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The identification of key business processes

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The identification of key business processes

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San Jose State University, 1992

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**THE IDENTIFICATION
OF KEY BUSINESS PROCESSES**

**A Thesis
Presented to
the Faculty of the Department of Psychology
San Jose State University**

**In Partial Fulfillment
of the Requirements for the Degree
Master of Science**

**by
Lianne R. Updike
August, 1992**

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The Identification of Key Business Processes

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Running head: KEY BUSINESS PROCESSES

Footnotes

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Abstract

This study documents how leading organizations in the field of Business Process Management and Reengineering identify their Key Business Processes and makes a comparison between the approaches put forth by earlier writers and the methods that were actually being used. A content analysis was done on the coded interview data collected from the 16 organizations participating in the study. Seven overall steps were developed as a schema which could be used to describe their identification procedures. The identification procedures were then organized into five distinct methods in terms of the seven steps. The similarities and differences between previous approaches and the five methods are discussed. Overall, organizations are using identification methods which utilize more factual data. This indicates that organizations are realizing the importance of correctly identifying Key Business Processes and are therefore willing to spend more time and resources in the effort.

The Identification of Key Business Processes

In the past quality has been viewed by American companies as an unaffordable luxury (Pall, 1987). Following WWII the United States' economy had fully recovered from the great Depression and beginning in the early 1950s people finally had the money to buy what they had gone so long without. At the same time, U.S. industries had to satisfy the domestic and world demand, which was incredible (Dobyns & Crawford-Mason, 1991). For example, in 1948 only 54 percent of American families owned automobiles; by 1956, 73 percent did. For U.S. industries, quantity was the key. "Make it in mass, get it out the door, and if something's wrong, someone else will fix it" (Dobyns & Crawford-Mason, 1991, p. 18).

This view began to change in the late 1970s, when several U.S. companies began to lose market share both at home and abroad. Between 1978 and 1982, for example, both Ford Motor Company and Xerox experienced a 50% drop in sales, the result of foreign competition (United States General Accounting Office [GAO], 1990). It was clear that "an international quality revolution had arrived and that U.S. companies did not know how to respond" (GAO, 1990, p. 12). U.S. companies began to recognize quality as the key factor leading to competitive success and business expansion in both national and international markets (Pall, 1987).

Traditionally, quality in the U.S. was handled by specialists who determined the acceptable levels of product variability and performed quality control inspections on the factory floors (GAO, 1990). This was the first step towards quality for the U.S. In earlier times this method worked well, for example, "the master checking his apprentice's work, the buyer checking the craftsman's product"

(Dobyns & Crawford-Mason, 1991, p. 14). However, in mass production this method was seen as expensive and wasteful. A quality inspector could only determine good products from bad after they had already been made, and it cost nearly as much to make products wrong as it did to make them right (Dobyns & Crawford-Mason, 1991).

One reason why quality in America has undergone little or no change is a prevailing assumption that quality originates in the quality department and is the responsibility of quality professionals (Pall, 1987). Foreign competition, however, viewed quality as everyone's job (GAO, 1990). In order to compete, a new view towards quality needed to be adopted. Gulden and Reck (1991) explain that "quality has moved far beyond the institution of quality control measures to reduce product and process variability and remove defects. It has become a state of mind in the executive circles of many organizations, a concept for empowering the organization to deliver what the customer wants" (p. 2).

Americans began by importing quality ideas from Japan in the early 1970s. One of the first ideas to be imported was quality circles. It involved small groups of employees who met voluntarily to discuss ways of improving their own work and to make suggestions for improving the organization (Dobyns & Crawford-Mason, 1991).

Two differences between the Japanese and American versions of quality circles guaranteed a lower level of success in this country than in Japan. First, Japanese workers met on their own time, while Americans discussed quality improvements on company time. Second, Japanese employers implemented the suggestions recommended by the quality circles, while their American counterparts did not (Dobyns & Crawford-Mason, 1991).

Another method of quality improvement adopted by Americans was statistical quality control, the idea that the variability of each part manufactured was controlled and kept within determined parameters (Dobyns & Crawford-Mason, 1991). The overall picture was also kept in mind, because when the end product was assembled the variabilities multiplied and easily produced defective products. Thus, a goal of reaching zero variability and perfection was instilled.

Although the newly adopted quality efforts were wide spread, both quality circles and statistical quality control were not enough by themselves. It is important to remember that each is only a tool, only two of many quality tools (Harrington, 1987). What was felt to be needed was a new way of looking at the organization, one that instills a total quality attitude throughout the organization and involves all levels of management.

Business Process Management (BPM) has been viewed as a method for managers to improve quality (Harrington, 1987). Rummler and Brache (1990) define BPM as "a set of techniques for ensuring that Key processes are continuously monitored and improved" (p. 131). A process is defined by Rummler and Brache (1988) as "any activity or group of activities that takes an input, adds value to it, and provides an output to an internal or external customer" (p. 9). Put more simply, a process is how work gets done. Processes vary in complexity within the organization from macro-processes, which span the entire organization and cross over several functions, to micro-processes or subprocesses, which occur within macro-processes (Rummler & Brache, 1990; Juran, 1988).

Business Process Management encourages management to view the organization horizontally, instead of the traditional functional or vertical view (Rummler & Brache, 1988). Harrington (1987) sees BPM as "a strategy that takes

maximum advantage of the effectiveness of the functional organization and drives the process to ensure that all activities provide maximum benefit to the company" (p. 136). This allows the management of processes which flow horizontally to occur. When management views the organization vertically, the scope of the process is perceived to go only as far as its functional boundaries. Such a limited view can cripple an entire organizational process, or macro-process, especially when individual functions maximize only their own part of the process.

Example

The sales function is operating at maximum efficiency and has mastered the management of their individual processes. As a result, they are experiencing sales at an accelerated rate. The manufacturing function, on the other hand, has not reached the same level of efficiency. Thus, manufacturing can not supply the demand created by sales. The result: A crippled macro-process, "customer order fulfillment," and a number of unhappy customers who have purchased products through sales, but have yet to receive their products.

Business Process Management solves the problem of suboptimization in the example above by moving the focus from inside one function to all the functions that the process encompasses company-wide. The "customer order fulfillment" process, illustrated above, crosses over several functions within the organization. This cross-functional process requires information from the manufacturing, shipping, and sales function in order to increase the quality of the process.

