Benchmarking – Best Practices: An Integrated Approach

Article *in* Benchmarking An International Journal · September 1999

DOI: 10.1108/14635779910289261

2 authors:

M. Khurrum S. Bhutta
Ohio University
69 PUBLICATIONS **2,893** CITATIONS

SEE PROFILE

Faizul Huq
Northeastern University
68 PUBLICATIONS **2,430** CITATIONS

SEE PROFILE

Benchmarking – best practices: an integrated approach

Khurrum S. Bhutta and Faizul Huq
University of Texas at Arlington, Arlington Texas, USA

Keywords *Benchmarking, Teams, Partnering, Performance, Case studies*

Abstract *The essence of benchmarking is the process of identifying the highest standards of excellence for products, services, or processes, and then making the improvements necessary to reach those standards – commonly called "best practices". Various companies have adopted benchmarking and customized the methodology to suit their needs. A five-step benchmarking model is suggested in this paper as a model to be used when undertaking a benchmarking study. Two case studies are enumerated and a comparison presented.*

I. Introduction

The essence of benchmarking is the process of identifying the highest standards of excellence for products, services, or processes, and then making the improvements necessary to reach those standards – commonly called "best practices". The justification lies partly in the question, Why re-invent the wheel? Benchmarking is not just competitive analysis or number crunching, nor is it spying, espionage or stealing. It is a process to establish the ground for creative breakthroughs. Many organizations publicize what they have achieved, but it is unusual for them to be open on the more mundane facts of how this transformation was made to work. More than 70 percent of the Fortune 500 companies use benchmarking on a regular basis, including AT&T, Ford, Eastman Kodak, IBM, Ford Motor Company and Weyerhaeuser (Greengard, 1995).

Benchmarking is a way to move away from tradition. It carefully dissects the organization into segments, and then removes and inserts pieces to account for changing environments. Changes occur once the process has started, and will continue to change and mold the organization for as long as individuals are continuously striving to make it better. If these individuals lose the ability to analyze and make changes, they begin to lose ground. Benchmarking was traditionally used as a problem solving technique (problem based benchmarking). During the past several years, through extensive efforts, leading organizations have come to realize that there is a better way to focus benchmarking activities for greater payback. The most effective vehicle to ensure continuous improvement is to focus on the basic processes that run the organization. It is this concentration that will deliver the outputs that will achieve the organization's objectives, priorities, and mission. This (process based benchmarking) is a new and revolutionary perspective in benchmarking.

When undertaking a literature review in the benchmarking area, one is intimidated by the numerous methods adopted to do what actually accounts to the same thing. A gap seems to exist in the literature regarding a unified

Benchmarking: An International Journal, Vol. 6 No. 3, 1999, pp. 254-268.

understanding of the steps involved in a benchmarking study. This paper will attempt to fill this gap with the help of case studies. This paper is structured in six sections. In the first section an introduction to benchmarking is presented to followed by a review of the current literature; the third section touches on the types of benchmarking and an integrated approach is laid out; section four enumerates case studies with the fifth section concentrating on the contrasts between Xerox and Kodak approaches to benchmarking. Section six lists the conclusions of the paper. The paper is concluded with a discussion to facilitate the understanding of the subtle differences in the benchmarking methods/techniques of the companies studied and some misconceptions among executives about benchmarking.

II. Literature review

Benchmarking is first and foremost a tool for improvement, achieved through comparison with other organizations recognized as the best within the area. The philosophy of benchmarking is that one should be able to recognize one's shortcomings and acknowledge that someone is doing a better job, learn how it is being done and then implement it in one's own business (APQC, 1996). This attitude has to be inculcated in the organization and only then can the organization take full benefit of the benchmarking study. Benchmarking forces an external focus to becoming competitive and often points the way to break-through thinking (Landry, 1993). Benchmarking gives the firm an external focus and forces the organization to look at what its competitors are doing. Properly conducted, the study forces the organization to focus on its competitive edge, while bringing the other processes up to mark with those of its competition. In other words, benchmarking raises the standard of competition in an industry and weeds out the companies that do not or cannot maintain a competitive edge.

