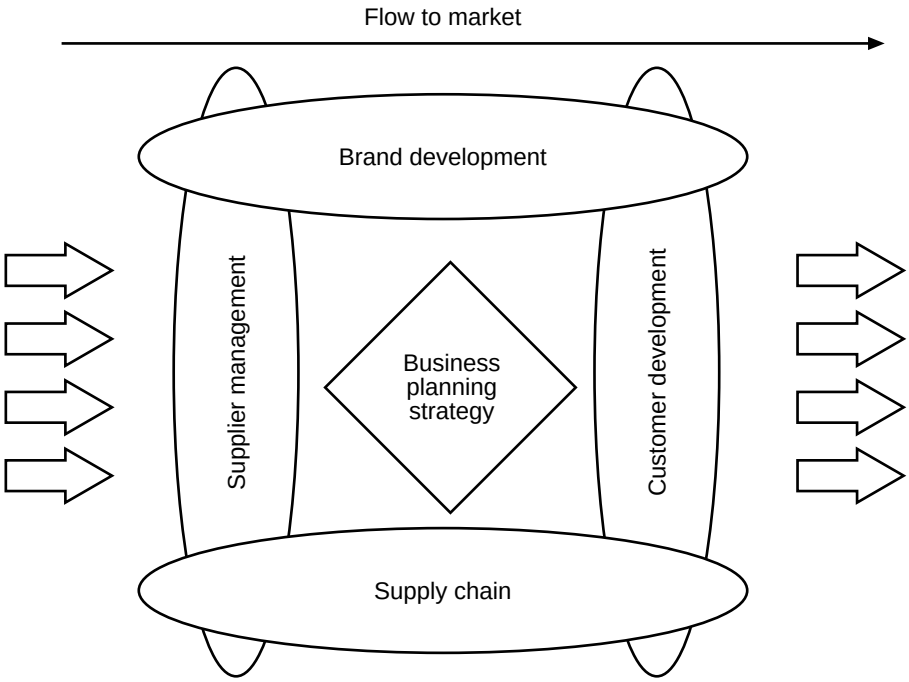

Figure 1.
Business process management at Elida Fabergé Ltd

- realignment of senior management responsibility;
- responsibilities based on natural boundaries between processes (not functional boundaries which cut across processes).

Rank Xerox Corp.
Rank Zerox (*Bulletpoint*, 1996):

- from a manufacturer of copier, printer and fax products, became a provider of document tools and services;
- appreciated that processes are liberating and empowering rather than constraining;
- focused on core processes to become customer focused and more efficient and effective.

British Telecom
British Telecom (*Bulletpoint*, 1996):

- changed from technology-based divisions to customer sector and international market-based divisions;
- used to manage through a project-based approach by focusing on the management of risk rather than effective planning, continuously improving routine processes, eliminating waste and duplication, learning from previous experience and injecting innovation and best practice.

SmithKline Beecham
SmithKline Beecham (*Bulletpoint*, 1996):

- realized that the customer has changed and therefore decided to move away from the doctor-driven approach;
- reorganized the four traditional divisions – pharmaceuticals, consumer health care, animal health, clinical laboratories – into three key areas: care delivery, care management, and care coverage, each area having many layers of sub-processes;
- recognizes that the big task now is to ensure that each process is mapped, documented, with performance measures and a consistent, repeatable and predictable performance;
- has recognized that it will take many years (at least five) to become a fully process-oriented organization.

Building a culture based on process management: examples of best practice

It emerged from the previous discussions that an effective approach to change management has to rely on a combination of soft and hard aspects of organizational systems. In particular, if a BPM culture is to ensue, there has to be a systematic approach to designing, prioritizing, managing, controlling and monitoring business processes, which can lead to superior competitive

standards. Performance, therefore, is very much dependent on the dynamism generated and the degree to which organizations can develop their capabilities to compete in the marketplace.

There are numerous examples of methodological approaches covered in the literature. One of the most comprehensive frameworks is perhaps the one recommended by Harrington (1995), the process breakthrough methodology.

The process breakthrough methodology

Essentially, this approach consists of five major phases which are sub-divided into 27 key activities. Table I illustrates the breakdown of the various key activities.