The quality concept Reengineering also focuses on the improvement of business processes (Hammer, 1990). Gulden and Reck (1991) explain that

Reengineering involves "the radical redesign of the business processes, organizational structures, management systems and values of an organization to achieve breakthroughs in business performance" (p. 2). Its underlying premise is that a majority of our present business processes are virtually unchanged from their original state developed many years ago (Gulden & Reck, 1991). Thus, there is a need to break away from these outdated business processes and develop new ones.

Business Process Management and Reengineering are both based on the premise that "superiority in business process performance is critical to competitiveness" (Gulden & Reck, 1991, p. 3). Reengineering and BPM complement one another by working together to improve business processes. While BPM is continuous and required on a regular basis, Reengineering involves the periodic radical redesign of business processes to achieve breakthroughs in business performance.

To ensure the successful implementation of BPM and Reengineering, a prescribed series of activities has been developed for each. Rummler and Brache (1991, p. 21) recommend the following first four activities for BPM:

1. Identify the "Critical Business Issue" that has impact on multiple functions
2. **Identify the "Key Process" that has the greatest influence on the issue**
3. Identify Process Improvement team and leader
4. Schedule team meetings

Davenport and Short (1990, p. 14) recommend similar activities for Reengineering business processes:

1. Develop business vision and process objectives
2. **Identify critical processes to be redesigned**

3. Understand and measure existing processes
4. Identify informational technology levers
5. Design and build a prototype of the process

In both the above quality efforts one of the first activities is to identify the key or critical processes within the organization. This step is seen as one of grave importance to the success of both quality efforts and not something to casually pursue (Davenport & Short, 1990; Gulden & Reck, 1991; Harrington, 1991; Kaplan & Murdock, 1991). Harrington (1991) explains that "selecting the process to work on is a very critical step in the total business process improvement cycle. A lot of effort can be wasted, and the program can be dropped because of lack of interest and payback, if the wrong processes are selected" (p. 36). In addition, Kaplan and Murdock (1991) argue that there is considerable value in investing a lot of time and effort at the outset in defining the Key Business Processes (KBP). The purpose of this study is to examine how leading organizations in the field of quality identify their KBP.

A limited amount of research has been done to document the procedures used by organizations to identify their KBP. Davenport and Short (1990) propose two approaches which identify KBP to be reengineered, the Exhaustive and the High-impact approach. The Exhaustive approach involves the identification and prioritization of all organizational processes. Once the processes are identified, a management team begins the task of prioritizing the list based on criteria. For example, Xerox managers prioritized their processes on the basis of which processes needed information technology support the most (Davenport & Short, 1990).

The High-impact approach involves management's subjective identification of only the most important processes. This approach works under the assumption

that most organizations have an idea of their most critical processes and those processes that are in most need of help. Top management simply picks the processes they want reengineered. In some cases management groups come together to decide on the process to be reengineered.

Neither of these approaches seems objective nor adequate to provide organizations with accurate identification of their critical KBP. The Exhaustive approach is time consuming, usually taking over three months to complete. It produces a long list of processes; the organization barely has the time and the resources to address the top few, let alone all of them. The High-impact approach, on the other hand, takes much less time. However, the decisions are not based on any factual data, but rather on the subjective opinion of management.

As an alternative to Davenport and Short's two methods, Harrington (1991) provides organizations with four approaches to identifying KBP. The first approach, entitled the Total approach, involves the identification of all the organization's processes. This approach is used when organizations want improvement efforts to occur on an organizational-wide basis and in all areas of the organization at once. As with Davenport and Short's (1990) Exhaustive approach, the Total approach can be time consuming. In addition, Harrington (1991) points out that the normal ongoing business of the organization is neglected and that the improvement effort is too large, resulting in a lack of focus and coordination.

Harrington's (1991) second approach, the Management Selection approach, is similar to the High-impact approach developed by Davenport and Short (1990). Although, both focus on problem areas identified by management, the Management Selection approach is more structured as it requires management to develop two lists of approximately twenty processes. The first list contains the processes that are

critical to the business, while the second list contains the processes that are presenting the biggest problems to the organization. These lists are then combined. Processes appearing high on both lists are considered the KBP. As with the High-impact approach, the Management Selection approach is based solely on subjective opinion and not factual data.

The Weighted Selected approach, Harrington's (1991) third approach, involves management's subjective rating of each process on four criteria. These criteria include the changeability of the process (how difficult the process is to change), its performance (how dysfunctional is the process), the impact on the business if the process fails, and the impact on the customer if the process fails. A high rating indicates that the process can easily be changed, or that it will have a high impact on the organization if it fails. After the processes are rated, the scores are added together and the processes with the highest scores are considered the KBP. Although this approach may seem less subjective than Harrington's previous methods, management perspectives may not be supported by factual data. In addition, upper management may influence the decision and "pet projects" may be identified (Harrington, 1991).

Harrington's (1991) final approach, the Informed approach, is the only one based largely on actual data collected from customers and internal operations instead of subjective opinion. It is an objective approach for prioritizing business processes, "based on the importance of the process (as determined by external customer expectations) and the degree to which the process can be improved (as determined by its current quality)" (Harrington, 1991, p. 39).

The Informed approach provides the most advantages for organizations when identifying their KBP. This approach is based on actual customer expectations,

emphasizes processes with the greatest potential for improvement, and are determined based on facts, not opinions. However, an important disadvantage still remains. Because the Informed approach is based largely on actual data collected from customers and internal operations, it is more time-consuming than previous approaches.

Little empirical work has been done to see how KBP are identified. Therefore, the purpose of this study is to document how leading organizations in the field of BPM and Reengineering have identified their KBP and to organize them into usable methods. The goal of this analysis is to test whether the previous approaches described are in fact being used or if new and improved approaches need to be developed. Thus, this information may either support or disconfirm the previous approaches that have been discussed, as well as possibly document new approaches currently being used.

Method

Subjects

A total of 16 subjects participated in the study. Management levels ranged from internal consultants to VP, Director of Total Quality management, with upper management representing the average subject. Subjects were initially identified through their organization's reputation regarding quality efforts and recommendations by individuals in the quality field.

Potential subjects were screened using specific selection criteria. First, subjects had to represent a process oriented organization focused on KBP. This was determined by asking potential subjects if their organization was viewed in terms of

processes and if they were focused on only their most critical processes. Secondly, the organization had to have a procedure in place to identify KBP. This was determined by asking the potential subject if there was such a procedure in place. Finally, subjects had to be very knowledgeable regarding the identification procedure used by their organization. Again, this was determined by asking the potential subject if they were the most knowledgeable person in the organization regarding their procedure for identifying KBP.