Andersen and Pettersen (1996) identify five steps of benchmarking, giving the relationships that are at work at the various steps and how the steps are interrelated. They stress the recognition of who is the best in class and then the need to emulate them. Feigenbaum (1951) talks about benchmarking as the process of continuously measuring and comparing one's business processes against comparable processes in leading organizations to obtain information that will help the organization identify and implement improvements. Identification of critical performance measures and their comparison with similar performance measures of "best in class" organizations is at the heart of benchmarking. Identification of the proper measures is a fundamental part of the study. Dickey (1996) and Pulat (1994) stress matching the objectives of the organization's business strategy and management practices to those of the benchmarking study. Benchmarking cannot be carried out in isolation and has to match and contribute to the overall business objectives of the organization to be of benefit.

Internal benchmarking and transfer of best practices is one of the most tangible manifestations of knowledge management – the process of identifying,

capturing and leveraging knowledge to help the company compete (Elmuti, 1997). Sharing and transfer of knowledge is also tangible evidence of a learning organization – one that can analyze, reflect, learn and change based on experience. Before one can transfer knowledge or best practices, it is necessary to define and find them. Of course, the organizations have always had mechanisms, from R&D experts and technical audits to internal conferences, intended to identify and spread practices. In their article, O'Dell and Grayson (1998) focus on the impact that benchmarking could have on the oil refinery business and lament on the short-sightedness of the people in this field. "Research has good ideas, but they don't get used. The refineries don't always talk to each other enough. We re-invent the wheel everywhere, and there is no way to pass on the success stories". Executives tend to be close-mouthed about what they are doing in their respective organizations and the industry ends up investing many times over in the same things and the successes are not shared.

Arun Maua, VP at Arthur D. Little, mentions, "You can't just impose a best practice. It has to be adapted to your own company's style". This refutes the assumption that all processes work for all companies (Boxwell, 1994). One cannot just pick up a "best practice" and surgically implant it in one's own organization. One has to look at the way things are being done, the culture prevailing, the human resource employed to do the job, etc., before one can adapt a process. And that is what is the main crux of the benchmarking methodology, i.e. to adapt the process from the leading companies to one's own organization.

Though benchmarking is an effective tool, it does have limitations. The main problem with benchmarking is the focus on data – and not the processes used to make that data, however, this is changing as "process-based benchmarking" becomes more in vogue as opposed to "problem-based benchmarking". The initial focus on data is being replaced by focus on the process and how it works and what makes it work. Benchmarking should be used as a guide, not for statistical precision (Boxwell, 1994).

III. Different types of benchmarking

Comparison can be made at the company, process, function, or product levels. The types of benchmarking (Table I) can be defined as based on what is compared and what the comparison is being made against.

Figure 1 depicts the combinations of the types of benchmarking that can be used to yield better results.

As can be seen from the combinations, some types of benchmarking are more relevant than others in particular contexts. An internal comparison made of the strategy would be almost meaningless whereas the comparison of strategy with oneself would give little or no means of improvement. However, a comparison made of one's strategy with a competitor's would reveal an enormous amount of information and provide many avenues for improvement.

Types	Definitions
Performance benchmarking	It is the comparison of performance measures for the purpose of determining how good our company is as compared to others
Process benchmarking	Methods and processes are compared in an effort to improve the processes in our own company
Strategic benchmarking	The study is undertaken when an attempt is being made to change the strategic direction of the company and the comparison with one's competition in terms of strategy is made
Internal benchmarking	When comparisons are made between departments/divisions of the same company or organization
Competitive benchmarking	Is performed against "best" competition to compare performance and results
Functional benchmarking	A benchmarking study to compare the technology/process in one's own industry or technological area. The purpose of this type of benchmarking to become the best in that technology/process
Generic benchmarking	Comparison of processes against best process operators regardless of industry

