

# Framework of Key Processes and Quality Management

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## Abstract

**Purpose** – Many organizations integrate their performance improvement initiatives under the banner of process management methodologies. This paper resumes the spectrum of the most common Business Process Management, as is currently applied in practice and attempts to contribute to the problem of key business processes' identification.

**Design/Methodology/Approach** – The paper utilizes quality tools and techniques in the identification of key processes.

**Findings** – A quality based methodology to key processes' identification is presented.

**Research limitations** – Many of the detailed and already applied business approaches may have not been made publicly available.

**Originality/value** - Integration of quality tools and techniques with processes management.

**Short biography of the author(s)** - Please see the lines below the authors at the paper title area.

## **Introduction**

Changes in customer behaviour, powerful international competition, increased complexity of Organizational environment and rapid growth of IT systems have forced a lot of companies to realize that their way of operation needs to be changed and adapted to the new requirements. Performance improvement has become a strategic imperative, so that executives and managers are constantly trying to improve their organizations performance by implementing well known programs, such as Total Quality Management, Balanced Scorecard, BPR and Six Sigma. Companies like IBM, Hewlett Packard, Geon, General Mills, Texas Instruments, Owens-Corning, Duke Power have found that although each of these performance initiatives can reinforce business results, they need to be positioned under a process management philosophy if they are to be successfully integrated (Hammer, 2002; Armistead, 1999).

Business Process Management (BPM) is a structured approach to performance improvement that focuses on the disciplined design and careful execution of a company's end-to-end business processes. BPM is an approach 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. Process management draws the attention of executives on the framework of key processes, the outputs of which delivers organizational goals that satisfy stakeholders needs. Process management makes team members to understand how processes relate to other processes within the organization and with their customers. There is a range of tools which help teams to understand a process, many of which have been already used in quality management field.

Many researchers mainly from the management field have provided their insight and writings in process management. Some of them have focused their efforts for conducting research in this filed, most notably process management principles, frameworks, tools and techniques and best practices. However, it seems that key process identification is an interesting area, which requires special attention and research. Accordingly, the objectives of this article are:

- To highlight the main messages and principles that have been developed and applied in practice
- To draw attention to the problem of key business process identification
- To utilize quality tools and techniques for the identification of key processes.

## **1. Literature Review**

For the purpose of achieving the objectives mentioned above, first, a review of Business Process Management relevant literature is presented.

Since the 1990s, some researchers like Hammer, Davenport, Harrington, Garvin, Armistead and Zairi have focused their effort for conducting research in the filed of “process improvement” and many more relative terms. Each of them has made major contributions to Process Management as we know it today. EFQM Business Excellence Model, Malcolm Baldrige National Quality Award (MBNQA), Six Sigma, Balanced Scorecard and the International Quality Management Standard ISO:9001 stress the importance of the concept. The main principles and elements, as they have been developed and applied by the experts and the participated Organizations, follow.

### **1.1 The issue of process management definition**

The attention that is given to the processes via which a company creates its products, services and impacts its operations is one of the important characteristic traits of TQM, BPR, and Six Sigma. Today, the importance that is given in the processes of a company is widely recognized. Nevertheless, it is often accompanied by the uncertainties and the functional

difficulties of Management approaches. A recent study that has selected a sample of companies that applied the EFQM Excellence program indicated that one of the problems was the implementation of Process Management. In particular, the lack of a sound meaning creates much of the difficulty in defining an organization's business processes (Pritchard and Armistead, 1999). Another empiric research regarding "Business Process Re - engineering" reveals that companies often do not have a clear perception of the process management concept (Belmiro et al, 2000). Some definitions of process drawn from recent experts' works follow (Table 1). All of them suggest that a "process" is a set or a group of activities in their conceptual determination of a process.