Organizations represented by the subjects included pharmaceutical, communication, defense and computer industries. The size of the organizations ranged from 136 to 374,000 employees with a mean of 90,000 employees. Fifteen out of 16 organizations were located in the United States, including five eastern, two central and eight western locations. The sixteenth organization was located in Europe.

Instruments

Nine open ended questions, provided in Figure 1, were developed and asked during the subject's interview. The questions were chosen to investigate four specific areas. The first area was the amount of experience the organizations had in identifying KBP. For organizations with more experience, questions were chosen to determine how their procedure has changed and evolved to improve how KBP were identified.

The second area focused on was the steps used by the organizations to produce their list of KBP. It was assumed that some parts of each organization's procedure would overlap with others. In order to more easily identify these overlaps between organizations, subjects were asked to break their procedure down into

1. How many times have you gone through your technique for identifying your key business processes?
2. Please describe the major steps you've gone through to identify your key business processes.
3. Who (level of management) is the 'owner' of the technique used to identify key business processes within your organization, division or function?
4. Which steps in the technique were most/least successful?
5. How many key business processes were identified?
6. How is your most recent identification technique different from techniques you have used in the past?
7. Overall, how successful were you in identifying your key business processes?
8. If you feel that you were not successful, what do you think the causes might be? (Was it because of the identification technique or outside barriers)
9. How well did the identification technique work for the organization, division or function overall? (In terms of money, time and resources required)

Figure 1. Nine open ended questions used during subject interviews.

finite steps. This also made the procedures more understandable for the interviewer and less likely for the subject to leave out important information.

The third area was the level of management involved in identifying the organization's KBP. It was important to determine if only a particular level of management was involved with the identification of the organization's KBP or if several different levels have been involved in the procedure.

The final area examined was how successful the organizations were in their identification effort. It was assumed more experienced organizations would have more efficient identification procedures, because they have knowledge gained from previous attempts.

Procedure

Those subjects who met the criteria were asked if they would agree to participate in a study to determine how leading quality organizations identified their KBP. Subjects were interviewed for approximately one hour either in person or by telephone, depending on the subject's location. All but one interview was recorded in order to ensure the quality of the data.

During the interview, each subject was asked nine questions in the same order. Additional questions were asked when needed to clarify the subjects' responses. Five subjects described more than one identification procedure occurring within their organization. This resulted in a total of 21 procedures examined in the study.

Each subject's tape recorded interview was transcribed to ensure that verbatim responses were recorded and used in the content analysis. The interviews were then coded to extract the subject's specific answers to each of the nine

interview questions. A list of criteria for coding answers to each of the interview questions is provided in Appendix B.

Various descriptive statistics were used to describe the length of time organizations have been involved in identifying KBP, the number of KBP identified, and the members of the identification group.

A content analysis was done on the coded interviews to organize the data. Each subject's identification procedure was broken down into generic steps which could be manipulated and reorganized to describe any of the identification procedures. An affinity diagram was then used to organize the data. An affinity diagram is a tool that gathers large amounts of language data, organizes it into groupings based on the relationship between each item, and defines groups of items (GOAL/QPC, 1989). The steps were then organized into five different methods which represent the identification procedures examined in this study.

Results

The organizations in the study have been identifying their KBP for an average of four years, ranging from two and a half months to eight years. Organizations in this study have used their procedure for identifying KBP an average of five times, with a range of 1 to 30 and a mode of one.

The number of KBP identified for each organization ranged from 1 to 15, with an average of six. A breakdown of the number of KBP identified in four different scopes within the organizations is provided in Figure 2. While some organizations in the study identified the KBP for the entire organization, others identified the KBP for a subset of the organization. For example, an organization could be interested in identifying the KBP for a manufacturing function (functional

<u>Scope of Processes</u>	<u>Range</u>	<u>Mean</u>
Organization	3 - 15	7.20
Group of Divisions	5 - 8	6.75
Division	1 - 15	6.10
Function	1 - 9	4.75

Figure 2. The mean and range of the four scopes of interest examined in this study.

scope), a sales division (divisional scope) or the entire organization (organizational scope). The information provided in Figure 2 suggests that both the range and the number of KBP identified becomes smaller as the scope of interest, the scope for which KBP were identified, becomes smaller.

In all but one case, the KBP were identified by groups or teams rather than by individuals. The management levels participating in the groups ranged from the president and the president's direct reports to line employees. These groups were classified as either upper ($n=3$), middle ($n=13$) or lower ($n=5$) management level. The upper level was defined as the president and the president's direct reports. The middle level consisted of a group of general managers (GM), a GM and functional managers, or a functional manager and the team members. The lower management level consisted of program managers, team members and employees.

Seven overall steps were developed as a schema which could be used to describe the identification procedures examined in this study (see Figure 3). It is critical to note that not all of the organizations' identification procedures incorporated all seven steps. Rather, organizations in the study used several different combinations of these steps to identify their KBP.

7 Steps to Key Business Processes

Step 1: Develop Mission Statement. The first thing an identification group did was develop or reevaluate their mission statement--what its members were collectively paid to do or the reason why the organization existed. If a mission statement did not exist, the group started from scratch to develop one. However, if a mission statement already existed, the group reevaluated the existing mission

Figure 3. 7 Steps to Key Business Processes.

statement and made any adjustments necessary to keep up with the changing organization and environment. To develop or reevaluate their mission statements, groups often used brainstorming and discussion during meetings to reach a consensus.

The mission statement should be clear, explicit and no more than three to four sentences long. In addition, it should include the boundaries of the business, what needs to be done and how the achievement of this will be measured (Hardaker & Ward, 1987). Ideally, mission statements also incorporate the customers, excellence, service, quality and the nature of the business.

A mission statement was developed or reevaluated for each particular scope of interest. For example, if an upper level management group was identifying the KBP for an entire organization, they would develop a mission statement which represented the organization as a whole. However, if a group of team members identified the KBP for a function, the mission statement would represent that function specifically, but would also be representative of the organization's mission statement.

One of the mission statements examined in the study, developed for a dry material feeder organization, met each of these criteria. Its mission was to, **"Create highly satisfied customers in worldwide markets by supplying them with dry material handling products that perform well, are of superior quality and value, and are backed by excellent service"** (company brochure).

This mission statement includes all the essential elements. It is clear and explicit in no more than three to four sentences. The boundaries of the business are worldwide markets, the organization needs to supply and back their products, and achievement is measured by the performance, quality and value of their product.

This mission statement also includes the customer, the nature of the business and excellent service.