Table I.
Types of benchmarking

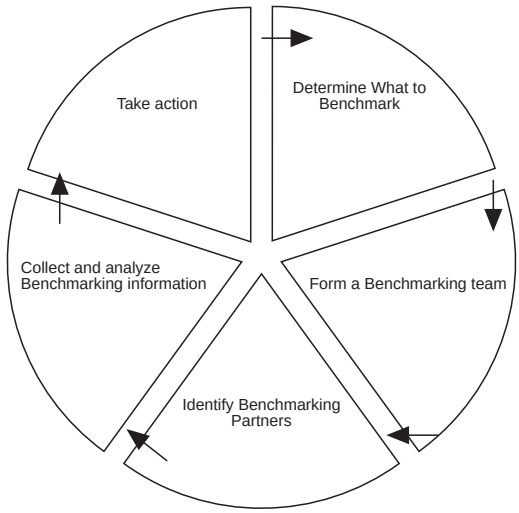
	Internal benchmarking	Competitor benchmarking	Functional benchmarking	Generic benchmarking
Performance Benchmarking	∇	Φ	∇	θ
Process Benchmarking	∇	θ	Φ	Φ
Strategic Benchmarking	θ	Φ	θ	θ
Relevance/Value		High Φ	Medium ∇	Low θ

Source: Adapted from Leibfried & Mcnair (1992)

Figure 1.
The benchmarking matrix

III.I The benchmarking wheel

As implied in the various definitions offered, benchmarking is a continuous process (Figure 2). It follows the PDCA (plan, do, check, act) cycle (Pulat, 1994). The "plan" phase focuses on the various upfront decisions, such as the selection of functions/processes to benchmark and the type of benchmarking study to embark on. In the "do" phase, one delves into a self-study to characterize the selected processes using metrics and documenting business practices. Furthermore, data (metrics and business practices) are collected on the company that is the benchmarking partner. "Check" refers to the comparison of findings via a gap analysis to observe whether negative or positive gaps exist



Source: Adapted from Camp (1989)

Figure 2.
The benchmarking wheel

between the benchmarking company and the benchmarking partner. "Act" refers to the launching of projects either to close negative gaps or maintain positive gaps. This is the stage that distinguishes benchmarking from organized tourism. Benchmarking can be carried out in many steps; some companies have used up to 33 steps while others have used only four. A fundamental process evaluation reveals five major components of the benchmarking process that are linked together like the spokes on a wheel, hence the name, benchmarking wheel.

With the above benchmarking wheel in mind the basic content of the benchmarking process is described as under.

Step 1: plan the study. Corporate or divisional leadership teams typically decide what will be benchmarked, though some companies use benchmarking study teams. In either case, the decision of what to benchmark must be driven by organizations' "critical success factors" – that is, an organization should benchmark processes that are aligned with the company's strategic direction.

Step 2: form the benchmarking team. Next comes the formation of benchmarking teams. Proper training is provided to the team members in the field of benchmarking. The team develops a plan that includes designation of team member's roles and responsibilities, project milestones and a realistic completion date; a typical study takes four to six months to complete.

The team then defines the process or processes to be benchmarked. A thorough understanding of the process being benchmarked is found to be the strongest success factor. Defining the process involves (Pattison, 1994) identifying customers, defining the process' start and end points, designing a flow chart, determining critical success factors and deciding on the critical performance measures.

Step 3: identifying partners. The team then identifies potential benchmarking partners – companies that are considered by the business community at large to be "world class" in that process. Though these companies can be competitors, it is more common that they will be non-competitors within the same industry. Many companies choose Baldrige Award winners as benchmarks. Candidate companies are invited to participate in the study, and an agreement is reached about the information that will be shared and how it will be used. Not all companies contacted will want to participate, so it is imperative that mutual benefits are highlighted. Generally, sharing the benchmarking report with partners serves as a strong incentive for participation.

Step 4: collect and analyze information. This step is perhaps the heart of the benchmarking process. Not only are data collected, but also analyzed and turned into information to be compared with one's own. The purpose of collecting data in a benchmarking study is much more than understanding which companies are excelling at certain processes and by how much. This does not answer the question of how best practice performance is achieved, so the data collection should be geared toward understanding the "enablers" of best-practice performance (Camp, 1989). A multi-pronged data collection approach is preferred, yielding richer data and enhanced validity.