Table 1. Definition of a process

Hammer (2002)	a group of activities that together create a desired result
Davenport (2005)	the set of activities it pursues to accomplish a particular objective for a particular customer, either internal or external
Harrington (1993)	any activity or group of activities that takes an input, adds value to it, and provides an output to an internal or external customer.
Armistead (1995)	conversion of inputs (resources) into outputs (goods and services)
Garvin (1998)	collections of tasks and activities that together -- and only together -- transform inputs into outputs
Zairi (1997)	an approach for converting inputs into outputs
ISO 9000:2000	a system of activities that uses resources to convert inputs into outputs

In addition to these definitions, the fact is that the word process has different associations across many academic domains including theology, sociology, anthropology, psychology and economics. The resulting ambiguity leads to a lack of shared understanding that causes confusion, frustration and wasted effort (Armistead, 1995, 1999). Armistead suggested that operations management is a useful place to start with in the quest for a definitive answer. This is because operations management is based on the concept of managing the transformation process and "Process" refers to the conversion of inputs (resources) into outputs (goods and services).

Garvin (1998) recommend that processes can be defined as collections of tasks and activities that together transform inputs into outputs. Common examples of processes include new product development, order fulfilment, and customer service; less obvious but equally legitimate candidates are resource allocation and decision-making.

Therefore, it seems that process is a group of activities that are related and organized, and they work together to create a result that add value to a customer or a stakeholder. However, the simplicity and the lack of a standard definition create much of the difficulty in defining further an organization's business processes.

## 1.2 Process Management principles

Understanding the process may be achieved by the formulation of a new set of common principles that correspond to and are required by the customer-oriented environment. Principles of process management (Hammer 1999, 1990; Armistead 1996, 1999, 2000; Zairi 1997), shown in Table 2, provide perhaps the essential characteristics and a point of reference to encouragement, involvement and effective kick off. For example, Hammer emphasizes on results and outcomes of the tasks, not the tasks themselves. This principle eschews Adam Smith's traditional management notion that efficiency is achieved by decomposing processes into tasks. Process orientation is seen by Hammer, Armistead, Zairi as a way of relating and linking processes within the organization in order to get closer to its customers whilst simultaneously managing and improving the organization itself and its competitiveness.

Table 2. Process Management principles

<b>Armistead (1996)</b>	<b>Hammer (1990)</b>	<b>Zairi (1997)</b>
<ol style="list-style-type: none"> <li>1. Designate a process champion.</li> <li>2. Know the process.</li> <li>3. Understand the linkages.</li> <li>4. Work on the trade-offs.</li> <li>5. Teach others about the process.</li> <li>6. Train within the process.</li> <li>7. Measure the process.</li> <li>8. Manage careers.</li> <li>9. Build specialist expertise.</li> <li>10. Improve the process.</li> </ol>	<ol style="list-style-type: none"> <li>1. Organize around results and outcomes, not tasks</li> <li>2. Have those who use the output of the process perform the process</li> <li>3. Subsume information-processing work into the real work that produces the information</li> <li>4. Treat geographically dispersed resources as though they were centralized</li> <li>5. Link parallel activities instead of integrating their results</li> <li>6. Put the decision point where the work is performed</li> <li>7. Capture information once and at the source</li> </ol>	<ol style="list-style-type: none"> <li>1. Mapping and documentation of major activities.</li> <li>2. Focus on customers through horizontal linkages between key activities.</li> <li>3. Systems support and procedures documentation.</li> <li>4. Performance measurement and assessment of key activities</li> <li>5. Continuous improvement</li> <li>6. Culture change through good systems and right structure.</li> </ol>

Their ideas are based on systems thinking analysis in the sense that it can provide a description of the components, their relationship and their interaction with all other components as well as the environment (Senge, 1990; Rummler and Brache, 1995). Identification of processes is a key principle towards being able to manage processes (Hammer, Zairi). This varies from identification of a small number of core business processes to attempting to identify all organizational processes. The importance of standardizing and documenting processes in order to deal with many contingencies is highlighted by Hammer, Zairi and Davenport.

Armistead and Zairi emphasize also the regular measurement, the learning and the continuous improvement of processes as a central part of the process initiative and the designation for a process owner or champion who will have responsibility for the whole process. Process teams have to be assigned to improve and in some cases manage the processes. Quality tools will be needed according to Armistead for helping teams towards process orientation and management.

