

Opportunities and challenges of benchmarking

[Life](#)



The first question to be asked is what benchmarking can do for any organization. The process of benchmarking permits the entire organization to identify, share and use the knowledge that exists within the organization as also the best practices prevalent within the organization. The attempt is to concentrate on improving the situation of any business unit and not to just measure the best performances that have been achieved. The method for this is to apply the use of best known methods of solving the problems that are facing the business.

The results come from the utilization after determination of the problems and this can come only after a careful study of the problems. On determination it is expected that the best solutions will be implemented. (Defining Benchmarking) The result will come to the organization in the form of gaining important advantages for the organization in the form of advantages. These can be in any form or more than one form - strategic advantages, operational advantages, or direct financial gains.

At the same time, it also is an indirect admission that some others are better at the function that we are involved in than ourselves. At the same time, we are being wise enough to understand our own shortcomings and are trying to improve our position so that we can improve and match them in performance. If all our efforts are in the direction of development, a stage may come when we would be in a position to perform better than them. (Defining Benchmarking)

The process of benchmarking is not just calculating numbers, getting briefs about sites on which organizations are to be set up or traveling through the

factories of other organizations, or even copying, spying or espionage. The process does not end here and it has to continue further throughout the entire life of the organization and as the organization improves to a better position, there has to be additional steps which have to be taken so that the organization can successfully step even further.

When benchmarking is not performed and a major in any industry ignores the competition levels there are chances that it would tend to fall behind in its own development and leadership qualities. It is also not the same with regard to establishing benchmarks which involve the setting up of acceptable levels of standards, so that the product or service can move forward to the next immediate step and not be rejected automatically as a result of quality control.

Benchmarks are defined in terms of how many units are to be produced in one unit of time, how quickly the product line can transfer itself into manufacturing another product, how high the production levels can be from one shift, or what the minimum levels of production are which are being acceptable. The similarity of benchmarking and benchmarks is in that benchmarking tries to find out and understand the direct reasons for the production to be high in certain relevant situations and not be so high in other situations/conditions.

Once the reasons are being determined then the same methods can be expanded for use in other parts of the complete production process so that the total production level can be at higher levels and correspondingly the profits of the organization as well. This is the real benefit that can be

obtained from the practice of benchmarking. (Defining Benchmarking)

Looking at the acts of benchmarking in benefiting the organization, one can see some direct benefits.

It prevents reinventing the wheel and what is meant by that is that since the process or machinery or item has already been invented, anybody else trying to reinvent the same is only wasting money. The second method in which it provides benefits is through using tested and proven practices that have already been used successfully by others, it convinces people who do not take kindly to fresh ideas by demonstrating to them that it works, and it forces the organization to move at a rapid pace as it knows that competitors are already using the method.

The third advantage is that it leads to development of some ideas that were not being used earlier and these are innovative ways to improve methods and in many cases they have come from outside the industry. The use of benchmarking also forces organizations to check on the present process and many times these may lead to direct improvements in terms of quality or quantity directly. The last use of benchmarking is also advantageous in making changes more likely as the process involves the direct participation by the owners.

Today is the age of competition and it is very difficult to say which manufacturer is the best, and at the same time, this is an age when every manufacturer can claim that they are the best based on scientific studies of their machines. Let us view it in a simpler context and try to determine which team is the best in baseball, and may be you have a reason for

<https://assignbuster.com/opportunities-and-challenges-of-benchmarking/>

determining this - you may love the game, you may be laying a bet on the results of the current season, or just curiosity.

It is known that New York Yankees have won the World Series Championships seven consecutive times. In the opinion of quite a few of the fans, that would make them the best team. Thus one of the first points in benchmarking is deciding on the benchmark, and then one has to decide as to how the performance can be measured against the benchmark. If the required standard is not known by the organization trying to be the best then it cannot possibly reach the target. (Who's best? How good are they? How do we get that good?)

In certain cases they are measured by definitions like Mean Time between Failures or MTBF. This will help the customer also and make him ask the manufacturer as to the MTBF for the product. Then let us say that on one of the products of the client is 120 hours and on another product is 150 hours, then that will have to be mentioned to the customer. Then to be the best, the concerned organization has to find out or determine the method to get to the best possible benchmark. Now let us say that on investigation it is found out that for competitors, the MTBF is 10, 000 hours.

It is clear now as to which manufacturer will get the order. Thus often benchmarking is not a stand alone exercise, but a part of a Process Re-engineering or Quality Improvement Initiative. The requirement is not a management fad, but is a requirement to be able to compete in the market. Most of the initial work on benchmarking was done in manufacturing, and it is important that it is still done there, but benchmarking has now developed

into a management tool that can be used anywhere. (Who's best? How good are they? How do we get that good?)