When analyzing results, the realization of the rationale for collecting more than statistics from benchmarking partners emerges. By understanding variations in different companies' processes along with enablers of superior performance, one is able to identify strategies for improvement.

Step 5: adapt and improve. The final benchmarking step involves adapting the other companies' best practices and implementing specific improvements. Adapting best practices is not to be confused with copying best practices. Best practices learned from others must be adapted to an organization's culture, technology and human resources. Action planning or goal settings are appropriate for this phase. Some improvements will be immediate or short-term, requiring few or no additional resources. Others will be long-term and will require considerable resources.

A method of evaluating improvements over time is critical to effective adaptation of best practices. The measures developed in the planning phase can now be used to track performance improvements on an ongoing basis. Measurable improvement usually takes at least three months after the completion of the study. The time taken on the benchmarking process depends what is being benchmarked and how smoothly the process progresses. There is usually a degree of overlap in the processes of the benchmarking exercise and feed-back loops are ever present to enable evaluation. Figure 3 depicts the relationships between the steps.

IV. Case studies

Benchmarking is emerging in leading companies as an information tool to support continuous improvement and to gain competitive advantage.

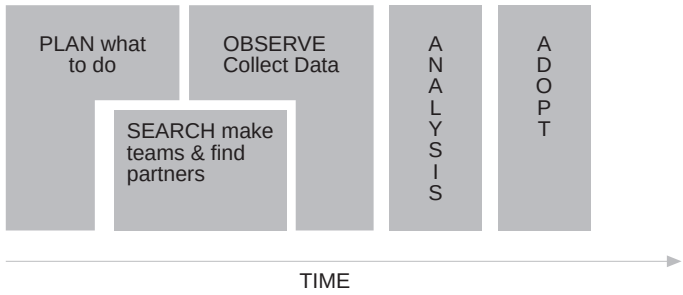


Figure 3.
Relationships of the benchmarking steps

Source: Adopted from Feigenbum (1951)

Following are two case studies of leading international firms who have adopted the benchmarking approach to their activities.

IV.I Xerox

Xerox's success is the first in the history of benchmarking. It has become a real model since, being in a critical situation in 1972, Xerox has achieved what is called today a top-benchmarking partner status. In 1979, Xerox started benchmarking and by 1989, had won the Malcolm Baldrige National Quality Award (Boxwell, 1994). The Xerox benchmarking methodology was a ten-step process (Camp, 1989).

Step I: identify what is to be benchmarked. Xerox's benchmarking process first started in the photocopier manufacturing unit as part of an effort to assess its manufacturing costs. Benchmarking was in effect invented in the late 1970s, when a shocked Xerox decided to analyze the performance of its Japanese associate to discover how Eastern rivals could sell excellent photocopiers for less than it cost the parent to make them.

Step II: identify comparative companies. Xerox first studied one of its Japanese affiliates, Fuji-Xerox, and later on Canon, Minolta and Toyota to determine whether the relative costs of their Japanese counterparts were as low as their relative prices (Finnigan, 1996).

Step III: determine data collection method and collect data. The studies confirmed that US prices were higher than the Japanese ones. Japanese costs became the target for Xerox. However, the benchmarking process was only starting. Managers from the main plant visited Xerox's Japanese affiliates and saw what they were doing at the factory floor. Xerox then started collecting the information.

Step IV: determine current performance gap. The information collected at the previous step is then used to determine the gap that might exist between Xerox's performance and the best in class.

Step V: project future performance levels. From the gap analysis, projected future performance levels are determine and how these levels are going to be achieved and maintained is determined.

Step VI: communicate benchmark findings and gain acceptance. All Xerox employees receive at least the basic 28-hour leadership through quality training

and many were trained in advanced quality techniques. Over the last four years, Xerox has invested four million man-hours and $125 million in its training program. Once a new benchmark has been established and incorporated for in future strategy, it is communicated to the rest of the organization so that others may also use it in their standard operating procedures.