Step 2: Gather Information. Once a mission statement had been developed, group members gathered information in order to make informed decisions regarding business processes. The information gathered by the identification groups was classified into two distinct types: internal and external. Internal information included what the organization did, the products it produced, and its strengths and weaknesses. External information included identifying the organization's internal and external customers, customer needs and satisfaction requirements, the organization's suppliers, and the organization's needs from its suppliers. Additional external information could be the strengths and weaknesses of competitors, the available technologies, and the competitive environment. The information gathered was structured towards the most critical aspect of the business. The word critical meant if that aspect of the organization fails, the organization would not survive or there would be a dramatic loss in customers.

Both internal and external information was gathered through several different methods. Surveys and questionnaires were given to customers, suppliers and employees of the organization. Interviews and day-to-day interactions were also useful tools. Information produced by the organizations, such as annual reports, warranty data and product reliability & dependability data, were also used. Finally, brainstorming and discussion sessions were used by management and employees to generate both internal and external information.

These methods helped the groups to determine the three or four most critical aspects of the organization. In some cases, an affinity diagram was used to group

similar critical aspects together. Frequencies of the information in each grouping were used to assist in determining the critical aspects of the organization. For example, if only a few customers complained that they had been charged twice for products, but seventy-five customers felt that it took much too long to get their products, "improving the time it takes customers to receive their products" is more critical than "how customers are charged for their products."

Step 3: List Processes. The gathered information was then used to generate a list of business processes that represented the scope of interest. Typical business processes included advertise products, develop new products, produce orders, research the marketplace, and employee training.

These processes represented several different scopes within the organization. For example, "research the marketplace" and "employee training" were both cross-functional macro-processes that had an organizational wide scope. The process "develop new products" had a functional scope, specifically the research & development function. "Produce orders" and "advertise products" also had a functional scope, focused in the manufacturing and marketing functions, respectfully.

To generate a list of processes for the scope of interest, the groups used the gathered information from Step 2 as well as the mission statement developed in Step 1. Processes within the organization were developed that best represented the essential activities of the scope of interest and were necessary to achieving the mission statement. In the example discussed in Step 2, customers felt that it took much too long to receive their products. This could be represented by the delivery

process, (if the manufacturing function was the scope of interest) or the order fulfillment process (if the scope was organizational wide).

Members of the group used brainstorming and discussion to come to a consensus regarding the list of processes. The generated lists of processes were long enough to incorporate the more essential activities of the organization, but were not excessively long. Twenty to 40 processes was the average number, although the optimum number depended on the scope of interest.

Step 4: Structure Processes. The processes for the scope of interest generated in Step 3 were then broken down into a structure of subprocesses that adequately defined each process at all levels within the organization. The structuring ensured that employees at every level of the organization were focused on a subprocess or "lower level process" that feeds into one of the organization's KBP. For example, in one organization three division level processes (strategic planning, product generation and order fulfillment) were developed and were felt to be important cross-functional macro-processes. For each of these processes, their subprocesses were listed to clarify the processes' structure. These subprocesses could include "establish tactical plan," "product research" and "order entry" (see Figure 4). Subprocesses continued to be broken down until an adequate structure was produced.

Processes continued to be broken down until a complete structure of processes was developed under the initial macro-processes. Each level of processes or subprocesses within the structure had a particular scope within the organization. In the example above, "establish tactical plan," a subprocess of the division level

Figure 4. The hierarchical structure of three divisional processes.

process "strategic planning," had a functional scope and required the cross-functional efforts of several functions.

The processes were structured to gain a better understanding of the subprocesses that made up the larger macro-processes and to provide information to determine the KBP. In addition, a process structure was needed to coordinate several groups working simultaneously within the organization toward the identification of KBP at different levels of the process structure. This encouraged an organizational wide structuring of processes.

Step 5: Prioritize Processes. Prioritizing the processes for the scope of interest was the fifth step toward the identification of KBP. Processes were prioritized regarding how important each was to the scope of interest. Information obtained through previous steps 1, 2 and 4, Develop Mission Statement, Gather Information and Structure Processes, respectfully, was used to prioritize the processes developed in Step 3, List Processes.

Processes were given scores on specific criteria developed by the identification groups. Possible criteria included the importance of the process in satisfying customer needs, the cost to the organization if the process failed, the performance quality of the process, and the importance of the process to the mission statement (Hardaker & Ward, 1987). If the scope of interest was smaller than the entire organization, the importance of the process to larger macro-processes was another possible criteria.

Individuals within, and in some cases outside, the groups assigned scores to each of the processes regarding the chosen criteria. Each of the criteria chosen was weighed equally, therefore one criterion was not viewed as more important than

another. Individuals followed specific guidelines when assigning scores to ensure the reliability of the scoring process. Individuals' scores were then integrated to obtain an average score for each of the chosen criteria for each process. For example, a marketing function had decided to prioritize its more important processes on four of the criteria previously described. Four individuals were asked to carefully consider the gathered information and structure of each process and assign each process a score of 1 to 10. Table 1 displays the scores for two of these processes.

Step 6: Determine Key Processes. Prioritization scores from Step 5 were used to determine the final number of KBP. When processes were scored on only two criteria, a matrix was used to visually display the processes. IBM used this idea and presented it in the article entitled, "How to Make a Team Work" (Hardaker and Ward, 1987).

To plot the processes on a matrix, one criterion score was represented on the X axis and the second criterion score was represented on the Y axis. The scores for the eight example processes (P1 to P8) in Table 2 are plotted in the matrix in Figure 5. This matrix is similar to the ones used by organizations in this study.

Organizations using this method divided their prioritization matrixes into three areas of increasing importance (see Figure 5). Although all the processes are important, the most critical processes fall into Area 1. The division of the prioritization matrix into the three areas of importance was subjective and not based on factual data. The most important consideration was that processes chosen as KBP scored high on both criteria. This placed them in the upper left hand corner of the prioritization matrix.

Table 1

Scores assigned by four identification group members for two of their processes.

PROCESS 1 -

	Person 1	Person 2	Person 3	Person 4	Average
Criterion 1	8	7	8	9	8
Criterion 2	5	3	4	4	4
Criterion 3	6	7	7	8	7
Criterion 4	7	6	6	7	6.5

PROCESS 2 -

	Person 1	Person 2	Person 3	Person 4	Average
Criterion 1	6	4	5	6	5.25
Criterion 2	5	3	4	6	4.5
Criterion 3	6	5	6	7	6
Criterion 4	7	6	6	8	6.75

Figure 5. Prioritization matrix.