These principles which are based on systems thinking can be used for making clearer the meaning of *process* as it is used in 'business process management' and many more relative terms. These principles should deal with the:

- Results that a company deliver to its customers to satisfy their needs and expectations.
- Identification of key process that deliver determined business results
- Standardization and documentation of key processes
- Regular measurement, learning and continuous improvement of processes.
- Assignments of process owner and process teams that will work the defined principles with the support of Quality and Management tools.

### 1.3 Strategic direction and results

One of the key principles and problems so far with process-oriented attempts at organizational change is the lack of connection to strategic results (Harrington, 1995; Hammer, 1990; 2001; Armistead C., Pritchard J.P., Machin S., 1999). This is due to the fact that 'Business process', 'Business process improvement', 'Continuous process improvement', 'Business process reengineering' and many more process-orientation attempts still seems to be approached in a mainly functional way (Hammer, 1990; Kaplan and Murdock, 1991; Garvin, 1995; Rummler and Brache, 1995;). In fact, Rummler and Brache (1995) rank the lack of connection to strategy as the number one problem with process orientation. Similarly, in another study, which describes the experience of North American and European organizations with Business Process Reengineering (BPM), an important conclusion was that BPM is not enough on its own. It has to be linked to strategic direction and results (The Economist, 1994).

The true potential of process orientation may not be realized unless combined is process orientation with systems thinking, as it was mentioned in the previous section. Adopting this point of view requires that processes produce a result that the customer desires, as well as trying to produce this result in the most optimal way. The focus is, in other words, both on effectiveness and efficiency. Without an understanding of the big picture and how the details fit and relate into the big picture, it is difficult for companies to prioritize and choose between potential opportunities. Thus, strategy and goals should provide direction for business processes and also direction for efforts to improve. Companies need to work with these strategic aspects. They need to develop a future vision. They also need to translate this vision into concrete strategy and goals in order to guide the process orientation effort. At this point, another important part is to prioritize elements that are of importance and elements that are of less importance. With a clear strategic choice and direction not all processes are equally important, not all processes are as interesting, and not all measurements are as relevant. Prioritizing can, in turn, save organizations time and resources.

### 1.4 Process orientation

Process orientation includes structural aspects such as classifying processes and defining the most important processes. These structural aspects in the context of Business Process Management are not an easy work to deal with and resolve (Armistead C., Pritchard J.P., Machin S. 1999). Findings of the authors suggest that processes may remain as a list of several sub-processes, or they may be refined and drawn into a process map with some identification of core or support processes.

In the literature there seems to be a number of competing views upon the kind and the number of processes needed to fulfil the aim of an organization. Harrington (1995, 1996, 2000) focuses on the organization's processes and the output that its customers receive. These processes are part of three building blocks, which are: Process breakthrough which refers to the critical business processes (overhead-type activities), Product process excellence that refers to product design activities and production process and Service process excellence that focuses on how to design, implement, and improve the service delivery process in both the service and product industries. Armistead (1996, 1998, 1999) considering the nature of business processes, suggests that it is useful to group processes into four categories: direction setting processes, operational processes, supporting processes and managerial processes. Davenport (2005) argues that companies seek to standardize processes for several important reasons. Within a company, standardization can facilitate communications about how the business operates, enable smooth handoffs across process boundaries, and make possible comparative measures of performance. Standard processes include *process activity and flow standards*, such as the SCOR (Supply - Chain Operations Reference), the "Process

Handbook", the "Process Classification Framework " and eTOM. These are models or frameworks that are used in different types of operational processes. Garvin (1998, 2001) reviewing a wide range of process theories has grouped them into categories of processes: organizational processes and managerial processes. These are linked together as interconnected sets of processes within a unifying framework. Hammer (2002) in turn, considers effective for companies simply to determine five to ten important business processes. Kaplan and Murdock (1991) state that an organization generally has no more than three to four core processes that truly drive the realization of its strategic objectives. Other academics argue that a larger number of processes is needed, and about 20 would be a reasonable number (Davenport, 1993).

The competing views upon the kind and the number of processes can, to a large extent, be explained by the lack of a standard definition of the process concept and somewhat different purposes with process orientation. Moreover, it seems that the findings of most authors suggest that companies distinguish between two kinds of processes: key or core processes the outputs of which accomplish the aim of the company and satisfy customer needs; and support processes. Companies identify between three and ten core processes, while some other companies need a larger number of core processes, which constitute the bridge between strategy and daily operations. The possible ways by which these core processes are identified is an interesting area for special attention and research.