Harrington (1995) reports that by subscribing to sound systematic methodological approaches such as the one he initiated (see Table I), business process improvement can be made to work effectively and lead to positive results. He reported the following examples:

Phase	Key activities
Organizing for quality	Defining critical business processes Selecting process owners Defining preliminary boundaries Forming and training process improvement teams Boxing in the process Establishing measurements Developing project and change management plans
Understanding the process	Flowcharting the process Preparing the simulation model Conduct a process walk-through Performing process cost and cycle-time analysis Implementing quick fixes Aligning the process and the procedures
Streamlining the process	Process redesign (focused improvement) New process design (process re-engineering, process innovation, big picture analysis) Benchmarking the process Improvement, cost, and risk analysis Preferred process selection Preliminary implementation plan
Implementation, measurements and controls	Finalized implementation plan New process implementation In-process measurements Feedback systems Poor-quality cost
Continuous improvement	Major breakthrough in performance Process improvement must continue Natural work teams or department Improvement teams take over

Table I.
The key activities of the process breakthrough methodology

(1) McDonnell Douglas
- reduction in overheads: 20-40 per cent;
- inventory reduction: 30-70 per cent;
- material cost reduction: 5-25 per cent;
- quality improvement: 60-90 per cent;
- administrative cost reduction: 20-40 per cent.

(2) Federal Mogul
- reduction in NPD cycle time from 20 weeks to 20 business days, thus leading to a 75 per cent reduction in throughput time.

Harrington acknowledges that BPM is fundamentally a senior management responsibility. They have the task of determining the right vision for the organization, determine the top strategic priorities, design the right processes, break down walls and barriers to effective performance and put in place the key enabling factors for all employees to make optimum contributions.

Harrington (1995) argues that:

> The process and the system which controls it represents the real problem facing business today, not the people who work within the boundaries set for them by management. Employees must work within the process and management must work on the process. The improvement efforts and their supporting systems must be directed at the process and not the individual. This means that all functions must work together to optimize the efficiency, effectiveness, and adaptability of the total process.

Rank Xerox approach to process improvement and management

Rank Xerox Ltd is known for its leadership in TQM. Its achievements are reflected by its superior competitive position in the marketplace and the large number of prestigious awards and major accolades that the company has won over the years. What propels the quality improvement effort within rank Xerox is an initiative called "leadership through quality" which represents an integrated philosophy with the following key areas of focus:

- a *goal* for Rank Xerox to attain and maintain;
- a *strategy* to enable Xerox to achieve its competitive advantage; and
- a *way of working* or *process* to use for managing operation of the business, and at all levels.

Leadership through quality is based on the use of key tools, including the:

- problem-solving process;
- quality improvement process;
- benchmarking process;
- self-assessment process (business excellence certification model).

The last two will not be discussed in the context of this paper. However, the problem-solving process, which is illustrated in Figure 2, is used to enable people to close gaps in performance and to analyse problems, develop solutions and put action plans together (Zairi, 1996).

The quality improvement process. This is a more pervasive tool, it is not just related to internal problems. It focuses more on process routes for products and services which are delivered to the end customer. It is therefore customer-related. Table II illustrates the differences between the problem-solving process (PSP) and the quality improvement process (QIP). Although the differences are very apparent, the two approaches are, however, very complementary and the use of one will trigger the utilization of the other.

The QIP process has nine steps which are grouped into planning, organizing and monitoring stages (Figure 3):

(1) *Identify output.* The team is to brainstorm and define the desired output.

(2) *Identify customer.* This refers to customers of the desired output, outcome of using the QIP (often internal customers).