Step VII: establish functional goals. Xerox identified that purchased materials accounting for 70 percent of its product unit manufacturing costs, small strides could translate into significant quantifiable benefits. The company cut its supplier base from more than 5,000 in the early 1980s to 420 today. Defective components have been reduced from about 10,000 parts per million in 1980 to 225 today. Six of seven parts inspectors have been reassigned to other jobs, and 95 percent of supplied parts need not be inspected at all. Component lead-time is down from 39 weeks in 1980 to eight weeks last year. And the cost of purchased parts has been slashed by 45 percent. These goals were not necessarily all set at once but with the continuous process put in place for lowering costs they came more easily and without disruption.

Step VIII: develop action plans. Concrete action plans need to be developed and Xerox developed these plans, resulting in the reduction in lead times and the quality improvement of the copiers.

Step IX: implement specific actions and monitor results. Benchmarking has to be a coordinated plan. Specific action plans have to be drawn up and the results monitored to ensure that the required results are being achieved.

Step X: recalibrate benchmarks. After having benchmarked Japanese industries, Xerox didn't stop there, it started looking at L.L Bean, the American Hospital Supply and Caterpillar. The results speak for themselves as Xerox is the only company in the world to have won all three major awards: Japan's Deming Prize, America's Malcolm Baldrige National Quality Award and the European Quality Award. Obviously, adopting the benchmarking process was essential (Finnigan, 1996).

IV.II Kodak

The legal department may be more prestigious and the advertising department may be sexier, but the maintenance department is one of the unsung heroes of a manufacturing company. Neglect maintenance of the myriad pieces of equipment in a factory and someday soon the company will be devoting more time to the emergency repair of machinery than to the production of goods (Geber, 1994). Kodak uses a six-step benchmarking process. The following is a description of benchmarking at Kodak's Rochester plant.

Step I: what to benchmark. There is no guessing about the impact of a poorly performing maintenance department on a company's fortunes. If a machine breaks down in the middle of a run, it is easy enough to measure how many widgets its operator would have produced during the idle time.

That ability to measure most aspects of maintenance performance, along with a desire to lessen the maintenance department's drag on earnings, led the maintenance function at Rochester, NY-based Eastman Kodak Company to begin a benchmarking project in 1991.

As a large company with worldwide locations, Kodak had the luxury of measuring all its maintenance divisions against each other internally as it tried to find the exemplars for each of a long list of measurements. It then compared the various results to those of other companies with superior maintenance departments. As a result, Eastman Kodak was able to increase its planned maintenance work, reduce its inventory of parts for maintenance, and reduce the amount of time it spent on emergency repairs. Each one of those outcomes had an effect on the company's earnings.

Step II: establish teams. In 1990, the company's quality improvement director formalized ad hoc approaches to benchmarking by establishing the three-person office under Mr Enustun. Besides acting as a port of entry for incoming benchmarking requests from other companies, Mr Enustun's office maintained a detailed internal database that described and quantified best practices within Kodak worldwide. In addition, he and his staff served as consultants for benchmarking projects undertaken throughout the company. In that role, they helped Harvey Berson get his project started in January 1992.

Berson, manager of Kodak's manufacturing engineering and maintenance organization, oversaw maintenance of the equipment the company used for film production in nine manufacturing plants scattered across the globe. Berson wanted to find the pockets of excellence around the world and bring the rest of the maintenance departments up to those standards, thereby reducing overall maintenance costs for the company.

Step III: identify partners and identify critical measures. Berson knew that some maintenance facilities within Kodak were doing much better on certain measures than Kodak-Park, the company's huge hometown facility in Rochester. He was determined to improve Kodak-Park's performance, while seeking top performers elsewhere within the company. Luckily for the benchmarking project, the maintenance function was easily tracked and measured. One of the first tasks for Berson and the other four members of the initial benchmarking team was to identify which of those many measures were crucial to the business.