### **1.5 The role of measurement in process thinking**

During the last decade, interest in measurements, not least business process measures, has exploded. Cost, productivity, time and quality are traditional categories that are also stressed in the total quality management (TQM) and process management literature (Harrington, 1998, 1999; Davenport, 1995, 1996). For example, the measurement of process dimensions such as how much time is needed and also how much it cost to fill a customer order can be equally important compared to whether the order was filled flawlessly or precisely or whether the product was delivered to its destination. The objective of a process to provide value to its customer was presented previously as part of a basic definition. Therefore, customer satisfaction is also a key measure, which influences the attainment of key process performance and needs to be an integrated part of process management (Davenport, 1996; Armistead, 1996). Other dimensions of process measurement that have been discussed during the last years include organizational learning and development of the human capital (Garvin, 1993; Armistead, 2000; Davenport, 2002). The importance of creating a balanced measure picture for the organization as a whole and some value creating processes in particular has been stressed by Kaplan & Norton (1996, 2004). Moreover, Davenport (1995) associates process measures with learning, using the term "double-loop learning" of Argyris and Schön (1978). Using the first loop, he measures a narrowly defined task and its outcome, focusing on the worker, the process and its output. The other loop of double-loop requires measures and evaluation of the broader goals of key processes, judging the relevance of the processes to the environment. In moving to a process enterprise, Hammer (1990, 1999) reinforces aspects of process performance that are most directly linked to achieving the organization's overall objectives.

The performance of a process should be measured using financial and non-financial outcomes and indicators. Measuring each process end- to-end and aggregating these measures up to top-level businesses results is crucial and very important. They create a set or a balanced system of measures that helps the organization manage the most important process across the different functional silos to achieve business goals that satisfy stakeholders' needs.

## 2. Identification of processes

One of the structural issues that is crucial in process management and is emphasized by the above analysis is the key process identification theme. Today, many companies facing ever more demanding customers are constantly trying to attain improved performance from their operations by following a number of popular programs, including TQM, BPR, Balanced Scorecard or Six Sigma, under a process management philosophy (Hammer, 2002; Armistead 1999).

To start down the road to process orientation, a company must first recognize and name its processes. The identification, naming and communication of a company's key processes is a important step. Identification of the wrong processes could cause important operational and financial problems for a company. But selecting the right processes concerned with setting the strategy for a company as well as managing resources within the company, products and services will be produced in an efficient and effective way that will achieve goals and satisfy needs. A number of articles have addressed the importance of identifying core processes key elements for making the decision on core process identification. Basically, the core processes of an organization achieve business goals and their identity depends on the company's industry and the key results it produces for its customers (Hammer, 2002; Armistead,1999; Kaplan and Murdock,1991, Davenport, 1993, 2005). Though, sometimes they are related to the form of the matrix organization already in place, core processes should be identified through a customer-driven analysis.

Armistead (1999) has found that companies conduct an analysis of its external market value chain and identifies its key business processes in relation to this. However, the initial identification of processes may lead to too many business processes. Thus, emphasis should be given on introducing BPM at the top level of the organisation, revealing that the majority of organisations identified fewer processes (at the highest level) than the early stage sample for both operational and support processes. Hammer (2002) states that generally, companies find it effective to identify five to 10 major business processes. The author considers process identification complicated due to the fact that a process transcends functional boundaries; for example, order fulfilment cross-functional areas and integrates customer service, logistics, finance and even manufacturing to serve a common goal. The process owner is defined as a key figure, ensuring peak performance of a business process which is derived from customer and shareholder needs as well as it is aligned and integrated to achieve the strategic goals. The process owner employs different methods and tools such as the SIPOC (supplier, input, process, output, customer) model and a process map to document process steps. Identification which business processes are critical, based not only on the enterprise's vision, but also the core competencies of the company is suggested by Meade L., and Rogers (1998)