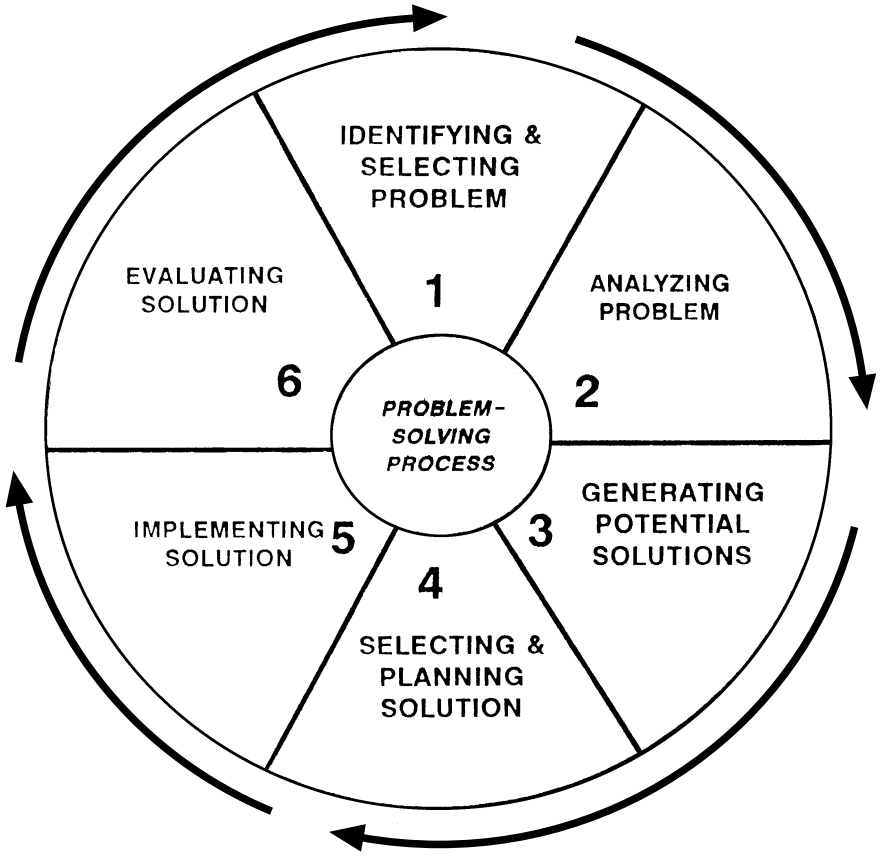

Figure 2.
Problem-solving process at Rank Xerox Ltd

(3) *Identify customer requirements.* This stems from Stage 2 and will prompt the project team (suppliers) to work closely with customers (beneficiaries of the output) to define what is required and therefore how it is going to be delivered.

(4) *Translate requirements into supplier specification.* All requirements are put into measurable and achievable deliverables.

(5) *Identify steps in the work process.* A step-by-step approach to how the output which is going to be produced needs to be developed, using perhaps existing work procedures and guidelines and producing a flow chart.

(6) *Select measurement.* Measures need to be selected to assess before, during and after scenarios and also measures need to be designed for continuous monitoring and prevention purposes.

(7) *Determine process capability.* This is to test the recommended process and to ensure that it can do the right things right first time. Otherwise the team can use the PSP to fine-tune the process for full capability to deliver customer requirements.

(8) *Evaluate results.* This is to answer the following two questions:

- Did the process work?
- Did the results of what we did meet customer requirements?

(9) *Recycle.* This is for continuous monitoring and the changing of steps following changes in customer requirement and exploiting best practice and new learning opportunities.

Process management methodology at Ford Motors

Ford introduced a new process management approach back in 1992, called quality operating systems (QOS). Ford felt there is a need for an operating system to guide improvement and optimization efforts. The following arguments were put forward in an internal document:

> Ford trained thousands of our people in the quality engineering tools and we developed Q-1 facilities only to find we needed more. QOS was the management "glue" that improved our success with our customers.

Table II.
The difference between the problem-solving and quality improvement processes at Rank Xerox Ltd

Problem solving	Quality improvement
Use when:	Use when:
• there is a gap between what is happening and what you want	• You need to improve the quality of a particular, currently existing output
• you want to move from a vague dissatisfaction to a solvable, clearly-defined problem	• You do not have agreed-on customer requirements for an output
• You are not sure how to approach an issue	• You are about to produce a new output