One has to develop a system which permits the organization to produce material of a certain quality, as if that is not produced many incidences may occur which are of great importance to the organization but also to the nation. Let us take a few examples of this and one of them is the case of the disaster of the space shuttle Columbia, and another is the power outages in August 2003 in New York which was followed by power failures in United Kingdom and Italy. There are reasons for this and one reason which is often quoted is " failureof maintenance". (An Introduction to the Maintenance Scorecard)

At the same time, maintenance is also a part of benchmarking and it is not a benchmarking of the product, but of the service system in the organization. Thus the problem can be manifest in many different ways in the field. There were four charges of manslaughter placed on individuals who were in charge of maintaining or managing railways in United Kingdom at the time of the Hatfield Train Disaster. The charges against these people were dropped only in August 2004. Among the people who were charged was the previous Chief Executive Officer of the company who owned all the assets indirectly.

Another case is the legislation in Canada which imposes criminal liability on businesses and individuals when workplace accidents take place. In short it is becoming very important that proper maintenance is done and for that purpose, benchmarking is essential for the assets. (An Introduction to the Maintenance Scorecard) Desired future state andgoalsagainst which to

<https://assignbuster.com/opportunities-and-challenges-of-benchmarking/>

evaluate alternatives It is clear that benchmarking is an activity of the individual organization undertaken with a purpose of developing the organization and giving it benefits or advantages over competition.

The details for such studies are obviously not available, and we got information only from an instance when the exercise was done at the initiative of the Surface Mining Association for Research and Technology. They commissioned a research project the main purpose of which was to enable comparison of equipment performance in the mining industry, and this was due to collaborative relationships between the mining industries to gain competitive advantages at a global level.

There was not much collaboration between the different units of the industry and as a start the attempt was made to establish some common definitions for availability and utilization. The entire exercise was conducted over some twenty five mining operations based in Canada and United States.

(Standardization of Definitions for benchmarking) After developing the common definitions the next stage was to collect the response from different members of the industry and put them in a position where the responses could be classified.

In terms of operations there were some typical events that were encountered as all the units were involved in the operation of a mine. These also had to be identified and included in the entire exercise for study. At the end of the study it was found that among the entire group the formulas and definitions for availabilities and utilizations of different parameters were similar, yet there were differences in the meanings of the formulas that were

used by different units. There are also differences in classification of different events in terms of their importance.

The two differences combined in the final report to show differences in the operating characteristics of different mines, and the events that we are referring are fairly common in the operations of mines. Thus it was possible to find out some common definitions for the mines in terms of operating parameters, yet all comparisons between them are meaningless. For any comparisons to be made, it is important that the discrepancies which are clearly seen to be happening due to their differences in meanings first being turned into some common time categories.

In practice it was not possible to get the different mines to change their formulas or collection practice for data as these systems had been well established over many years, it was seen that it was important to develop a parallel system which could collect similar data from the existing data collection system. This of course could be done only in organizations which wished to continue in the entire exercise of benchmarking all these units and getting to some results. (Standardization of Definitions for benchmarking)
This led essentially to the establishment of a central database.

This is where all the units participating in the study would be able to reach the data that they wanted or needed. They would also be able to compare their own formula and definitions with the new data that was collected. This would permit them to comparisons with the earlier data that they had, or even the standardized benchmarking formula that they were using. This was the first method of industry wide comparisons. Once these were developed

they would be the benchmarking definitions for the industry and thus the first step to development of industry-wise standards for required operating measures.

Most of the mines understood that this was required, but very few wanted to proceed on these lines, and all their actions are concentrated to their own mines. There does not seem to be much collaboration in the industry and most organizations are doing the same thing over and over again. There is a certain amount of interest in sharing of maintenance information there is scope for a study in which the maintenance practices can be compared as also the development of performance standards in the area of maintenance.

This would be of great use to the mining industry. Standardization of Definitions for benchmarking) Identify two to four potential solutions Here again the solution are different for every application of benchmarking and the solutions will depend also on the problems for which the solution is being sought, the nature of the industry, state of development, projected future growth, etc. Since we have started with the mining industry, let us continue with the same industry. One point that has to be remembered is that this industry has continued to remain behind other industries in the application of benchmarking.

The reasons for the shortcomings have already been discussed to some extent - a reluctance to share information as they feel it violates confidentiality and privacy concerns with a special sensitivity to cost data; available resources within the different units to spend time on the required initiatives for benchmarking; a specific lack of commitment and support for

the benchmarking exercise at all levels of the organization; and the lack of consistent and relevant indicators for performance.