Sinclair D. and Zairi M. (1995) in one of the early works on effective process management developed an integrated model of total quality – based performance measurement system. The second level of the system – model is referred to process management and measurement. The first step in this model system is to identify and map processes, including identification of critical partners and elements such as: process customers and suppliers (internal and external); customer requirements (internal and external); core and non-core activities; measurement points and feedback loops. One of the levels of Harrington's (1995) Total Improvement Management (TIM) pyramid refers on the identification of organization's processes, stressing the output that its customers receive. It is emphasised that the building blocks of the pyramid makes use of many different streamlining techniques, including value-added analysis, benchmarking, and information technology. As reported by a case study (Nickols,1998) another approach is to identify the outputs being delivered and then work backwards from there to identify the processes that yield these outputs, utilizing Quality tools and techniques.

Davenport (2005) referring to managers who have to decide which of their processes are core in order to make their strategies succeed and which can be performed in a relatively generic and low-cost fashion, emphasizes the need not only to consider traditional tools and techniques but also process standards. Especially, process activity and flow standards are used to communicate easily and efficiently when describing processes in an organization and organizing process benchmarks.

It seems that identification of key processes must be associated with critical partners and elements. These typically consist of customers or other stakeholders, strategy, business goals, and outputs. Also, several tools and techniques have been proposed for supporting process identification and analysis.

## 2.1 Tools and Techniques

The purpose of using tools and techniques is so that the process owner and teams can base their decisions on objective data rather than subjective feelings. By using techniques to support process analysis recommendations, teams will be better positioned to overcome barriers and obstacles and will more readily secure approval to proceed with process identification efforts. A single tool is a device with a clear function, and is usually applied on its own, whereas a technique has a wider application and is understood as a set of tools (McQuater et al., 1995). The quality and management tools and techniques can be mapped into representative key process themes or phases, as were derived above and shown in Table 3. The most important of them are presented as follows:

*Brainstorming* - Brainstorming is one of the most widely used process management techniques. It is actually a disciplined form of creative thinking (McFadzean, 1999, 2000). It is a technique of creative thinking and is used for decision making through the formulation of ideas from team members with regard to a subject (Pissarra I., Jesuino I. C. 2005; Brahm and Kleiner, 1996). Brainstorming has mainly exploratory application without however any restrictions to be used for other methods and approaches (Seaker and Waller, 1996). It is a tool that has been used to help reveal and clarify for the organization its common but sometimes unconscious assumptions about the nature and management of the key business processes (EFQM, 2000).

*Affinity diagram* - Affinity diagramming is the organized, consolidated output resulting from a brainstorming session in which large amounts of data have been generated (Babbar et al., 2002; Anjard, 1995; Evans and Lindsay, 1996; He et al., 1996). It is used to group facts, opinions, ideas and customer needs when the issues being investigated are numerous and complex and the thoughts on how to deal with the issue are in disarray.

*Relationship diagram* - Relations diagrams are simple graphical representations of cause and effect with respect to a given problem or process. It is used in the problem identification and description phase of strategic quality planning when there is a need to clarify and understand complex relationships (Boisvert, 2004; Anjard, 1995; He Z et al., 1996). It shows the logical connections between ideas and problems, while the affinity diagram shows the associations. It has a network structure while the Ishikawa diagram has a tree structure.

*Tree Diagram* - The tree diagram is used in a top-down manner to break down a subject into successive levels of detail until implementation (Stockle, 1995, Anjard, 1995). A main problem, a general goal or a main customer need can be broken down into its constituents. A business goal can be broken down into a series of process or activity goals. Therefore, it systematically shows the paths between objectives and gives a systematic view of how a result can be achieved. This allows a realistic implementation strategy to be generated and assessed.