Table 2

Criteria scores assigned to eight processes.

	Criterion 1	Criterion 2
Process 1	8	9
Process 2	7	8
Process 3	9	9
Process 4	5	6
Process 5	8	4
Process 6	10	9
Process 7	9	8
Process 8	8	7

The matrix was not recommended when more than two criteria were used to prioritize the processes because multidimensional matrices were difficult to comprehend. When more than two criteria were used, the scores given on each of the criteria were simply multiplied together resulting in one overall score for each process. Processes receiving the highest scores were chosen as the KBP.

The example provided Table 3 continues the example from Step 5 by using the scores provided in Table 1. From the calculations in Table 3 it is easy to determine the KBP for the scope of interest. Process 1, with a score of 1,456, would be chosen as the KBP for the example.

Step 7: Reevaluate Key Processes. Key Business Processes for the scope of interest were reevaluated as a test of completion to ensure that the KBP chosen represented all of the essential activities of the scope of interest. Members of the identification group, individuals who assisted in scoring the processes and those individuals familiar with the processes were asked if the KBP chosen did in fact represent the essential activities which were 'KEY' to the success of the scope of interest.

Discussion and consensus were used to come to an agreement regarding the KBP. If it was decided that, yes, these were the KBP for the scope of interest, the identification of KBP was considered a success. However, if essential activities had been overlooked and were not included, additions or changes to the KBP were made.

Table 3

The multiplication of process scores when more than two criteria were used.

	<u>Process 1 Scores</u>	<u>Process 2 Scores</u>
Criterion 1	8	5.25
Criterion 2	4	4.5
Criterion 3	7	6
Criterion 4	x 6.5	x 6.75
Total Score	1,456	956.8

Common and Unique Steps

Organizations examined in this study varied regarding the sequence of steps they used to identify their KBP. Some steps were prevalent and commonly found in most of the organizations' procedures. Other steps were unique and were found only in a handful of the procedures.

Gather Information, List Processes and Determine Key Processes, Steps 2, 3 and 6, respectfully (see Figure 3), were the most common steps out of the 7 overall steps identified in this study. Of the 21 identification procedures examined in this study 15 incorporated Step 2 and 20 incorporated Steps 3 and 6. Both of these steps, List Processes and Determine Key Processes, are therefore viewed as "essential steps" in procedures used to identify KBP. Gathering information (Step 2) was less essential; however, identification groups who tried to identify KBP without the use of this step described their procedure as fairly successful to unsuccessful.

Less common steps included Develop Mission Statement, Structure Processes, Prioritize Processes, and Reevaluate Processes, Steps 1, 4, 5, and 7, respectfully (see Figure 3). Steps 1 and 7, Develop Mission Statement and Reevaluate Key Processes, were found in 12 of the 21 procedures. These unique steps added to the information contributed by the more common steps discussed above. Steps 4 and 5, Structure Processes and Prioritize Processes, found in only 10 and 11 procedures respectively, differentiated the identification procedures and help to explain the five methods discussed below.

5 Methods for Identifying KBP

Organizations in this study used several different procedures to identify their KBP. The 21 identification procedures examined in this study were organized into

five distinct methods in terms of the seven overall steps. These five methods represented the procedures used by the organizations participating in this study to identify KBP. These five methods were also used to make a comparison between the approaches put forth by earlier writers (Davenport & Short, 1990; Harrington, 1991) and the methods that were actually being used.

The five methods have been labeled the Internal Focus method, the Internal/External Focus method, the Structure method, the Prioritize method, and the 7 Steps method. Figure 6 displays the relationship between the seven overall steps and the five methods.

Internal Focus Method. The Internal Focus method was constructed out of five of the seven overall steps: the three common steps, Gather Information, List Processes and Determine Key Processes, and two of the steps considered unique, Develop Mission Statement and Reevaluate Key Processes. The two differentiating steps, Structure Processes and Prioritize Processes, were not included. Thus, the Internal Focus method was differentiated by the type of information used to determine the KBP for the scope of interest.

Members of the group met to decide on the mission statement which not only related directly to the scope of interest, but also represented the organization's mission statement. Internal information was gathered to assist in determining the KBP. This information included what the organization did, the products and services it provided and its strengths and weaknesses.

From here a list of business processes was generated. One organization in the defense industry used its list of products and services to generate a list of processes. For example, "engineering drawings" and "disposal of hazardous waste"

		S T E P S						
		Mission Statement	Gather Information	List Processes	Structure Processes	Prioritize Processes	Determine Key Processes	Reevaluate Key Processes
M E T H O D S	Internal Focus	X	X	X			X	X
	Internal/External Focus	X	X	X			X	X
	Structure	X	X	X	X		X	
	Prioritize		X	X		X	X	
	7 Steps	X	X	X	X	X	X	X

Figure 6. A graphic display of the steps included in each of the five methods developed in this study.

are a product and a service, respectively. Each of these was converted into a process by adding an action verb to the output description. The resulting processes were "produce engineering drawings" and "provide controlled hazardous waste disposal."

After the list of processes was generated, members decided on the KBP through consensus based on internal information to achieve the mission statement. A check or reevaluation was used to see if vitally important processes had been left off the KBP list. This was done by asking the appropriate individuals if the KBP chosen were in fact 'KEY' to the scope of interest.

Hewlett-Packard's Workstation Business Division (located in Chelmsford, Massachusetts) has used a procedure that could be classified as the Internal Focus method to identify their KBP. Information regarding the entire Quality Maturity System activities, product reviews and plan of records were used to assist functional managers and the general manager in deciding the KBP for the Workstation Business Division.

Subjects representing organizations that used the Internal Focus method expressed several advantages and disadvantages of this method. One important advantage was that the method required only a short amount of time. Organizations using this method required approximately three weeks to complete it. Another important advantage was the small amount of money required to implement this method.

Unfortunately, the disadvantages strongly outweighed the advantages of this method. The Internal Focus method ignored customer needs, the structure of the process within the organization, and the improvement potential of the process (how much the process could be improved). In addition, this method looked at only one level of the organization or scope of interest at a time, which made it difficult for

more than one team to work on the identification of KBP at a time. Compared to other methods, the Internal Focus method was based on very little information which made it difficult to determine the KBP that best characterized the essential activities of the scope of interest.

Internal/External Focus Method. The Internal/External Focus method was constructed out of the same five steps used to describe the Internal Focus method. However, the type of information used to determine the KBP for the scope of interest differentiated this method from the earlier one. The focus of the information gathered using this method was more complete, including information both internal and external to the organization.