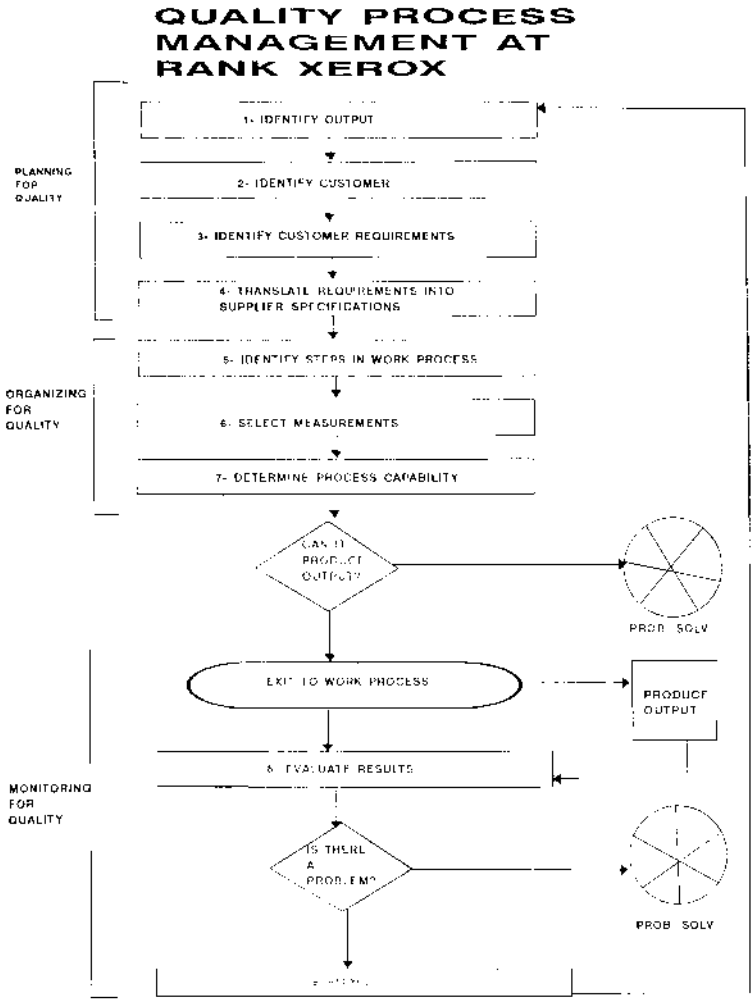

Figure 3.
Quality improvement process at Rank Xerox Ltd

QOS is defined as a systematic, disciplined approach that uses standardized tools and practices to manage business and achieve ever-increasing levels of customer satisfaction. QOS relies on the following sets of policies for its effective implementation:

- the assembly and analysis of existing data into a system of key process and result measurables which are correlated and can be quickly reviewed and acted on;
- a set of standardized management practices and system standards which maximize performance through a total systems approach;
- a set of standardized tools and methodologies for implementing continuous and breakthrough improvements in both manufacturing and non-manufacturing applications;

- the establishment of effective communication links between all people in the system through cross-organizational uniformity.

Figure 4 illustrates the QOS process at Ford. The QOS at Ford Motors is a generic process which can be applied in manufacturing and non-manufacturing operations. It is based on eight steps driven by a continuous involvement of all employees and the principle of Plan-Do-Check and Act. The reported benefits of QOS include:

- provides senior management with a tool to determine the correlation between customer expectations and company results;
- enhances empowerment;
- combines the power of team dynamics and management authority.

Process management at Post Office Counters Ltd

Post Office Counters Ltd (POCL) has over 25 million customers. In the late 1980s it appreciated the need to introduce quality in its business operations. In 1989, the "Customer First" initiative was launched. Customer First was defined as: "The way we manage the business in a way which continually focuses on the customer and harnesses everyone's commitment".

The business process improvement (BPI) methodology was introduced as a structured approach which will assist with the simplification and streamlining