At about the same time as Kodak-Park was launching the internal benchmarking project, it was beginning to look outside its walls as well. It found willing benchmarking partners within two professional maintenance organizations. One, the Plant Engineering Maintenance Managers Conference (PEMMC), consisted of a group of maintenance managers at eight large companies who formed a once-a-year networking group.

Step IV: collect data. Collecting the information in the first rounds from all Kodak's maintenance operations worldwide was not an idle data-gathering exercise, Berson says. The company used a questionnaire to make sure that data were being assembled in a uniform manner, a necessity if the numbers

were to have any validity. If a number seemed particularly high or low, a facility manager would be asked to check again. "Consistency has to be one of the under-pinning's of a measurement system", Berson says.

Once the data had been gathered from within Kodak, they was given to a second team, this one made up of the 36 Kodak managers responsible for maintenance functions. It was crucial to get them involved in analyzing the information since they were the ones who had to create individualized improvement plans based on the numbers. "The whole point behind benchmarking is understanding where to make the improvement", Berson says. "The number is only the trigger" (Geber, 1994).

Step V: gap analysis. Once Berson and the team had collected all the numbers, both internally and externally, they grouped the data into a number of charts that showed how Kodak-Park stacked up against its benchmarking partners. In some cases, the verdict was good, in other cases not so good. For instance, the data confirmed what Berson suspected, and what had prompted the study in the first place: Kodak-Park did too much reactive, or emergency, maintenance work. Its reactive work amounted to about 34 percent of the total time spent. That figure made Kodak-Park roughly equal to the rest of the company, better than the PEMMC average, but significantly behind the SMRP companies, which together spent an average of about 19 percent of their time doing reactive work.

On the other hand, Kodak-Park had some of the lowest maintenance costs, as measured by the category of maintenance cost as a percentage of the cost of the product.

Step VI: feedback and review. One way to use the information to improve, Berson says, was to involve the maintenance managers' customers: the manufacturing heads. Consequently, the benchmarking group devised another survey, this one a 32-question instrument based on the 12 measures Kodak wanted to hack. Each maintenance manager and the manufacturing manager he served was asked to rate the performance of the maintenance department. Afterward, the two managers would sit down to figure out how to improve the maintenance department's performance. After measuring how it stacked up, and beginning to implement some of the things it learned from high-performing partners, the Kodak-Park maintenance unit increased the amount of preventive work by 6 percent in one year.

It made great strides in increasing inventory turnover, saving more than $3 million in the process. Kodak-Park reports that it is on track for more improvement on turnover that would save an additional $5.5 million by the end of 1994.

V. Comparison and discussion

A comparison of the techniques undertaken and the steps followed by both Xerox and Kodak show that the process followed is fundamentally the same. The basic principle of PDCA (plan, do, check, act) is followed by both companies, though the steps within each stage of the principle differ. Some of the salient features of both the companies are given in Table II and a comparison is made between the methodology followed by them respectively.

Table II.
Comparison of Xerox and Kodak

	Xerox	Kodak	Comparison
Number of steps in the study	Xerox has ten steps in its benchmarking process	Kodak has only six steps in its benchmarking process	The number of steps does not signify any deviation from the process of benchmarking. It is simply an adaptation by the companies to suit their individual needs, depending on the complexity and size of the project undertaken. A careful analysis of these steps shows that they are fundamentally the same as those proposed earlier in the paper. The number of steps is adjusted to better enable them to control and monitor the study
Internal vs. external focus	Xerox has an external focus and comparison strategy	Kodak on the other hand began by using an internal focus	The external vs. internal focus followed by Xerox and Kodak is another major difference between the companies. Again the scope of the project may be to blame for the difference but the problem being studied also contributes to this. In the case of Xerox, the manufacturing costs were being studied and Xerox studied its affiliates and competitors to determine the benchmark to follow. In the case of Kodak the comparison was primarily made with Kodak's other facilities, however, Kodak later started to look at external sources
Formation of teams	The steps followed by Xerox in its benchmarking process do not explicitly depend on the formation of teams to perform the study. However, teams are formed as the study progresses	However, in the case of Kodak, a benchmarking team is established as a part of the benchmarking process. This team decides the problem to be studied and carries the whole study to its logical conclusion	Formation of teams in itself is not such a major difference but, when teams are formed and given the authority and responsibility, the study undertaken becomes a priority. However, looking at the success of Xerox in benchmarking this can be argued