After the members of the group agreed on their mission statement through consensus and brainstorming, information needed to help determine the KBP was gathered. The information had both an internal and external focus. In addition to the same internal information gathered in the Internal Focus method, external information was also collected concerning customer and supplier needs, the competition, and the external environment.

The internal and external information was then used to develop a list of processes. The technique described in the Internal Focus method was used, as well as, group members simply brainstorming a list of processes they felt were important to the scope of interest. Decisions regarding the KBP were made through consensus in order to best satisfy customer needs and achieve the mission statement. A reevaluation similar to the one used in the Internal Focus method was used to double check the KBP that had been decided upon.

In their first attempt to identify KBP, the Customer Repair Service of 3COM, a global data networking organization, used a procedure that could be classified as the Internal/External Focus method. Customer comments and feedback on surveys were seen as critical in determining the KBP. Both internal and external customers were asked to describe their most important needs, as well as what they perceived the process to be. The identification procedure took approximately three weeks to complete and was considered very successful.

The advantages and disadvantages expressed by subjects for this method were similar to those of the Internal Focus method. The Internal/External Focus method required little money and approximately the same amount of time as the Internal Focus method to implement. One important advantage of this method over the Internal Focus method was that customer needs were taken into consideration.

Unfortunately, as with the Internal Focus method, the Internal/External Focus method had several disadvantages. This method ignored the structure of the process within the organization and the improvement potential of the processes. Thus, the KBP chosen were not always the best ones to characterize the essential activities of the scope of interest.

Structure Method. The Structure method was constructed out of the three common steps, Gather Information, List Processes and Determine Key Processes as well as two steps considered unique, Develop Mission Statement and Structure Processes. Unlike the information focused methods, the Structure method was differentiated by Step 4, Structure Processes. The structuring of the processes occurred throughout the entire organization. Organizational statements, similar to

macro-processes, guided the groups working on the identification of KBP, while each group had a different scope of interest.

As with the previous methods, the members of the group met to determine their mission statement; from there, they gathered information to help determine the KBP for the scope of interest. In the majority of organizations using this method, both internal and external information was gathered.

A list of processes important to the scope of interest was then generated. In three of the four organizations using this method, the lists were unique. The lists consisted of three to five "policy statements" or "critical success factors," similar to macro-processes. A policy statement was described as a statement of what the organization was going to focus on in order to achieve success. Critical success factors were described as things that absolutely must be accomplished in order for the organization to survive. Both of these were based on customer comments, customer responses to surveys, and additional gathered information. Examples of organizational statements included "ontime shipment," "competitive leadtime," and "customer field problems and deliveries."

In each of these organizations there was more than one group identifying KBP, each with their own scope of interest within the organization. All statements, whether referred to as "policy statements" or "critical success factors," were developed by upper management to represent the entire organization. This gave the groups working on the identification of KBP a common organizational focus. In the fourth procedure using this method, macro-processes for the entire organization took the place of organizational statements.

Once they had been generated, the macro-processes or organizational statements were then structured by breaking each down into its important

subprocesses. These subprocesses were again broken down until an adequate structure of the process was developed. For example, if an entire organization was to be structured, upper management would develop a list of three to five macro-processes or organizational statements which represent the most critical processes to the organization. This list would then be handed down to each of the divisions in the organization.

Each of the division management teams would then break the processes on the list down into the division's more important processes. Division A could decide on three processes that have their division's scope and represent the organizational statements, while division B could decide on six. After the KBP are determined in each division, they would distribute their KBP to the functions within that division. Each function then repeats the procedure by taking their division's KBP and breaking them down into the more important subprocesses for the function. This procedure continues until the entire organization is structured in terms of processes.

At each scope of interest, the KBP were determined before they were passed down to a group that had a smaller scope to continue the structuring. The identification of KBP was done by looking at the degree of relationship between "higher scoped processes" and the more specific processes of the scope of interest (lower scoped processes). For example, a division would look to see which of its processes had the highest degree of relationship to the organizational statements. A function would look to see which of its subprocesses had the highest degree of relationship to its division's KBP.

Quality Functional Deployment (QFD) was used by three out of the four organizations using this method to assist in determining the degree of relationship between the higher and lower scoped processes. Figure 7 provides a generic QFD

matrix that was used in some of the procedures. The subprocesses or "lower scoped processes" with the strongest degree of relationship to the "higher scoped processes" were chosen as the KBP for the scope of interest.

AccuRate, Inc., a manufacturer of dry material feeders, has been successfully identifying their KBP for seven years. Their newest procedure used to identify KBP could be classified as the Structure method. Their procedure incorporates an elaborate QFD matrix that includes three levels of the organization instead of just the two displayed in Figure 7. The QFD matrix was used to deploy the organization's company policy statements throughout the entire organization by determining their degree of relationship with "lower scoped processes." The "lower scoped processes" with the strongest degree of relationship to the "higher scoped processes" were then linked to even "lower scoped processes" until the top processes were deployed to the bottom of the organization. Both internal and external information, starting with the customers and the strengths and weaknesses of the organization, was used to assist the deployment of the policy statements.

The president, executive VP and all the vice presidents began the deployment of the policy statements. Then the policy statements were deployed down to each of the departments and eventually the deployment reached everyone in the organization.

The advantages expressed by subjects representing organizations using this method included a strong customer focus and a group of KBP that were more likely to correctly characterize the entire organization. In addition, the process structure within the organization was clear. All the KBP identified within the organization were originally generated from the top three to five organizational statements or macro-processes regardless of the identification group. This method also

encouraged the identification of KBP throughout the entire organization and provided a structure to organize the effort.

Aside from the strong advantages of this method there were a few disadvantages. The method ignored the improvement potential of the processes, and was much more time consuming and expensive than the previous two methods. Organizations that used this technique reported taking an average of 20% of a group's time over a six month period to complete the identification of the KBP for the scope of interest.

Prioritize Method. The Prioritized method was constructed out of the three common steps, Gather Information, List Processes and Determine Key Processes, with only one of the steps considered unique, Prioritize Processes. Steps 1 and 7, Develop Mission Statement and Reevaluate Key Processes, were not used in this method. However, both of these steps could be added without changing the method.

It was Step 5, Prioritize Processes, which differentiated this method from the others. Processes were given scores on a set of criteria so the KBP could be calculated mathematically.