The problems of these organizations has to be solved by meeting the difficulties in all theserespectand this makes the first solution as to stop comparisons till the operating events are clearly classified. Till this issue is resolved, there is very little value in suggesting common definitions for availability and utilization. The clear resolution thus also involves on consistent allocation of operating events as per agreed time classifications. (Standardization of Definitions for benchmarking)

The second solution comes from the survey interviews and that stated clearly that there is a great interest in information sharing and comparison, and still none of the organizations showed that they would be willing to accept new definitions for their operating parameters or accept new standards for the allocation of operating events so that they could get information in exchange. At the same time, there is strong interest in the exchange of data.

There is a solution to this apparently conflicting position and this can be done only through information sharing taking place in a manner that existing operating data collection and reporting systems at individual units proceed on their operations unaffected, but the data that had been collected earlier are not touched through any mode. The solution comes from utilizing data storage and manipulation with a capability of existing data collection systems being utilized for this purpose. This will take care of the constraints.

The third solution is from the general interest in sharing of maintenance information between different units.

This arises as most of the units understand the importance of improving maintenance management systems and processes. In general it can be said that development of maintenance performance management has not developed as fast as the other production systems in mines. This area requires collaboration, but much of that has not been coming. Thus it is clear that most organizations are just concentrating on doing the same job under different names. The solution would be to implement a study comparing management practices and development of performance standards for maintenance.

This would be found to be useful by the entire industry in that area. The fourth point is that once the data collection is built up, then it may be applied to other areas of the entire system so that those areas could also benefit. Some of those areas are the large tire user group that requires data common to the entire exercise; OEM availability guarantee reporting and lost control system benchmarking. It could also be seen that the structure which would be established for such initiatives could become the basis for a framework that could be used by the group for purchasing. Standardization of Definitions for benchmarking)

Let us now go to another area of benchmarking that we have used earlier and this is with reference to asset management. This has been important throughout history, and yet poses a special economic challenge during the 21st century. The reason for the challenge is from our efforts to release

<https://assignbuster.com/opportunities-and-challenges-of-benchmarking/>

economic value from our investments in asset investment as much as is possible and the main cause for that is the extreme competitive nature of industry and business now.

The challenge has led to our tackling the issue of benchmarking asset investment in three different areas and these are through minimizing life cycle costs of asset ownership, minimizing direct costs that are related to asset management and minimization of costs associated with new asset purchase and renewal of assets. Here the question of asset renewals means the overhauls and renovations that are carried out to the assets. All our benchmarking efforts are now directed to this area so that any new effort should give benefits in these terms. The question is whether that is enough? (An introduction to the Maintenance Scorecard)

Apart from this there has been a very rapid change in the use of technology and this has forced many professionals from other areas rapidly into the functional areas of management of assets. The new managers are making, managing or even otherwise deciding on assets. Do they have the capability? They have no experience or any depth of knowledge or experience in the area that they are now managing. In terms of areas, these may be system selection, implementation and regular day to day management.

This is leading to decisions being taken many times on issues which are not connected to management and the decisions may not concern the assets themselves or the asset managers. These sorts of incidents are happening throughout the world. The issue of maintenance was earlier seen as a

<https://assignbuster.com/opportunities-and-challenges-of-benchmarking/>

secondary rollout of a large scale system originally decided for financial or supply chain reasons, and the decision was taken whether the solution was the best for asset management or not. Another important change has been the shifting of maintenance function to outsourcing and this is also likely to affect the function.

This is a change that has been predicted many times by management consultants and also recommended by them as a method of reducing direct costs, improving the level of contact with specialized skills and of avoiding the complications that exist in finding and controlling a skilled workforce. This is very useful when the total production function is being outsourced. This has also led to many changes in employment patterns throughout the world. Many technical and repetitive roles like software development, call center management and some engineering functions are being shifted away to the third world from the first world.

In those countries the salary levels with the similar competencies as those in the 1st world are much lower. (An Introduction to the Maintenance Scorecard) Now that we have talked a lot about the advantages of benchmarking, let us also take a look at the other side. These refer to the times that existed before benchmarking came to be called benchmarking, and it was viewed as just application of common sense. It is always true that the best method of learning how to do a job is to see how others do the work and then trying to do it.

It is said that the great Henry ford went through the operations of production methods in a Chicago slaughterhouse before deciding how to set up his own

production line for which he is rightly renowned. At the time, and probably for many decades since that time, it was called a good idea - till in the 1980s, this process of learning was given the name of benchmarking. It is true that benchmarking can provide very good improvements of the product and deserved returns based on efficiency, cost savings and new revenues. The process also is able to reduce cycle times, productivity, customer service, quality and production costs.

This can make them a part of an effort of the company to change the culture of the organization to a more customer oriented and results focused. Yet many companies make a mistake in letting this excellent process of benchmarking to become an end in itself. This is quite common in corporate settings which have already established full fledged benchmarking teams. (Benchmarking: The trend line) The organization ends up losing sight of the objectives and start on benchmarking as an objective in itself. This can be seen in the case of Florida Power and Light Co.