Table 3. Technique application in the key process identification

Technique	Phase Data/Needs Gathering	Data Analysis	Decision- support	Consensus Building
Activity-based Costing (ABC)		X	X	
Force field analysis		X	X	X
Hoshin planning			X	X
Program Decision Process Chart (PDPC)		X		X
Quality Function Deployment (QFD)	X	X		
Survey/interview	X			X
SWOT analysis	X			X
Pareto Analysis		X		
Cause and Effect analysis		X	X	X
Gantt charts				
Διαγράμματα Διασποράς				
Control charts	X	X		
Flow chart			X	
Affinity diagram		X		
Relationship diagram		X		
Histograms		X		
Benchmarking	X	X		
Brainstorming	X			X
Performance cell	X		X	
Data modeling		X	X	
Process modelling		X	X	
Economic analysis	X	X	X	
Simulation		X		
Nominal Group Technique		X	X	X
PERT		X	X	
Checksheets	X			

*Matrix diagram* - The matrix diagram is a tabular tool to facilitate the identification of relationships between two or more sets of factors (He et al. 1996, Stockley, 1995). It is applicable to planning, failure prevention, and so on. At each intersecting point of the matrix between a vertical set of items and a horizontal set of items a relationship is indicated as being either present or absent. Strengths of relationship between elements can also be determined. In its most common use the matrix diagram takes an input often from the tree diagram and graphically displays their relationship with people, processes or other themes (Anjard, 1995). There are a variety of different types of matrix diagram available to deal with different numbers of groupings and different types of relationships between these groupings. It is used for quality function deployment, allocation of tasks, clarifying relationships between defect phenomena and their causes, etc.

*Quality Function Deployment* - The QFD also known as the “House of Quality” and introduced in 1972 by Akao (Miguel, 2005; Akao and Mazur, 2003), is used basically to translate the “voice of customer” into product features (Özgener, 2003). Some of the acknowledged advantages of QFD include development of cross-functional teamwork, easier documentation, and, above all, customer satisfaction (Govers, 2001, Politis, 2003). QFD has

been proved to be a successful tool to support a product design project. Moreover, the application of QFD to the process prioritization has been a popular approach.

All these techniques should be used to accomplish predetermined objectives. That is, to select a technique for a specific purpose and ensure that the purpose is fulfilled, as shown in Table 3. This matrix can be used as a guide for selecting techniques by key process identification phase. Putting together the critical phases of key process identification and considering the features of process management techniques a framework can be formed. Linking these factors into a system model or framework is a source for operational effectiveness.

## **2.2 Framework of key process identification**

Some of the articles in the literature combined popular models or frameworks to deal with process identification, such as the BEM-EFQM, the Baldrige Award, the Deming Award, the Balanced Scorecard and the 6 sigma.

Hammer (2002) considers six-sigma methodology to identify “primary” activities or “secondary” ones. The concept of the “value chain” is used to provide an answer. A starting point to identify core processes is the definition first of major activities through which companies provide value – products and services – to customers, and then of the primary Outputs of each process. Thus using six-sigma methodology, business processes are designed to be customer-driven, cross-functional and value-based. The concept of “Value chain” was defined by Michael Porter (1985) in *Competitive Advantage*. Value chain depicts a series of value-generating activities within an enterprise. It provides substantial linkage of activities to bottom line business results and integrates key activity functions. ISO 9001:2000 Quality Standard requirements, make also use of the concept of value chain, stressing the need for a company to identify the processes used for the Quality Management and determine the relation and the interaction of these activities (Biazzo, S. and Bernardi, G. 2003).

Armistead (1999) proposed the TQM frameworks, such as the Baldrige Award and the EFQM Model for companies that they want to address the key process identification problem. One of the core values and concepts of the American Baldrige Award is Process Management. The process Management Category examines the key aspects of an organization’s process management, including organizational value and key support processes. The identification of key processes are associated with a) key products or services, b) creation value for the company, customers, and other stakeholders, c) profitability and business success and d) key performance measures. The EFQM Excellence Model is a non prescriptive framework based on nine criteria (EFQM, 2003). Five of these are “Enablers” and four are “Results”. Excellent Organization implements their mission and vision by developing a stakeholder focused strategy. Policies and strategies are deployed through a framework of processes. This includes identifying and designing a key process framework.