The identification groups that used this method started by gathering both internal and external information. After the needed information was gathered, a list of important processes was generated. In two out of the five organizations that used this method, the lists were based on additional information such as corporate key processes and strategic organizational objectives. These pieces of information were provided by upper management and were not designed to support a process structure within the organization (as observed in the Structure method).

Each process on the list was then prioritized regarding specific criteria determined by the identification group. Organizations using this method typically chose between two to four criteria to prioritize the processes. A score of 1 to 10 was given on each of the chosen criteria for each process on the list. For example, a score of one would represent a low importance of the process to the mission statement, whereas a score of 10 would represent a high importance.

If only two criteria were used to prioritize the processes, a matrix was used to visually display the processes (see Figure 5). Those processes ending up in the top most left corner of the matrix, Area 1, were considered KBP. If more than two criteria were chosen, multiplication of the scores resulting in a single score for each process was recommended.

The Information Networks Division of Hewlett-Packard located in Cupertino, California used the Prioritize method to determine the KBP for the division. Two criteria were used to prioritize the processes: the current quality of the process and the impact of the process on strategic objectives (R&D productivity, ease of use, customer satisfaction, and profit improvement).

A team of five individuals scored and graded the list of processes. This enabled the identification group to plot the processes on a matrix (see Figure 5). Three KBP were chosen from Area 1 of their matrix and six additional processes that fell into Area 2.

Some of the advantages expressed by subjects for this method when using two criteria included a group of KBP that were more likely to correctly characterize the entire organization. The method took into account the improvement potential associated with the process as well as the needs of the customers. Some of the

disadvantages included more time and money required to implement this method and the process structure was not clear across the entire organization.

Using more than two criteria to prioritize the processes produced an additional advantage. When mathematically prioritizing processes a direct comparison can be made using the multiplied scores.

7 Steps Method. Ideally, all seven steps were used to identify the KBP throughout the organization. Although two disadvantages, an increase in the time and money remained, the advantages were well worth it. Only one organization in the study incorporate all seven steps in its identification procedure.

The Aircraft Division of Northrop in Hawthorne, California successfully identified its KBP by using each of the seven steps developed in this study (see Figure 3). Their success was partially due to the architecture people who make up a separate organization within Northrop. Their contribution was to organize the processes of the organization into an architectural hierarchy of processes (see Figure 4) . This hierarchy crossed over the entire organization and structured the organization in terms of processes.

The structure developed by the architecture people was then handed back to the groups who prioritized the processes on four criteria including (1) how important the process was to satisfying the customer requirements, (2) the impact on the organization if the process should fail, (3) the resources consumed by the process, and (4) the improvement opportunity of the process.

Each of the groups working within the organization to identify KBP chose which criteria to score the processes on. After the scores were given, the processes receiving the highest scores were chosen as the KBP for that scope of interest. The

scope of interest began with the entire organization and then was structured down. Initially, the macro-processes or organizational statements for the organization were passed down to the divisions, who broke them down into processes specific to their division. This list was prioritized or scored resulting in the KBP for the division. These KBP were passed down to the functions in that division to continue the cycle.

The result of using the 7 Steps method was an organization commonly focused on a group of KBP which characterizes the essential activities of the organization. Once the KBP were identified throughout the organization, concentration moved toward the continuous improvement of the KBP.

Discussion

The purpose of this study was to document how leading organizations in the field of Business Process Management (BPM) and Reengineering identified their Key Business Processes (KBP) and to organize them into usable methods. This study also examined whether these methods were the same as previous approaches developed by other writers.

Seven overall steps were identified and used to describe the identification procedures examined in this study (see Figure 3). Different combinations of these steps were present in the organizations' identification procedures. Some organizations used only four of the seven steps, while others used six or all seven.

The seven steps laid the foundation on which the five methods were constructed (see Figure 6). These five methods represented the identification procedures used by the organizations participating in this study. The first, the Internal Focus method, was characterized by the type of information used to determine the KBP. Only information regarding the organization or internal

information was used. The Internal/External Focus method required information regarding the organization as well as external information, such as customers and the external environment. The third method, the Structure method, was characterized by the structural hierarchy of processes that was developed. The Prioritize method was characterized by the ranking or scoring of processes that occurs. Finally, the 7 Steps method incorporated all 7 steps developed in this study.

Some of the methods are similar to the approaches discussed earlier. The Structure method shares similar characteristics with Harrington's (1991) Total approach, which implements several identification efforts at one time throughout the entire organization. Although both procedures try to represent the entire organization in terms of processes, there are two important differences. First, unlike the Total approach, the Structure method is designed primarily to "hook" separate identification groups together to give them an organizational focus as opposed to having several groups independently identify KBP. In addition, the effort does not take place all at once. An identification group starts with a very wide scope of interest, determines the KBP for that scope and hands the list down to the next smaller scope. That group can then begin to identify their KBP at their own pace. This helps to ensure that the normal ongoing business is not neglected.

Similar to the Prioritize method, Davenport and Short's (1990) Exhaustive approach uses prioritization of processes on specific criteria to determine KBP. The Exhaustive approach, however, is used to identify all of the organization's processes, whereas the Prioritize method is usually implemented in only a few particular scopes of the organization at a time. In addition, the Prioritize method uses scoring and averaging on at least two criteria whereby processes are placed on a matrix or scores are multiplied together to determine KBP. The Exhaustive approach, on the

other hand, relies on management's subjective opinion to prioritize and determine KBP.

Two other approaches also have characteristics similar to the Prioritize method developed in this study. The Weighted Selection approach (Harrington, 1991) also rates processes on specific criteria by assigning a numerical value to it. With the Prioritize method, however, group members determine their own criteria, making it more specific to their own scope of interest. In addition, the average ratings are multiplied together, making it less likely that two processes share the same final score. Finally, the Prioritize method is more objective because the processes listed are based on internal and external information.

The Prioritize method also shares some similar characteristics with Harrington's (1991) Informed approach. This approach prioritizes processes on two criteria, customer impact and improvement opportunity, which are then plotted on a matrix similar to the one in Figure 5. Unlike the Prioritize method, the Informed approach gives a rating of high, medium or low. Those processes rated high on both criteria are considered the ideal candidates for KBP.

Two of the approaches previously discussed, the High-Impact approach (Davenport & Short, 1990) and the Management Selection approach (Harrington, 1991), were unlike any of the methods developed in this study. Although they do incorporate two of the more common steps, List Processes and Determine Key Processes, these approaches are basically a subjective guess by management as to the organization's KBP.

Some of the methods developed in this study did not have similar characteristics with previous approaches. Neither the Internal nor the Internal/External Focus method were similar to the approaches discussed earlier.