(continued)

Process vs. problem based benchmarking	Xerox carried out a process orientated benchmarking study in the case under study. This would imply that Xerox was in fact tring to benchmark its "process" of manufacturing costs rather than a particular item in the process	In the case of Kodak, the case seems to indicate a more problem-based focus. The management at Kodak felt that they had a problem with the maintenance costs and were trying to minimize the costs. Hence a problem was identified and a benchmarking study undertaken to alleviate it	Recently more emphasis has been place on "process-based benchmarking". So instead of taking one problem at a time, the whole process is studied and benchmarked against the best in class
Formal communication of benchmarking findings	The benchmarking study at Xerox incorporates a formal process of communicating its findings to all parts of the organization, enabling the whole organization to take advantage of the results of the new study	At Kodak no formal means of communicating the findings was apparent	Communicating the findings and results of a benchmarking study makes it easier and brings the importance of benchmarking to the fore. Xerox, being a pioneer, has inculcated the spirit of continuous improvement in its organization and that seems to be apparent from communicating and highlighting the achievements made by department. This also helps in proposing and identifying possible benchmarking partners for other studies

Table II.

As can be seen from Table II, Xerox and Kodak have successfully integrated benchmarking into their operating strategies. The benefits derived by both these organizations are innumerable. In terms of cost savings and customer satisfaction alone the organizations have saved millions (Worthing Brighton Press, 1997). At first glance the process looks different as adopted by these companies, but in fact it is fundamentally the same. Benchmarking has played a significant role in the industry leadership stature of both these organizations.

V.I Misconceptions and limitations

Some of the common misconceptions and limitations encountered in the process are:

- Benchmarking alone does not tell one what customers actually want. If the product or service is obsolete, no amount of improvements in production processes will make it competitive. Benchmarking is only of benefit if the improvement actions are implemented. An effort should always be made to seek out how a company has improved its performance, and this normally comes from the people, not the management (who will tell you how much performance has improved but not necessarily how).
- Not involving employees during the process. Ultimately, these employees will need the information to improve the process. Some organizations have difficulty treating benchmarking as an ongoing process: it should not be viewed as a onetime project. In addition, some companies think a tactic not invented by them may be inferior. Furthermore, some companies do not benchmark because it exposes their weaknesses.
- Benchmarking is too expensive. Benchmarking does come at a price, but costs vary considerably. Usually there are travel expenses and indirect costs – including employee time devoted to team meetings and travel – but with careful planning, benchmarking costs can be kept to a minimum. In a 1995 survey of benchmarking exchange members, benchmarking was one of the top five most popular current business processes. Resources and information are now more affordable and accessible. In 1992, the average cost of conducting one benchmark study was $50,000. By 1996, the average cost had dropped to $5,000. With the cost of benchmarking falling rapidly, its use is increasing. The knowledge gained is well worth the small investment.
- A way to control costs is to tackle benchmarking one step at a time. It is not an extremely difficult or complex process: companies can reduce financial stress by examining one process at a time. Actually, costs can be controlled if the company benchmarks in degrees and defines very narrow areas to explore.

- To minimize costly meeting and travel time, a company must work efficiently and communicate effectively. The company should do its homework and know specific problems before employees visit other companies. The trip should be clearly defined: what to look for and what to accomplish. Make this information known to the other company and, since benchmarking is a two-way street, it is important to understand the other company's needs and decide what you are willing to share with them.
- Benchmarking gives too much information to one's competitors. Employees providing information should be smart about it and not give away the heart and soul of the company. As a whole, distributing information and processes helps our country become more competitive in the global marketplace.