Most of the articles considering models or frameworks to deal with process identification are limited only to state the critical elements of the problem. In summary, research on process identification covers only a number of issues related to the topic. None of the work reported is focused on putting together critical elements of process identification to form a framework. However, this paper utilises an extract from an EFQM Benchmarking Group report on Process Management (EFQM, 2000). EFQM links fundamental TQM concepts with the Business Excellence Model. Excellent results with respect to performance, customers, people and society are achieved through Leadership driving Policy and Strategy, People, Partnerships and Resources, and Processes. Processes are at the heart of the EFQM Business Excellence Model. Thus, Organizations need to have clear statements of Vision, Purpose and Values that allow them to set strategies and plans for achieving their Mission. These strategies and plans set out the Organization’s objectives and targets and it is the organization’s key processes that

will deliver those organizational goals. These elements are parts of the identified key process themes in Section 2 of this paper. The Figure 1, which is a slightly differentiated work of the EFQM Benchmarking Group, can be used as a suitable framework to key process identification problem.

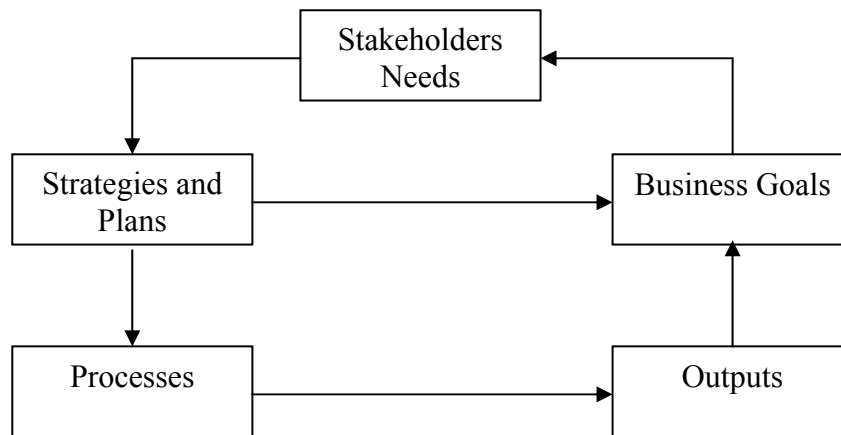


Figure 1. Key process identification framework (EFQM, 2000)

Based on this framework, the needs of all stakeholders help define the strategies and plans for the Organizations. These strategies and plans, in turn help to identify the key processes, the outputs of which, will satisfy the Stakeholders' needs. Being the basis for the key process identification framework, each of the principle as determined in Section 1.2 has number of direct or indirect link to different elements or phase of the framework. The process management techniques are used to accomplish predetermined objectives, as shown in Table 3. Key Process identification is accomplished by the process owner and cross-functional teams working together. The more useful the data that are gathered from all stakeholders needs the more effective key process identification efforts will be. It is important that when a technique is used to generate decision-support data, the data itself is neutral, balanced, and factual. At the conclusion of every phase in the framework, there should be team consensus on the results obtained, the meaning of those results, and the application of the results in subsequent steps.

At the heart of the framework lies a causal logic based on lead and lag types elements, grouped into five areas. The five cause-related chain areas are:

- Stakeholder: What do they want? How do they think?
- Strategy: How do we want to achieve?
- Process: How will we do it?
- Output: What have we achieved?
- Goal: How will we know?

As a consequence of the causal framework logic, the key process identification problem can be supported by using relevant techniques from Table 3.

## Summary and Conclusions

This paper summarizes in brief relevant knowledge associated with the application of process management principles and elements to key process identification. Basic process definitions are singled out and presented in conjunction with resulting value, customer and stakeholder. The lack of a standard definition creates much of the difficulty in identifying key business processes. However, principles based on systems thinking could make clearer the meaning of

*processes*. These principles should deal with company's results, identification of relevant sub-processes, standardization and measurement of processes, learning and continuous improvement, as well as process owners and process teams identifying, utilising the appropriate supporting tools and techniques. Companies distinguish between two kinds of processes: key or core processes and support processes. Companies identify between three and ten core processes, which constitute the bridge between strategy and daily operations. The performance of a core process should be measured using a balanced system of financial and non-financial outcomes and indicators that help the organization manage the most important process to achieve business goals that satisfy stakeholders' needs. Stakeholders needs, strategies and plans for the Organizations, processes, outputs of processes, and business goals that are critical elements of process management are revised and introduced into a key process framework.

In the context of the proposed framework, selected Quality and Management tools and techniques may be utilised in key process identification. Further work is aimed to refine the proposed framework and detail the use of selected tools based on key process identification.

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