Of these approaches only one, Harrington's (1991) Informed approach, was based on collected information. In addition to collecting factual data, the Informed approach prioritized processes on specific criteria. Therefore, the Informed approach is more closely related to the Prioritize method rather than either of the Focus methods.

No one has previously developed a method that includes all 7 Steps to Key Business Processes (see Figure 3). In fact, three out of the seven steps developed in this study have failed to be included in other approaches. These steps include Develop Mission Statement, Structure Processes, and Reevaluate Key Processes.

Perhaps organizations have learned that approaches similar to Davenport and Short's (1990) Exhaustive approach and Harrington's (1991) Total approach are wasteful. Processes are identified that can not be addressed due to lack of resources. A more realistic approach is to use the Structure method and gradually deploy organization wide macro-processes down through the entire organization.

Organizations also seem to be using more factual data to help identify their KBP. Approaches such as the High-Impact (Davenport & Short, 1990), the Management Selection and the Weighted Selection approach are giving way to methods that include the gathering of information. This suggests the Internal Focus and the Internal/External Focus method developed in this study. Harrington's (1991) Informed approach seems to be the only approach still in use by leading quality organizations. All other approaches seem to have undergone major changes or are simply no longer in use.

Organizations could be realizing the importance of correctly identifying KBP and are therefore willing to spend more time and resources in the effort. Thus, new steps have been incorporated into previously used approaches to help ensure

correctly identified KBP. Specifically, organizations are including the development of a mission statement, the structuring of processes and the reevaluation of KBP.

The present study primarily focused on leading quality organizations identified initially by their reputation and by word of mouth. A wider variety of subjects in the study may have revealed different results. Specifically, previous approaches may still be in use by a population other than the one examined in this study.

More accurate results could also have been obtained if the overall seven steps had been developed in a pilot study and used as a framework during data collection interviews. It is possible that subjects neglected to mention the use of one or more of the steps in the open ended interview. Subjects would be less likely to leave steps out if they were specifically asked which steps their identification procedure included as well as any other steps not included in the overall seven.

Finally, a more objective measure of successful identification procedures needs to be developed. The questions included in this study's interview were open ended and yielded large amounts of data which increased the difficulty of the analysis. A success criteria should be developed that would help determine if one method was better than another.

Future research should include a wider breadth of subjects including a random selection of those who actively identify their KBP. As previously mentioned, the overall seven steps should be used as a framework during future interviews to ensure that steps are not left out and a higher quality of data is obtained.

In this study, both BPM and Reengineering were lumped together and it was assumed that the procedures used to identify KBP for both quality efforts were the

same. Future research may show that there are unique methods for each.

Differences between BPM and Reengineering may be subtle, yet important enough to warrant specific identification methods for each.

Improving the way KBP are identified is one important way both BPM and Reengineering can be improved (Davenport & Short, 1990; Gulden & Reck, 1991; Harrington, 1991; Kaplan & Murdock, 1991). This study has shown that at least some organizations view quality as an affordable luxury and are willing to invest time and energy in the identification of KBP.

The assumption that quality originates in the quality department and that quality professionals are responsible for quality in their organizations is changing. In this study the identification of KBP spanned across entire organizations and was not dependent on quality professionals. Perhaps the U.S. has finally found the quality effort that will help it win the quality revolution.

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Appendix A

Signed Approval Forms

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One Washington Square • San Jose, California 95192-0025 • 408/924-2480

To: Lianne Updike, Psychology
2560 Elliot Court
Santa Clara, CA 95051

From: Serena W. Stanford *Serena W. Stanford*
AAVP, Graduate Studies and Research

Date: April 27, 1992

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

"The Identification of Key Business Processes"

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to any and all data that may be collected from the subjects. The Board's approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Dr. Serena Stanford immediately. Injury includes but is not limited to bodily harm, psychological trauma and release of potentially damaging personal information.

Please also be advised that each subject needs to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate or withdrawal will not affect any services the subject is receiving or will receive at the institution in which the research is being conducted.

If you have questions, please contact me at 408-924-2480.

CC: Howard Tokunaga, Ph.D.

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Appendix B

Interview Coding Criteria

Question #1: How many times have you gone through your technique for identifying your key business processes?

- Must be a number
- Can include a time period (i.e. the length of time they've been using their technique, i.e. 6 months, one year)

Question #2: Please describe the major steps you've gone through to identify your key business processes.

- If it is referred to as a step
- Description of a step, how it was done
- Description of overall procedure (i.e. then we did this, next we, etc.)
- Subjects answers "yes" to the question, "Is that your first, second, etc. step?"
- Specific description of what people do
- An action (i.e. we did, they did, etc.)
- Note any tools that are used
- Keep in mind that subjects must be doing something that is driving toward identifying a key business process. Once they have accomplished this, be very critical of following steps.
- * All answers meeting the criteria above must be directly speaking of the identification technique that was used.

Question #3: Who (level of management) is the 'owner' of the technique used to identify key business processes within your organization, division, or function?

- Any note of who (level of management) does any of the steps (i.e. executive council members, top managers, etc.)
- The owner of a process is different from the individual who does the identifying, but also should be noted.

Question #4: Which steps in the technique were most/least successful?

- An expression that some part or step of the identification technique was good/bad, successful/unsuccessful, positive/negative, etc.
- An expression of importance or failure
- Any statement that expresses one step being better than another
- An expression of difficulty

Question #5: How many key business processes were identified?

- Must be a number
- Must use the word key or an equivalent (i.e. primary, critical, etc.)
- Any label subjects use to describe the key processes (i.e. they are key to the entire organization, they are just for my division, etc.)
- Explanation of what a key process is to them, what they depend on (i.e. size of business)

Question #6: How is your most recent identification technique different from techniques you have used in the past?

- Specific description of each attempt
- Description of how more recent techniques have evolved or changed from earlier techniques used
- Reasons for changes (i.e. what did not work)

Question #7: Overall, how successful were you in identifying your key business processes?

- Any expression of successfulness or non-successfulness overall
- If they actually did identified the business processes that they feel are key to the business
- Expressions similar to Question #4 criteria referring to the overall technique instead of a single step

Question #8: If you feel that you were not successful, what do you think the causes might be? (Was it because of the identification technique or outside barriers)

- Any Explanation of why the identification techniques were not successful

- Any outside barriers

Question #9: How well did the identification technique work for the organization, division or function overall? (In terms of money, time and resources required)

- Any expression of the money spent, time involved, or man power required and if it was worth it.