VI. Conclusion

Camp (1989) calls benchmarking an applied discipline. It cannot be learned by taking a class or reading a book. It is a hands-on learning experience, and the drawback to this type of a process is that mistakes are inevitable. However, senseless mistakes are avoided by setting goals and following the rules to achieve them. Companies that benchmark identify specific areas of weakness, and find solutions to turn them into strengths.

Benchmarking is a process that can be and has been adapted to fit the managerial inclinations of an organization. It can be carried out in 33 steps or just five, however, the essence remains the same. It is also very important to remember improvements are continuous and benchmarks go out of date quickly, the competitor's performance will probably continue to improve in advance of one's own. The study should always remain honest and thoroughly professional.

During the past several years, through extensive efforts, leading firms have come to realize that there is a better way to focus benchmarking activities for greater payback. Formulating a strategy in an attempt to continuously improve processes has lead to myriad benchmarking steps. This paper attempted to provide an integrated approach to benchmarking and illustrated the various methods followed by enumerating the case studies of Xerox and Kodak.

References

American Productivity & Quality Center (APQC) (1996), *Emerging Best Practices in Knowledge Management*, American Productivity & Quality Center, Houston, TX.

Andersen and Pettersen (1996), *The Benchmarking Handbook*, Chapman & Hall.

Boxwell, R.J. Jr (1994), *Benchmarking for Competitive Advantage*, McGraw-Hill, New York, NY.

Camp, R.C. (1989), "Benchmarking the search for industry best practices that lead to superior performance", *Quality Resources*, White Plains, NY.

Dickey, J.D. (1996), "How benchmark studies can help you be the best", *Metal Center News*, June, pp. 65-71.

Elmuti, D. *et al.* (1997), "The benchmarking process: assessing its value and limitations", *Industrial Management*, July.

Feigenbaum, A.V. (1951), *Total Quality Control.*

Finnigan, J.P. (1996), *The Managers Guide to Benchmarking*, Jossey-Bass, San Francisco, CA.

Geber, B. (1994), *Benchmarking at Kodak – How To Measure a Maintenance Unit*, Lakewood Publications.

Greengard, S. (1995), "Discover best practices from benchmarking", *Personnel Journal*, November.

Landry, P. (1993), "Benchmarking strategy", *Executive Excellence*, June.

Leibfried and Mcnair (1992), *Benchmarking – A Tool for Continuous Improvement*, Harper Collins.

O'Dell, C. and Grayson, J.C. (1998), "If only we knew what we know: identification and transfer of internal best practices", Special issue on knowledge and the firm, *California Management Review*, March, p. 154.

Pattison, D.D. (1994), "The benchmarking management guide", *Management Review*.

Pulat, M.B. (1994), "Benchmarking is more than organized tourism; implementing benchmarks", *Industrial Engineering*, March.

Worthing Brighton Press (1997), http://www.utsi.com/wbp/reengineering/benchmark.html.

Further reading

American Productivity & Quality Center (1997), *Using Information Technology to Support Knowledge Management*, American Productivity & Quality Center, Houston, TX.

Ellram, L.M. (1991), "A managerial guideline for the development and implementation of purchasing partnerships", *International Journal of Purchasing and Materials Management*, Vol. 27 No. 3, Summer.

Hendrick, T.E. and Ellram, L.M. (1993), *Strategic Supplier Partnerships: An International Study*, Center for Advanced Purchasing Studies, Tempe, AZ.

Kearns, D. and Nadler, D. (1992), *Prophets in the Dark: How Xerox Reinvented Itself and Beat Back the Japanese*, HarperCollins, New York, NY.

Lambertus, T. (1997), "Basis of benchmarking", *Incentive*.

Martin, J. (1996), "Are you as good as you think you are?", *Fortune*.

Omachonu, V.K. and Ross, J.R. (1994), *Principles of Total Quality*, St Lucie Press.

Power, J.V. (1995), "Sprint corporation: blending in benchmarking with quality", *Continuous Journey*, American Productivity and Quality Center.

Szulanski, G. (1994), *Intra-Firm Transfer of Best Practices Project*, American Productivity & Quality Center, Houston, TX.