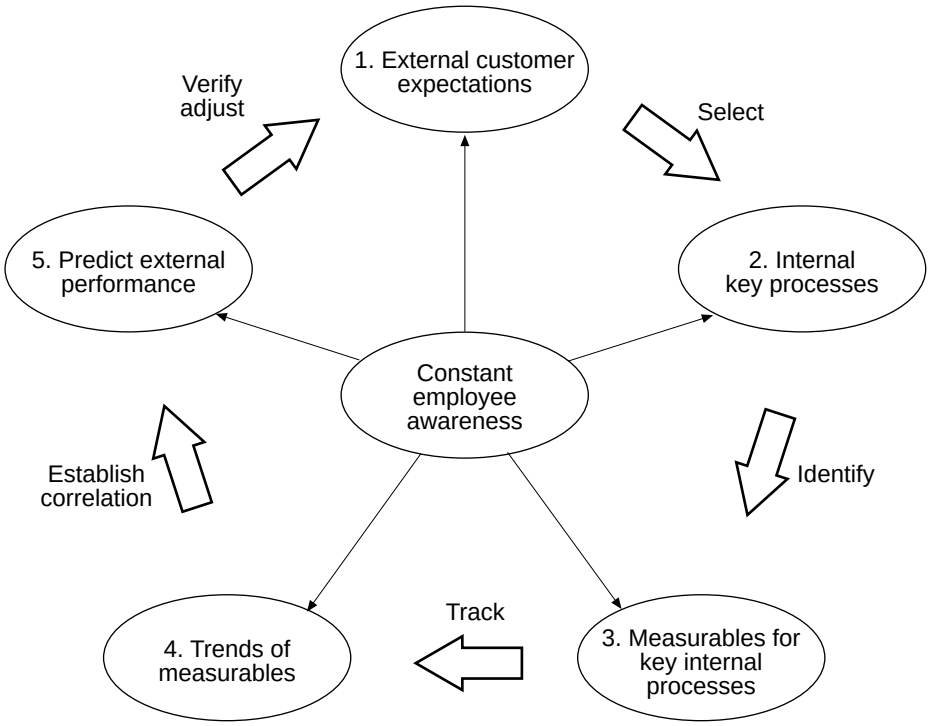

Figure 4.
Process management at Ford Motors

of business processes, thus leading to the efficient and effective use of resources such as facilities, people, equipment, time and capital.

BPI has three main objectives:

(1) Making processes more effective (producing the desired results);

(2) Making processes more efficient (minimizing the resources used);

(3) Making processes adaptable (being able to meet changing customer and business needs).

Similarly to Rank Xerox, POCL uses a quality improvement process (QIP) as a problem-solving process used within functions and cross-functions. Figure 5