This received the Deming Prize in 1989 as it had performed excellently in benchmarking. In the same year, the company was put under the charge of a new CEO and he dismantled large sections of the company as those sections were mainly based on benchmarking and less on functions of the company. Alan Weiss, president of Summit Consulting Inc said " He found the company was more committed to winning awards than serving the customer". (Benchmarking: The trend line) This is a loss in focus that can happen if benchmarking is made a part of the jobs of line managers and they have other responsibilities.

They are more inclined to take up practical applications for their talents.

(Benchmarking: The trend line) Let us take a case of a computer based service organization. The organization is trying to speed up the service of its computers when they fail as the computers are the main machines which help them keep their business in running condition. The question is that there are many parts inside a computer and every time it was repaired, there used to be a serviceman who would come and replace the part. Of course the bill for the part would be received and the amount paid.

The organization decided to go through an exercise of benchmarking so that the cost of repairs can be reduced. The decision was to introduce the system of codes so that it would be known which part was failing. These codes are numbers which are cross referenced to a complete list of code descriptions. The codes may also be a series of alphanumeric descriptions. Now since computers are fairly commonplace the full descriptions of the failed parts are now being stored. (Failure codes) The storage of the complete list was in the computerized management system.

The required parts are input by the person who was reporting the failure and if it was not known to him then it had to be input by the technician when he repaired the equipment. The main use of these codes is in providing statistics about machine failures. Thus one can know the reasons for machine failures and take corrective actions. (Failure codes) The risks of using such a procedure is very low as the computers also have self assessment procedures and that can often tell the region of failure. This information is unlikely to be wrong.

For the technician when he comes in to repair, he has to change the required part for the machine to start running again, and thus he is also unlikely to be wrong. The risks with finding out the part number are thus very low and can be safely viewed to be accurate. The objectives of determining the part numbers are also very simple as each part stops certain functions that the machine is supposed to do. This slows down operating procedures and once the reasons for delays are known, action may be taken to speed up the entire process.

Once the operations are speeded up, the organization is expected to earn more revenues. The total impact can only be assessed after the full analysis is made. This sort of a system is also used in certain organizations where computerized systems are used to deliver items at fixed schedules like newspapers, milk processing machines, etc. Present the recommended solution and the rationale behind the recommendation We are now in a period of history where we have to totally depend on machines for all our functions and most industrial tasks.

At the same time, repairs and other tasks are becoming increasingly complicated as no extra persons are available. Computerized machinery is very good as long as they run, but when they fail, they fail completely and no action can be taken till they are repaired. Thus getting the machine repaired is very important. The technicians come quickly, but often they do not have the needed parts and when that happens, the machine will continue to remain out of order for quite a few days, and that is what is sought to be avoided through this exercise.

The objective is not to increase profits directly, but make the operations more dependable. The new machinery has been responsible for dramatic increases in productivity levels, but it has also led to high direct costs for asset management over the last few years. (An Introduction to the Maintenance Scorecard) The problem with determination of reliability in most cases is that some factors may be brought up by theory and through strategic planning, but they do not translate into reality at the end of the day.

In many cases, the results that are achieved cannot justify the investments that are made to achieve them. There are many areas which hurt the realization of benefits. Here the change in process is just the recording of a part number and that should not take much time when compared to the total time lost in terms of production. We are talking about the requirement to note down the part numbers when the machine fails. Identify the expected impact and value. The expected impact in terms of costs is not much as has been explained earlier, but the impact in terms of value is expected to be high.

The effect will be in terms of extra production capacity that should be available. The exact benefits can only be determined when the total picture is known. It is not useful to make advance calculations in such cases, as the present production is for the total usage of the company and no extra jobs can be taken up without meeting this requirement. Provide a summary of how you would approach implementing the recommended solution and measuring its effectiveness. The implementation methods are very simple.

Prepare a list of the parts that go wrong in the machines in different areas and hand them over to the operators. Every operator has to make a failure report and when that is submitted, the reason for failure that is given has to include the part number. Once the part numbers are made available in this way, then in the report itself they should be noted, and after a period of six months, a search program or a summary should be made of the reasons for failures. This is a totally internal exercise and we do not have to observe the other requirements now.

APQC has now developed and wants adherence to the following code - " guide benchmarking efforts, advance the professionalism and effectiveness of benchmarking, and help protect the members from harm". (Benchmarking Code of Conduct) According to this code will help the implementation of efficient, effective and ethical benchmarking. (Benchmarking Code of Conduct) The question is that ultimately the entire process is for internal development and to be done totally internally, so why are we all getting so excited about it? Make the changes that you have to after a cool consideration.