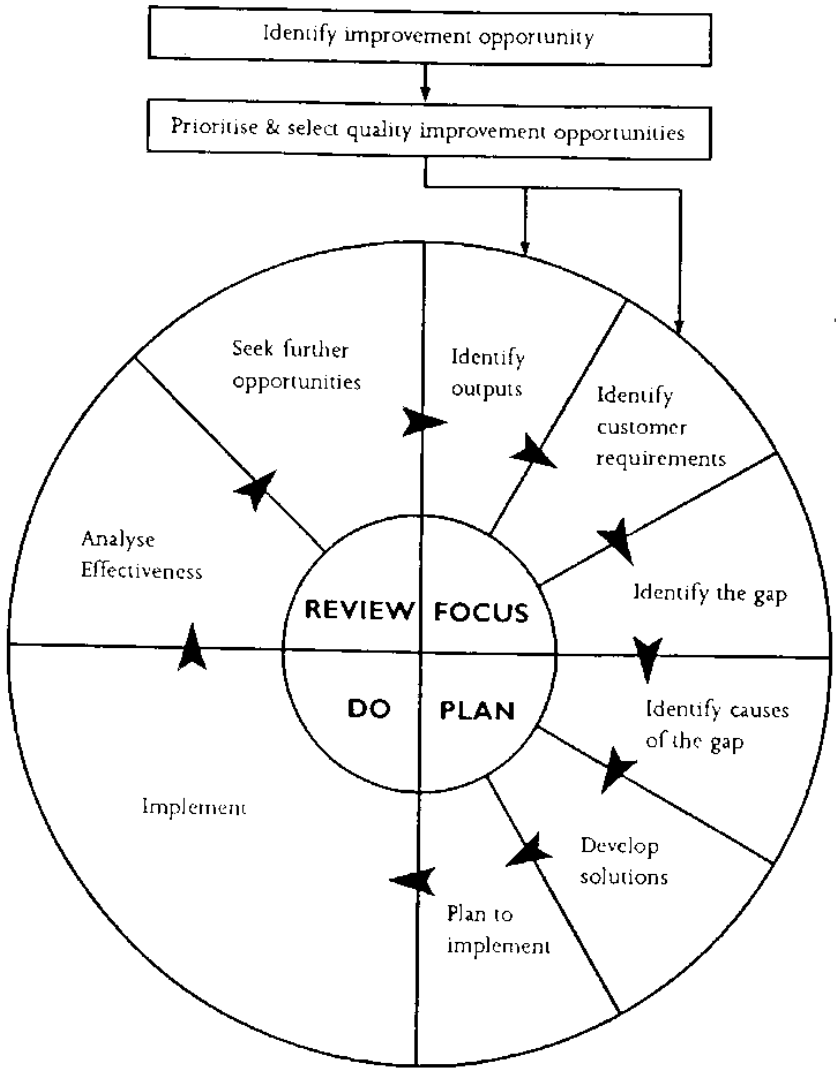

Figure 5.
Quality improvement process at Post Office Counters Ltd

illustrates the QIP at POCL. The BPI, however, starts and ends with customer needs identification and their fulfilment to customer satisfaction. BPI:

- provides a structured approach for focusing improvement activity on external customer satisfaction and business objectives;
- has a measurement framework which is clearly positioned;
- emphasizes the use of in-process measurement and display, especially promoting service level agreements.

Figure 6 illustrates the BPI at POCL, which consists of five phases, each with a specific purpose described in Table III.

Sustaining BPM – some guidelines

It is clear that BPM is an approach which is all-encompassing and is dependent on strategic elements, operational elements, use of modern tools and techniques, people involvement and, more importantly, on a horizontal focus which will best suit and deliver customer requirements in an optimum and satisfactory way.

The development of a culture based on BPM can be greatly assisted by using total quality principles, a systematic methodology, a problem-solving or QIP which can help with developing local solutions within functions or across functions, the use of performance measures for monitoring inputs, outputs and

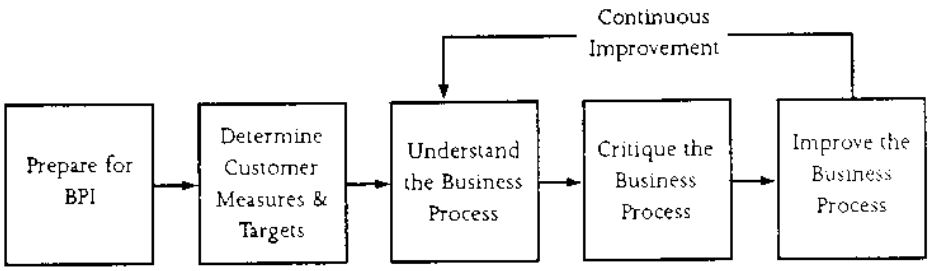

Figure 6.
Business process improvement at Post Office Counters Ltd

Phase	Purpose
Prepare for BPI	To ensure the success of BPI effort by building understanding and commitment
Determining customer measures and targets	Define success criteria for the BPI effort
Understand the business process	To understand all dimensions of the current business process
Critique the business process	To determine the best solution(s) to improve the quality and efficiency of the business process
Improve the business process	To implement changes that will improve the effectiveness and efficiency of the business process

Table III.
The business process improvement model at Post Office Counters Ltd

the control of each process, and a culture of continuous improvement based on learning from within and outside the organization.

The following is proposed as a set of rules which can assist in the development of a BPM culture:

- BPM is the way in which key activities are managed and continuously improved to ensure consistent ability to deliver high quality standards of products and services.
- Business processes are the critical and all-encompassing activities of design, manufacture, marketing, innovation, sales and others which deliver quality to the end customers.
- Process management also refers to the way companies constantly strive for excellence and how they stimulate innovation and creativity for process improvement and optimization.
- BPM also includes activities which refer to supplier quality management issues.
- The management of processes is conducted through performance measurement for setting targets for improvement and also for measuring product/service capability, process capability, supplier capability and efficiency/effectiveness aspects in terms of cycle time, quality standards, costs, etc.
- BPM, through continuous measurement and improvement will determine effectiveness of process design for streamlining and simplification. It ensures the introduction of best practice through benchmarking information and is based on valuable inputs from customers.
- Process management challenges practices (i.e. the dynamic aspects of each process and its behaviour) as much as the performance of each process (its output/metrics). Further, process management seeks to continuously strengthen all activities through the introduction of best practice, to ensure that internal standards of performance are competitively acceptable.
- BPM relies on a systematic methodology supported by a problem-solving methodology to strengthen newly-designed processes, to reinforce the linkages between various functions and to ensure that optimum performance can be achieved.

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